

**Title of Thesis: The Tenant as Customer:  
Does Good Service Enhance the Financial Performance of  
Commercial Real Estate?**

HENLEY BUSINESS SCHOOL

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School of Real Estate and Planning

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## **Declaration**

I confirm that this is my own work and the use of all material from other sources has been properly and fully acknowledged.

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## Dedication

*I dedicate this Thesis to my husband Steven, who had to contend with four students in the family at the same time, and to my children Joseph, Miriam and Hannah. Without their support and encouragement, I would not have embarked upon this challenge.*

# Abstract

The motivation for this research was to investigate whether both parties benefit if landlords treat tenants as valued customers. Are satisfied occupiers more likely to renew their lease and recommend the landlord to others? Does this, in turn, improve the financial performance of commercial properties?

This research analyses data from 4500 interviews with occupiers of UK commercial property to determine which factors affect occupiers' satisfaction with the property management service they receive. Various statistical techniques are employed, including Structural Equation Modelling, Ordinary Least Squares Regression and Logistic Regression. Results are presented for four sectors of commercial property – retailers in Shopping Centres, managers of retail warehouses on Retail Parks, occupiers of Office buildings, and occupiers of light industrial units on Industrial Estates.

Although the precise determinants of occupiers' overall satisfaction are found to differ between the sectors, the most important factor for all occupiers is satisfaction with property management. The key determinant of lease renewal intentions is the perception of receiving value-for-money for rent, whilst 'Empathy' and 'Assurance' are particularly relevant to occupiers' willingness to recommend their landlord. Perception of receiving value for money is largely influenced by the reliability of the property management service.

Following this part of the research, occupier satisfaction ratings and property returns are analysed for 273 properties over an 11-year period, to explore the relationship for the different sectors of commercial property. Positive correlations are found between the satisfaction of occupiers at a property and the risk-adjusted financial returns at that property, measured by reference to IPD benchmarks. The relationship is found to be particularly strong for the retail sector. It also appears stronger during the Global Financial Crisis, indicating that attention to satisfying the needs of occupiers might reduce void periods and maintain rental income when property supply exceeds demand.

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# **Part 1: Theory and Literature Review**

## Chapter 1 Introduction

“The Tenant as Customer: does good service enhance the financial performance of commercial real estate?” The answer to this question might seem self-evident - a satisfied tenant will surely be more likely to renew their lease, for example - yet very little research has been done on this topic. The purpose of this thesis is to address whether this hypothesised return on investment is achieved in practice: if landlords treat tenants as valued customers, are tenants more highly satisfied and does this lead to greater financial returns for property owners and investors?

Businesses engage in Customer Relationship Management (CRM) in the belief that good customer service results in satisfied customers, who in turn are more likely to remain loyal and recommend the service provider to others. With loyal customers and a good reputation, a business should be more profitable. This idea is known as the “Service – Profit Chain” (Heskett, Sasser, & Schlesinger, 1997). Applied to commercial property management, the “Service – Profit Chain” suggests that landlords should achieve a return on investment they make in the property management service they deliver to tenants. Increased profitability should result from an increase in lease renewal rates without compromising rents, and an improvement in the reputation and trustworthiness of the landlord, making it easier to attract new tenants. The ability to attract and retain occupiers reduces void rates, and should result in enhanced real estate performance. The financial performance of commercial properties is assessed on their total return, which comprises the net income from rents and the increase in the capital value of a property. Rental income depends upon the rents paid by each occupier and upon the occupancy rates. Capital value also is affected by this, because valuers will take account of the future income stream when assessing value. Of course property owners and investors also generate revenue and profit from property development and trading properties, but such activity is not the focus of this present research because, when a property is sold, the link between owner and tenant is broken.

Although several studies have been carried out into the satisfaction of occupiers of commercial property, few have looked at whether satisfaction affects lease renewal, advocacy of landlord and the financial performance of property. Most have concentrated on the individual sectors of retail, office and industrial, and even those, such as the UK Occupier Satisfaction Index (RealService Ltd & Property Industry Alliance, 2012), that interviewed occupiers in the three main sectors, have not attempted to analyse similarities and differences between sectors. This present research is designed to address this deficiency by comparing and contrasting findings for the three sectors.



This research is primarily concerned with commercial property management, as delivered to tenants by the landlord or landlord's representative<sup>1</sup>. The Royal Institution of Chartered Surveyors estimates that about 90% of UK businesses rent rather than own their premises (Raeburn, 2014). "A property manager acts on behalf of the landlord in routine tasks such as rent collection, handling of leases, scheduling of maintenance and repair" (Fuerst, 2009, p. 10), although "the profile of a property manager overlaps considerably with other management activities in real estate" (ibid). The job titles of property professionals vary from organisation to organisation and sector to sector, but include, for example, Estate Manager, Shopping Centre Manager, and Office Building Manager. These managers may be employed directly by the property owner using a "vertical integration" model of service delivery (Benjamin, Chinloy, & Hardin, 2006; Williamson, 2002). Alternatively some landlords outsource the function to specialist providers, in which case there is the potential for agency problems to arise as the Managing Agent is acting on behalf of the landlord whilst trying to meet the needs of the tenants. Both models can be successful if the personnel employed have the necessary customer focus and service skills (Palm, 2013).

McAllister (2012a) describes the roles and the typical hierarchy of property managers, asset managers and portfolio or fund managers. In the context of this thesis, and the treatment of tenants as customers, any of the activities of the property professional which impact on occupiers are relevant, but the main tasks under consideration here are those which McAllister ascribes to property managers – "the day-to-day functions such as service charge functions, tenant liaison, inspection and monitoring" - as well as dealing with lease events, procurement of services, facilities management<sup>2</sup>, maintenance issues, contract negotiation, rent collection and reviews, and perhaps aspects of workspace design and fit-out at the start of a tenancy, or dealing with dilapidations at lease expiry (Stapleton, 1994, p. 260).

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<sup>1</sup> Not to be confused with the similar term, "Corporate Property Management" which is widely used to refer to the management of properties occupied by a company whose primary purpose is not real estate, by people employed directly by the company, and whose role is to align the property strategy with that of the company's business (Edwards & Ellison, 2004; Harris & Cooke, 2014; Haynes & Nunnington, 2010; Roulac, 2001)

<sup>2</sup> Facilities management is the integration of processes within an organisation to maintain and develop the agreed services which support and improve the effectiveness of its primary activities (British Institute of Facilities Management, 2015)

## 1.1 Background

Traditionally there has been a somewhat adversarial relationship between landlords and tenants (Sayce et al., 2009). Until the late 20<sup>th</sup> century, the focus of property management was to maximise rents, with rapid recourse to legal process to resolve disputes between landlord and tenant. Edington (1997 p. xii) points out that such a traditional approach to property management “gives no glimpse of the notion that if a supplier (the landlord) is receiving substantial sums (rents) from the customer (tenant), then the customer has the right to receive exemplary service.” Edington was an early proponent of the need for customer-focused property management, eschewing the “old way” of treating customers as a source of “upwardly mobile income” and recognizing instead that “it is the tenants that are mobile and that their custom must be earned.”

Other real estate practitioners and writers have recognised that, historically, the real estate industry has not focused enough on customer relationships (Appel-Meulenbroek, 2008; Silver, 2000; Valley, 2001; Worthington, 2015). During the past decade there has been a gradual shift in attitude and behaviour on the part of property owners and managing agents towards a more customer-oriented approach to property management (Palm, 2011), not least because of pressure from tenants and the threat of legislation (Bannister, 2008, p. 4; Crosby, Hughes, & Murdoch, 2006b; Morgan, 2013). Many landlords and managing agents acknowledge that describing occupiers as “customers” rather than “tenants” creates more of a partnership and a mutually beneficial, respectful relationship (Goobey, 2006; Kivlehan, 2011; “Real Service Best Practice Group,” 2012); others feel that what matters are actions rather than words, and that there is a risk that landlords may think that they will improve the relationship simply by calling their tenants “customers” (Kivlehan, 2011)<sup>3</sup>.

Since the purpose of this research is to examine the benefits to landlords and tenants of good customer service, it would be preferable to refer to tenants as “customers” throughout; however, the term “customer” can be ambiguous, and could cause confusion between, for example, retail tenants and shoppers. Therefore, throughout this thesis, tenants, including employees of the lessee company, will generally be referred to as “occupiers”, except where legal terminology demands or the traditional relationship is intended.

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<sup>3</sup> A view also expressed to the author in “off-the-record” comments by two landlords during interviews conducted as part of this research

## 1.2 Research Aim and Objectives

The overall aim of this research is to investigate the relationship between excellence in property management, as determined by the satisfaction of occupiers at a commercial property (shopping centre, retail park, office building or industrial estate), and the financial returns achieved by the property. The main objective of the research is to help landlords and managers of properties in the retail, office and industrial sectors understand where to focus their customer relationship management efforts in order to have the greatest impact on occupier satisfaction and the greatest return on investment.

For a property to achieve superior financial returns than comparable properties requires high occupancy rates, at or above market rents. This, in turn, requires landlords to provide properties and service which are attractive to occupiers. The first Research Question will therefore examine occupiers' reasons for choosing to rent a particular property.

The primary purpose of the research is to explore the relationship between "good [property management] service" and financial returns, but good service can only be assessed by its effect on the recipients of that service. Thus it is necessary to establish which aspects of property management have most impact on occupiers' satisfaction. The links with profitability arise from customer loyalty and the reputation of a business, according to Heskett et al., (1997), thus this research will also assess determinants of tenant retention and landlord reputation, using the behavioural intentions "likelihood of lease renewal" and "willingness to recommend landlord or property manager".

In any business, the price of the product or service is designed to be set so as to maximise profit. Adam Smith (1776 p. 124) explained that rent had a "natural" level, which would maximise the benefit to the landlord, with lease terms being set so as to give the tenant the smallest viable tract of land for the maximum price the tenant could afford to pay. In the supply of commercial real estate landlords are aiming to maximise rental income by optimising rent per square foot and occupancy levels. However, occupiers are unlikely to express high levels of satisfaction if they feel they are paying too much for the property and service they receive (Haynes, 2012; J Kaizr, Haynes, & Parsons, 2010; S Tsolacos, McGough, & Thompson, 2005). Thus this research will also investigate factors that affect occupiers' perception of receiving value for money and the effect of this on satisfaction, loyalty and advocacy.

The main empirical study will address the relationship between occupier satisfaction and the financial performance of property (Research Question 3). In doing so, it will investigate whether there is a positive correlation between occupier satisfaction and the persistent ability of a property to out-perform its benchmark. The research will also analyse whether the relationship is affected by the

supply of and demand for commercial real estate by examining the relationship during the global financial crisis. It will assess whether the relationship between occupier satisfaction and property returns is the same for all sectors of UK Commercial Property, and will compare and contrast the findings for the Retail, Office and Industrial Sectors.

### **1.3 Research Questions**

**For each of the three main sectors of UK Commercial property (Retail, Office and Industrial):**

- Question 1: *What factors affect occupiers' choice of property?*
- Question 2: *What are the determinants of occupier satisfaction, loyalty and advocacy?*
- Question 3: *Is there a positive relationship between financial performance and the satisfaction of occupiers at a property?*

In answering these questions, the research will also examine the similarities and differences between the sectors of commercial property.

### **1.4 Research Methods**

The methods used to conduct this research include both qualitative and quantitative analysis of interviews with occupiers of UK commercial property, and statistical analysis of property performance data. The data is mainly secondary data which has not previously been used for this purpose nor analysed in this way.

Question 1, factors affecting occupiers' choice of property, is answered by reviewing previous research and also analysing responses from occupiers of commercial property.

Question 2, which examines occupier perceptions and behavioural intentions, is answered using structural equation modelling supplemented by logistic regression.

The final question is answered by analysing individual property returns data combined with occupier satisfaction ratings. Correlations between benchmark out-performance and occupier satisfaction are performed, and regression analysis is conducted, looking at the sectors of commercial property and different periods of time.

The occupier satisfaction data is described in Chapter 5 whilst the financial performance data is described in Chapter 8.

## 1.5 Structure of Dissertation

This thesis is divided into three parts (see **Figure 1-1**):

- Part 1 comprises the introduction to the topic, including relevant theories and a review of prior literature;
- Part 2 examines the requirements of commercial occupiers and determinants of occupier satisfaction, lease renewal intentions and willingness to recommend their landlord;
- Part 3 tests hypotheses about the relationship between property performance and occupier satisfaction.

Within these three parts, the material is organised as follows:

Chapter 2 reviews research into customer satisfaction with service quality, and discusses the nature of service excellence. Various metrics which have been used to measure service quality and customer satisfaction with the service they receive are examined, and their application to the service of property management is explained. The links between customer satisfaction, loyalty and advocacy are considered in a review of Relationship Marketing and Customer Relationship Management, and the underlying rationale of the “Service-Profit Chain”. Previous studies into the satisfaction of retailers, office occupiers and industrial occupiers are described and results from the UK Occupier Satisfaction Index research is analysed. Factors that affect property performance are discussed, and the fact that occupier satisfaction has not previously been included in such research is highlighted.

This thesis is based upon the premise of the relationship between excellent service and profit in commercial real estate, so Chapter 3 derives a “Service-Profit Chain for Commercial Real Estate”, which serves as a framework for the research. The framework highlights the three areas where excellence on the part of property suppliers (landlords, brokers and managers) should produce greater financial returns than would otherwise be achieved. These three areas are:

1. The lease terms and leasing process, in which pro-active, efficient, simple processes, flexible leases, and the provision of properties which meet occupiers’ needs, should enable faster letting of empty properties and minimise void periods.
2. Excellent property management so that occupiers renew their lease when it expires and do not exercise break options.
3. Building a relationship with occupiers so that they recommend the property supplier to others, thereby improving the reputation of the landlord or managing agency, which in turn should help reduce vacancies without compromising rents.

Previous research relevant to these aspects is also reviewed in Chapter 3.

The three stages of the Service-Profit Chain for Commercial Real Estate are explored in Part 2 (Chapters 4 – 7).

Chapter 4 examines what occupiers are looking for when they lease premises, by analysing interviews with store managers in shopping centres and on Retail Parks, and occupiers of office buildings, and of units on Industrial Estates. The results are compared with previous research, and implications for landlords are highlighted.

Chapter 5 describes the quantitative data obtained from occupier satisfaction studies which is used in the subsequent analysis of determinants of occupier satisfaction. Some preliminary analysis of the relationship between satisfaction with aspects of tenancy and occupiers' overall satisfaction is conducted using correlations, regressions and principal components analysis.

Chapter 6 uses Structural Equation Modelling to examine the relationship between aspects of property management, occupier satisfaction, occupiers' perception of receiving value for money, and the reputation of the landlord or property manager. Separate analyses are carried out for retail property, offices and industrial estates, and the implications for property managers of each of the three sectors are highlighted. Whilst differences do emerge for the three sectors, the empathy and professionalism of the property manager are found to be of great importance to all occupiers.

In order to triangulate the findings, and to investigate occupiers' behavioural intentions, logistic regression is used in Chapter 7 to investigate the relationship between occupiers' satisfaction with aspects of property management, their lease renewal intentions, and their willingness to recommend their Landlord or Property Manager. These complementary methods of analysis strengthen the robustness of the results, and enable similarities and differences between the sectors of commercial property to be established.

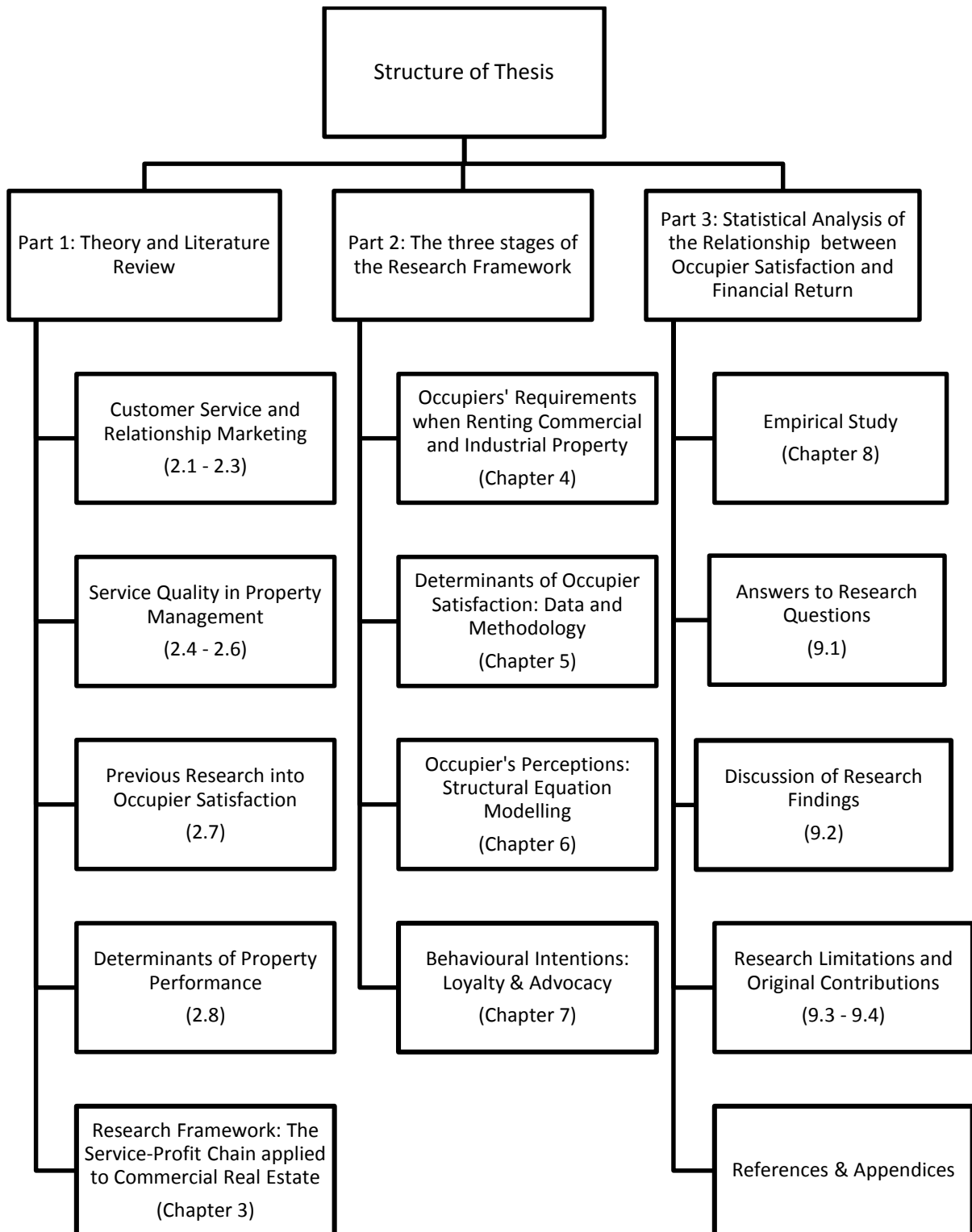
Part 3 of the thesis contains the main empirical research, in which various statistical techniques are employed to investigate the relationship between occupier satisfaction and the financial performance of commercial property. The null hypothesis, that excellence in property management, occupier satisfaction and occupiers' willingness to recommend their property supplier has no impact on the financial performance of commercial property, is tested in Chapter 8 in a quantitative analysis of the relationship between occupier satisfaction and various financial measures, using primary and secondary data for a sample of 273 properties gathered over a 12 year period. The properties comprise shopping centres, retail parks, industrial estates and business parks, and (mostly multi-tenanted) office buildings, with a combined floor space of over 7.3 million m<sup>2</sup>.

Regression analysis is also carried out to see whether any ability of properties to achieve persistent superior abnormal returns is correlated with occupier satisfaction. A number of interesting, statistically significant, relationships emerge, in spite of the many confounding factors which affect property returns. In particular, the impact of occupier satisfaction on property returns varies with sector, with economic conditions, and with the landlord's business strategy.

Chapter 9 summarises the findings from the research, and discusses the implications for landlords and managing agents. Answers to each of the Research Questions are proposed and the main contributions of the research are highlighted, including discussion of the similarities and differences between the sectors of commercial property. Several avenues for further research are suggested, including extending the sample to incorporate residential investment property, and aggregating the data for each landlord to look at the effect of occupier satisfaction at a company level, since the impact of reputation and recommendation might not be apparent at an individual property level.

Supplementary information relating to the research is given in Appendices, including examples of questions used in the occupier satisfaction surveys, more detailed discussion of factors affecting the financial performance of property, and results tables from the validity tests required when performing structural equation modelling.

**Figure 1-1: Structure of Thesis**



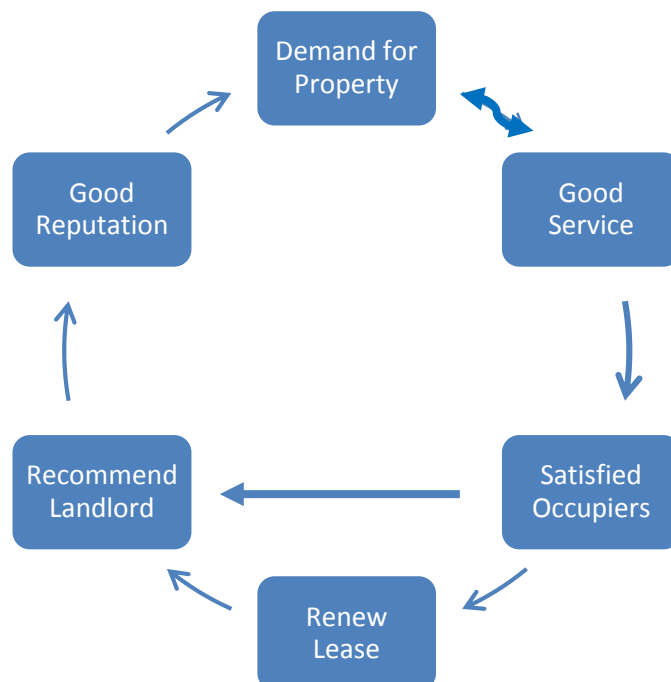


## Chapter 2 : Service Quality, Customer Satisfaction and Profitability

This chapter reviews literature on the relationship between service quality and customer satisfaction, and discusses methods by which these may be assessed. The “Service – Profit Chain” (Heskett et al., 1997) is examined for businesses in general and real estate companies in particular, including the links between customer satisfaction, loyalty and advocacy. The chapter also discusses the personal attributes that it is desirable for property managers to possess, and the purpose and pitfalls of occupier satisfaction studies.

The links which underpin the postulated relationship between service and profit for commercial real estate are indicated in **Figure 2-1**. This proposes that demand for property belonging to a particular landlord or managed by a particular agent is enhanced by delivering good service to occupiers and developing a reputation for this good service. Increased demand should accrue from satisfied occupiers renewing their lease and recommending the landlord or property manager to others. This basic model is extended in Chapter 3.

**Figure 2-1: A "Service - Profit Cycle" for Commercial Property**



## 2.1 Service Quality and Customer Satisfaction

It is not possible to measure customer service quality directly, because quality is in the “eye of the beholder”. Rather, quality has to be inferred from the recipient’s assessment (Schneider & White, 2004). However, the recipients are not homogeneous, the service itself is not necessarily consistent, and opinions differ. “One cannot make a thorough evaluation of a service”, according to Grönroos (1978, p. 591), because of its “intangibility”. Excellence in customer service cannot be defined in absolute terms; rather it is a function of the performance of the supplier and the expectation of the customer. In manufacturing, a common definition of quality is “Conformance to Requirements” with a performance standard of zero defects (Crosby, 1979). This idea can be applied to real estate when considering the functionality of the building and whether it meets the needs of the occupier, but is harder to apply to property *management* performance.

One of the earliest attempts to formalise the definition of quality in service performance was made by Kano et al., (1984). In this model “attributes of quality” are classified according to their impact on a customer: what a customer would expect or how the attribute would influence a customer’s satisfaction. These can be considered as:

1. Expected or “must-be” quality, which is taken for granted when fulfilled but causes dissatisfaction when unfulfilled.
2. Proportional or one dimensional quality which provides satisfaction when fulfilled but results in dissatisfaction when unfulfilled.
3. Value-added quality (“exciting / attractive / charming quality”) which provides satisfaction when fulfilled but does not cause dissatisfaction when unfulfilled as the customer was not expecting it anyway.
4. Indifferent “quality” which has no impact on customer satisfaction.
5. Reverse “quality” which causes dissatisfaction when present and satisfaction when absent.

Kano’s model has been adapted by other writers including Yang (2005) who extended the number of categories to eight and attempted to quantify the relative impact of each. Assessment of service quality differs from assessment of product quality in that the characteristics of *service* include “intangibility, relative inseparability of production and consumption, and relative heterogeneity by virtue of involving the interaction of service personnel and customers, making each instance of service different” (Schneider & White, 2004, p. 8). Many other researchers have attempted to assess, define and model quality in service encounters, including Grönroos (1978, 1982, 1990) and Gummesson (2002a, 2002b).

Perhaps the most widely used method of measuring service quality is to obtain customers' opinions using questionnaires based on the SERVQUAL instrument (Parasuraman, Zeithaml, & Berry, 1985, 1988). Development of SERVQUAL started from the premise that customers' assessment of service quality depends upon gaps between the service they expect and that which they perceive they receive. Prior expectation is influenced by recommendation by others (word of mouth), personal needs and past experience, and has been found to alter over time (Omachonu, Johnson, & Onyeaso, 2008). The original model included ten dimensions of service quality: Access, Communication, Competence, Courtesy, Credibility, Reliability, Responsiveness, Security, Tangibles and Understanding (Parasuraman et al., 1985), assessed using 97 items. These were later condensed into seven dimensions and 34 items, and finally into five dimensions and 22 items:

- Assurance (knowledge and courtesy of employees and their ability to inspire trust and confidence);
  - Empathy (caring individualized attention the firm provides its customers);
  - Reliability (ability to perform the promised service dependably and accurately);
  - Responsiveness (willingness to help customers and provide prompt service); and
  - Tangibles (physical facilities, equipment and appearance of personnel);
- (Parasuraman et al., 1988)

The process of scale refinement involved checking internal consistency by ensuring that Cronbach's alpha and inter-item correlation within, and with, its dimension was adequate and conducting factor analysis to confirm the number of dimensions (ibid. p. 14)<sup>4</sup>.

Typical questions in a SERVQUAL questionnaire are based on those in **Table 2-1** which were used in the original study by Parasuraman et al., (1988). The items in the questionnaire take the form of statements with which respondents have to rate the extent of their agreement. The order of questions in the original study was randomised, and respondents gave ratings on a 7-point Likert Scale, with scores from the nine expectation and perception questions which are negatively worded being reversed prior to analysis. Likert-scoring involves giving a subjective rating on a numerical scale to indicate the extent to which one agrees or disagrees with a statement. A notable absence from SERVQUAL is reference to "value for money" and yet perception of receiving value is likely to underpin customers' responses. Implicitly, value for money is likely to be encompassed by the ratings given by customers to the expectations questions.

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<sup>4</sup> Cronbach's Alpha is a measure of the extent to which items comprising a scale are related. Items comprising a single dimension should be related, whereas those in different dimensions should not have high correlations. A value in excess of 0.7 is generally considered desirable for items within a dimension (Cronbach, 1951)

**Table 2-1: The SERVQUAL Instrument (Parasuraman et al., 1988)**

## Expectation Questions

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- E1. [The service provider] should have up-to-date equipment.
- E2. Their physical facilities should be visually appealing.
- E3. Their employees should be well dressed and appear neat.
- E4. The appearance of the physical facilities ... should be in keeping with the type of services provided.
- E5. When these firms promise to do something by a certain time, they should do so.
- E6. When customers have problems, these firms should be sympathetic and reassuring.
- E7. These firms should be dependable.
- E8. They should provide their services at the time they promise to do so.
- E9. They should keep their records accurately.
- E10. They shouldn't be expected to tell customers exactly when services will be performed.
- E11. It is not realistic for customers to expect prompt service from employees of this firm.
- E12. Their employees don't always have to be willing to help customers.
- E13. It is okay if they are too busy to respond to customer requests promptly.
- E14. Customers should be able to trust employees of these firms.
- E15. Customers should be able to feel safe in their transactions with these firms' employees.
- E16. Their employees should be polite.
- E17. Their employees should get adequate support from these firms to do their jobs well.
- E18. These firms should not be expected to give customers individual attention.
- E19. Employees of these firms cannot be expected to give customers personal attention.
- E20. It is unrealistic to expect employees to know what the needs of their customers are.
- E21. It is unrealistic to expect these firms to have their customers' best interests at heart.
- E22. They shouldn't be expected to have operating hours convenient to all their customers.

## Perception Questions

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- P1. XYZ has up-to-date equipment.
- P2. XYZ's physical facilities are visually appealing.
- P3. XYZ's employees are well dressed and appear neat.
- P4. The appearance of the physical facilities of XYZ is in keeping with the type of services provided.
- P5. When XYZ promises to do something by a certain time, it does so.
- P6. When customers have problems, XYZ is sympathetic and reassuring.
- P7. XYZ is dependable.
- P8. XYZ provides its services at the time they promise to do so.
- P9. XYZ keeps its records accurately.
- P10. XYZ does not tell customers exactly when services will be performed.
- P11. You do not receive prompt service from XYZ's employees.
- P12. Employees of XYZ are not always willing to help customers.
- P13. Employees of XYZ are too busy to respond to customer requests promptly.
- P14. You can trust employees of XYZ.
- P15. You feel safe in transactions with XYZ's employees.
- P16. Employees of XYZ are polite.
- P17. Employees get adequate support from XYZ to do their jobs well.
- P18. XYZ does not give you individual attention.
- P19. Employees of XYZ do not give you personal attention.
- P20. Employees of XYZ do not know what your needs are.
- P21. XYZ does not have your best interests at heart.
- P22. XYZ does not have operating hours convenient to all their customers

The SERVQUAL framework was initially devised for the services of retail banking, credit card provision, securities brokerage, and product repair and maintenance, but has subsequently been applied to a variety of industries, although the questionnaire items which should be used depend upon the type of services offered by an organisation. Some researchers have found, through factor analysis of responses, that additional dimensions are required (for example Baharum, Nawawi, & Saat, 2009; Van Ree, 2009; Westbrook & Peterson, 1998), whereas others have found that fewer dimensions suffice (Babakus & Boller, 1992; V. L. Seiler et al., 2010). Gummesson (2002a) derives the same four dimensions as SERVQUAL for the service elements but divides “Tangibles” into many aspects according to nature of the service, whilst Grönroos (1990b, p. 47) derives six dimensions:

1. Professionalism & Skills
2. Attitudes & Behaviours
3. Accessibility & Flexibility
4. Reliability & Trustworthiness
5. Recovery
6. Reputation & Credibility

Many other writers agree that service quality is a function of performance and expectation (Gee, Coates, & Nicholson, 2008; Grönroos, 1982; Lewis & Booms, 1983; Reichheld & Sasser Jr, 1990; Sivadas & Baker-Prewitt, 2000) and is judged by customers not only on technical quality (the outcome) but also functional quality (the delivery process) (Ennew, Reed, & Binks, 1993). Other factors have also been found to influence satisfaction, including the positive “affects” of ‘joy’ and ‘interest’ and the negative “affects” of ‘disgust’, ‘contempt’ and ‘anger’ (Oliver, 1993; Westbrook, 1987).

An alternative approach is to measure perceived quality alone, without needing to know the customer’s prior expectation and whether disconfirmation affects results. Cronin Jr & Taylor (1992) devised the SERVPERF instrument to measure service quality in the banking, pest control, dry cleaning, and fast food industries using customer perceptions alone. The two approaches have been debated in the academic journals (Cronin Jr & Taylor, 1994; Parasuraman, Zeithaml, & Berry, 1994) and the consensus is that measuring both the *expectations* and the *perceptions* of customers does provide some extra information. In particular customer expectation has been found empirically to ‘Granger-cause’<sup>5</sup> customer perceived quality and customer satisfaction (Granger, 1969; Omachonu, Johnson, & Onyeaso, 2008). However the benefit of measuring both expectation and perception has to be offset

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<sup>5</sup> Granger-causality involves testing statistically the hypothesis that a variable depends upon lagged i.e. past values of another variable

against the increased complexity of analysis and the reduced likelihood of customers completing a longer questionnaire (Birkeland & Bettini, 1995; Jain & Gupta, 2004).

An even more parsimonious approach is taken by Reichheld (2003a, 2006; Reichheld & Teal, 1996) who devised the Net Promoter Score (NPS), based on responses to the single question “How likely is it that you would recommend this company to a friend or colleague?” Customers rate the likelihood that they would recommend the company (or its product or service) to others. Those that give a score of 0 – 6 are considered “detractors”; 7 – 8 is neutral or passive whilst “promoters” are the customers who rate their likelihood to recommend 9 – 10. NPS is calculated by subtracting the percentage of detractors from the percentage of promoters, and its creator claims that it is a good predictor of how well a business will grow. Another single-question metric, the Customer Effort Score (CES), (Dixon, Freeman, & Toman, 2010; Dixon, Toman, & DeLisi, 2013), asks, “How much effort did you personally have to put forth to handle your request?” This is based on the idea that customers want simple straightforward solutions to their problems, requiring minimal effort on their part.

Each approach, Net Promoter Score, Customer Effort Score and conventional customer satisfaction questionnaires, has its advantages and disadvantages. Proponents of NPS cite instances of its relevance to organisations in industries that include Retail, Financial Services, Healthcare, Technology, Telecoms and Media (Bain & Company, n.d.), whilst CES has recently been modified to a 7-point Likert response format that assesses the extent of (dis)agreement with the statement: “The company made it easy for me to handle my issue” (CEB Global, 2016). Disadvantages include the fact that respondents may not respond truthfully, behavioural intentions may not translate into actions, and poor scores on NPS or CES may not help a company determine specific causes of dissatisfaction. In general, several complementary techniques should be employed, to assess customer satisfaction and behavioural intentions, as well as enabling service providers to remedy causes of dissatisfaction (Keiningham et al., 2007; Omachonu et al., 2008; Söderlund & Vilgon, 1999).

Customer service which is perceived to be of high quality does not necessarily result in customer satisfaction, in part because customers’ needs differ. Parasuraman et al. (1988, p. 10) assert that “perceived service quality is a global judgment, or attitude, relating to the superiority of the service, whereas satisfaction is related to a specific transaction”. The definition of satisfaction as a noun meaning “fulfilment of one’s wishes, expectations, or needs, or the pleasure derived from this” (Oxford English Dictionary), and its Latin derivation “facere – to do; satis – enough”, imply that service which performs sufficiently well to fulfil the needs or expectations of the customer ought to result in customer satisfaction.

SERVQUAL-style questionnaires are the most widely used method of measuring customer satisfaction, but there are other approaches involving, for example, interviews, focus groups, and seeking feedback by eliciting complaints and compliments. The American Customer Satisfaction Index (ACSI)<sup>6</sup> (Fornell, 2001, 2007) uses a combination of interview feedback and econometric modelling of ratings of perception, expectation, and proximity to the customer's ideal, to quantify customer satisfaction. Satisfaction Scores are calculated for individual companies or organisations and, using statistical techniques, these are combined to give an overall national figure.

Customer satisfaction is an important component of the Balanced Scorecard approach to achieving all-round excellence in business. Combining goal-setting and paying attention to customer needs, staff satisfaction and development, internal processes as well as financial indicators, the scorecard enables an organisation to keep track of and improve all aspects of its business (Kaplan & Norton, 1992; Kaplan, 2010). Tucker & Pitt (2010) devised a customer performance measurement system (CPMS) for use by facilities management organisations to measure customer satisfaction with service provision, which, like the Balanced Scorecard, involves benchmarking and setting goals for improvement.

The Institute of Customer Service consulted 153 senior executives to gather their views on determinants of customer satisfaction (ICS, 2011) and the most important were considered to be:

1. Understanding the Customer's Viewpoint
2. Gathering and Acting on Customer Feedback
3. Training and Development of Staff in Soft Skills
4. Selecting the Right Staff
5. Being Responsive in terms of Quality
6. Empowering Staff
7. Being Responsive in terms of Speed

Lemke, Clark, & Wilson (2010) used a repertory grid technique to elicit tacit opinions about service in business to business (B2B) relationships and business to consumer (B2C) relationships. Respondents were asked to name nine companies they deal with and, taking three at a time, to compare ways in which two of the companies are similar to each other and different from the third in terms of the service they deliver to customers. Each comparison resulted in a "construct" – a behaviour or

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<sup>6</sup> ACSI was launched in 1994 and was based on the earlier Swedish Customer Satisfaction Index, conceived in 1987. Many countries now conduct similar surveys; the UKCSI, administered by ICS, began in 2008 and assesses companies in 19 sectors [http://www.instituteofcustomerservice.com/files/06882\\_UKCSI\\_July\\_13\\_Exec\\_Sum\\_Index\\_20pp\\_v16.pdf](http://www.instituteofcustomerservice.com/files/06882_UKCSI_July_13_Exec_Sum_Index_20pp_v16.pdf)

characteristic – and all nine companies were then rated on their perceived performance for that construct, using a Likert response format.

Because service quality is difficult to evaluate, and depends upon consumer expectations, it is crucial that service providers talk to their customers and get feedback, complaints and compliments. The service encounter (Shostack, 1985) is a precursor to the more recent concept of “customer journey mapping”, which involves “walk[ing] in your customer’s shoes” (Matzler et al., 1996, p. 8), tracking and understanding all the stages and interactions which customers undergo when purchasing a product or receiving service, although of course the crucial thing is that it must be *their* journey, not the service provider’s assumptions about the journey.

## **2.2 Relationship Marketing, Retention, Recommendation and Reputation**

The discussion until now has been about the relationship between customer service and customer satisfaction. In this section the business case for focusing on customer satisfaction is addressed by examining its impact on customer loyalty and advocacy.

“Relationship Marketing<sup>7</sup>” emphasises the enduring nature of an organisation’s partnership with its customers, recognising that the sale continues after the contract has been signed (Levitt, 1983a), and “the greater the level of satisfaction with the relationship – not just the product or service – then the greater the likelihood that the customer will stay” (Payne et al., p.vii). The term “Relationship Marketing” has more recently been replaced by the broader concept of Customer Relationship Management (CRM) - “the values and strategies of Relationship Marketing – with particular emphasis on customer relationships – turned into practical application” (Gummesson, 2002b, p. 3; 2004, p. 137).

It may be insufficient merely to *satisfy* customers; rather organisations should endeavour to *delight* them according to Berman (2005, p. 130) who posits a positive correlation between delight (“a positive surprise beyond their expectations”) and achieving cost savings as a result of “increased word-of-mouth promotion, lower selling and advertising costs, lower customer acquisition costs, higher revenues due to higher initial and repeat sales, and long-term strategic advantages due to increased brand equity and increased ability to withstand new entrants” (ibid, p. 148). Satisfaction is said to be transient whereas delight is more long-term and more decisive in building loyalty; loyalty has been found to be significantly higher amongst ‘delighted’ customers who rate their satisfaction ‘excellent’

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<sup>7</sup> See, for example, Berry, Shostack, & Upah (1983; Sheth (2002), Grönroos (1978, 1990), Gummesson (2002), and Levitt (1983a)



than for those who are merely 'satisfied' (Heskett et al., 1997; Keiningham et al., 1999; Kingsley Associates, 2004; Oliver, Rust, & Varki, 1997).

Dixon et al. (2010, 2013) dismiss the idea of attempts to "delight" customers, or exceed expectations, saying that these strategies do not build loyalty. This view ties in with "ideal point" attributes<sup>8</sup> (Schneider & White, 2004), for which exceeding the ideal point detracts from satisfaction, for example excessive empathy can be irritating to the recipient. Dixon's research was based on 75,000 business to business (B2B) and business to consumer (B2C) interactions, using channels such as telephone and e-mail, but not face-to-face, and found greatly increased re-purchase and advocacy intentions amongst customers experiencing low effort compared with others, and far greater likelihood of negative word-of-mouth from those with a high Customer Effort Score: (84% compared with less than 1%).

The evolution of customer loyalty is examined by Oliver (1999), who proposes a four-stage model from Cognitive Loyalty (believing one brand to be preferable to another); Affective Loyalty ("cumulative satisfying encounters" developing the customer's attitude); Conative Loyalty (behavioural intention to re-purchase); and Action Loyalty (a commitment to action even in the face of obstacles such as courting by rival suppliers). Even the last stage is vulnerable to factors such as deteriorating performance or unavailability of supply.

In order to stave off rival suppliers and increase market share, a company needs some form of competitive advantage, according to Porter (1979), who describes the forces which shape strategy as:

- The intensity of competitive rivalry
- The threat of substitute products
- The threat of the entry of new competitors
- The bargaining power of customers
- The bargaining power of suppliers

In the case of real estate, the "intensity of competitive rivalry" and "the bargaining power of customers" will depend upon the stage of the property market cycle<sup>9</sup> - whether demand for property outstrips supply. The threat of substitute products includes the increased adoption of home-working by staff as developments in technology and telecommunications enable remote working by those who would traditionally have been based in offices. It also includes Wi-Fi-enabled hotels and cafes which allow customers to treat their facilities as workspace or meeting rooms. The threat of the entry of new

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<sup>8</sup> As opposed to Vector Attributes for which "more is better".

<sup>9</sup> See Appendix A

competitors includes the emergence of a serviced office sector, allowing occupiers relatively inexpensive working facilities with shorter – term commitments and hence less risk.

In order to survive in a competitive market, Porter suggests that an organisation must focus on one of the following three strategies:

- Overall cost leadership – to produce the cheapest product or service within the industry;
- Focus – clearly identifying the target market and devoting attention to meeting its needs;
- Differentiation – developing a unique product or service, which might include a particular focus on Customer Service

Edwards & Ellison (2004) apply Porter’s theories to Corporate Property Management as a framework for occupiers to maximise the benefit they obtain from the properties they own or rent. Like Porter, Peters & Waterman Jr (1982) also believe customer orientation can be a way of differentiating a company, “a way of finding a niche where you are better at something than anyone else” (p. 182). They examined the characteristics shared by America’s most successful companies from which they devised the 7S Framework and defined eight attributes which they felt characterised excellent, innovative companies, one of which was being “close to the customer”.

### **2.3 Customer Relationships and Profit**

Relationship marketing and customer relationship management are founded upon the premise that there is a link between customer service, customer satisfaction, customer loyalty and the reputation of a company or brand. Research has indeed found such links, (Bolton & Drew, 1991; Gale, 1992; Ittner & Larcker, 1998; Keiningham et al., 1999; Reichheld, 1996; Reichheld & Sasser Jr, 1990; Rust, Zahorik, & Keiningham, 1994; Rust & Zahorik, 1993; Söderlund & Vilgon, 1999; Williams & Naumann, 2011; Zeithaml et al., 1996), although in some cases the links were with behavioural intentions rather than actions – intention to re-purchase a product or recommend a service provider rather than necessarily doing so, for example Zeithaml et al. (1996). Nevertheless, other studies have shown that behavioural intentions are a good proxy for actions (Keiningham et al., 2007).

A close relationship with customers ought to facilitate resolution of problems with service delivery. The ‘Recovery’ dimension of Grönroos (1990b), whilst not included explicitly in SERVQUAL, is considered by Zeithaml and other researchers (Zeithaml et al., 1996); the “Service Recovery Paradox” is the assertion that service quality and relationships with customers can be higher after a service failure that is subsequently handled well (Hart, Heskett, & Sasser, 1990; Magnini et al., 2007; Michel & Meuter, 2008). A business with a loyal customer base and a good reputation should be successful,

ceteris paribus<sup>10</sup>. Studies demonstrating the final stage of the service – profit chain, the link with profitability, have typically been case studies (Keiningham et al., 1999; Rust et al., 1994) or have emphasised the need to focus on certain segments of the customer base and be ruthless about discarding unprofitable customers (Gee et al., 2008; Reinartz & Kumar, 2002; Zeithaml, Rust, & Lemon, 2001), since “not all customers generate *acceptable* cost and revenue streams” (Söderlund & Vilgon, 1999 p. 2). Case studies can demonstrate pre- and post- intervention improvements, but cannot easily control for factors which might have affected the outcome, such as changes in economic conditions affecting supply and demand.

From the 1970s, the PIMS programme (Profit Impact of Market Strategy) was established to try to identify the factors associated with differences in performance of business units, and to quantify the return on investment in these factors, which included market share, relative product quality, labour productivity and the rate of growth of the market served by the business unit. The research found a positive link between market share and profitability, to the extent that some people believe the acronym stands for Profit Impact of Market Share (Buzzell, 2004). Defending the research, Buzzell argues that one would expect such a link because of “economies of scale” (p. 480) and also that there is a correlation between ‘quality’ and ‘market share’. However this assertion is not supported by the research of Van Ree (2008, p. 9) who finds a “weak and non-significant relation” between market clout and both service quality and customer satisfaction for suppliers of the business support services cleaning, security and catering. The researchers in the PIMS study calculated that market share, relative product quality, labour productivity and the rate of growth of the market explained about 40% of the variance in Return on Investment for the business units in the database (Buzzell & Gale, 1987), and quality improvements were found to increase market share as well as selling prices (L. D. Phillips, Chang, & Buzzell, 1983). Some studies have criticised or refuted PIMS’ findings on the grounds that “failure to control for unobservable factors influencing profitability both biases and exaggerates the effect of strategic factors” (Jacobson, 1990, p. 74). Gummesson (2004) also concedes that PIMS had some difficulty quantifying cause and effect, but believes that such a task is almost impossible because of the “myriad factors and influences in marketing” (p. 140). Buzzell himself acknowledges that hardware and software limitations at the time meant that multivariate statistics were not widely in use, rendering the task much more difficult than it might be nowadays (Buzzell, 2004).

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<sup>10</sup> The “other things” which must “remain equal” include, for example, competitive pricing and adapting to customers’ changing requirements

## **2.4 Service Quality in Commercial Property Management**

As discussed in Chapter 1, this thesis is concerned with property management as a service to occupiers provided by owners of commercial property or their managing agents. Depending upon the nature of the lease, the tasks involved in property management may include liaising with occupiers, issuing rent and service charge documentation, dealing with legal processes and third party suppliers and property maintenance amongst other things. The type of lease dictates whether responsibility for expenditure lies with the landlord or the occupier. Full repairing and insuring (FRI) leases place the onus for maintenance and insurance upon the occupier, who usually pays a service charge in addition to rent, whereas leases with all-inclusive rents, typically more common in short-term rentals such as serviced offices, place the obligation for property upkeep upon the owner.

The intensity of effort required by a property manager depends upon the stage a property has reached within its lifecycle, with most emphasis being on aspects such as snagging, marketing, fitting out and procuring services when a new development is introduced to the market. Thereafter, the focus is on day-to-day aspects of service delivery and monitoring, with increasing need for maintenance as the property ages, culminating in refurbishment and redevelopment as the property depreciates or becomes obsolete, in order to prepare for the next tenancy (McAllister, 2012). In carrying out these tasks, the property manager should aim to balance the needs of the occupier with obligations to the property owner. This requires effective communication and processes which are designed to achieve efficient delivery of service if the occupier is to be satisfied with the quality of service (Palm, 2013; Rasila, 2010).

An indication of a company's attitude towards customer service may be found from its website, annual report and other company publications. An assessment of the evolution of customer focus in the property industry in Sweden found that half of the Commercial Real Estate Companies whose Annual Reports were analysed for evidence of commitment to customer-related actions and intentions were deemed to "espouse customer-orientation" (Palm, 2011). A larger study, commissioned by the European Public Real Estate Association (EPRA), measured evidence of customer-focus in published statements from the top 50 European publicly listed property companies and concluded that "86% have embraced the customer (tenant) focused approach to property ownership and management to some degree" (Real Service & EPRA, 2012, p. 1). But how does customer focus translate into excellence in property management and occupier satisfaction?

Variants of SERVQUAL have been devised for real estate service quality measurement. RESERV is a model designed to measure satisfaction with Real Estate Brokerage i.e. residential estate agency service (Nelson & Nelson, 1995). It uses the five dimensions of SERVQUAL plus an additional two: Professionalism and Availability. Other dimensions used to measure service quality in Facilities Management include Credibility, Security, Competence, Accessibility, Communication, Understanding, Courtesy, Consulting, Offering, Clout, "Geographics" and Price in addition to - or as variants of - SERVQUAL's five dimensions (Van Ree, 2009; K. W. Westbrook & Peterson, 1998). The inclusion of Price as one of the dimensions allows an explicit assessment of the extent to which value for money affects responses. Baharum, Nawawi, & Saat (2009) devised PROPERTYQUAL in order to investigate occupier satisfaction with purpose-built office buildings; the model uses SERVQUAL's five dimensions plus some property-specific ones: Cleanliness, Building Services, Signage, Security, Parking and Building Aesthetics.

As discussed previously, service quality in property management cannot be measured directly; rather one must obtain feedback from the recipients of the service – the occupiers – to determine their satisfaction with the property management service. However the experience of real estate professionals, the opinions of occupiers, and research conducted by academics have provided some consensus about how to treat the tenant as a valued customer and to deliver a service that conforms to the requirements of occupiers.

According to Wilson et al., (2001), the customers of corporate real estate organisations value responsiveness and flexibility, an understanding of their customers' needs and accountabilities, professionalism, reliability, accessibility, risk management, ease of doing business and competitive pricing / value-for-money / affordability. Chin & Poh (1999) discuss the application of Total Quality Management (TQM) to property management, stating that "customer satisfaction in property management means providing professional, reliable and consistent delivery of management services to the client ... [ensuring that the properties they manage are] in satisfactory working order at all times, with minimal breakdowns and disruptions" (p. 311). TQM also "involves monitoring, measuring, analysing and reducing variations in the quality of products and services" and achieving continuous improvement through benchmarking.

In the UK property industry, the findings from focus groups have provided guidance to help property owners and managers achieve customer satisfaction. Regular tenant-association meetings are held at many multi-occupancy buildings and estates, allowing occupiers and property managers to share opinions and discuss issues. The outcome from such discussions between occupiers and managers enabled Edington (1997) to create a framework to help real estate organisations become more customer-centric. The steps involve:

- Defining the Customer
- Researching what the Customer wants
- Creating a Mission for the Organisation
- Leadership, Empowerment, Training and Communication
- Process Improvement and Information Management
- Measuring success and Benchmarking

The RealService Best Practice Group (RSBPG) is an organisation that was founded in 2004 as a benchmarking and best practice group of property owners and managers “dedicated to helping the real estate industry improve customer service and generate improved property performance” (Morgan; RealService Ltd, 2010). RSBPG uses an approach similar to that of Edington to define best practice in property ownership and management, with building blocks encompassing: *Service strategy; Customer Solutions; People and Leadership; Supply Chain Management; Operations; and Measurement*. Each building block comprises several criteria, and the whole framework acts as an instrument for quantifying the extent to which members of the RealService Best Practice Group adhere to the agreed “Best Practices”, with their scores forming the RSBPG Best Practice Index. The framework was developed with input from occupiers and its validity has been assessed using customer satisfaction questionnaires. Participants in the Best Practice Index make an initial assessment of their own performance, which is followed up with external verification and moderation of scores to ensure integrity and consistency.

The broad consensus amongst the differing methods of assessment is that occupier satisfaction depends upon property owners and managers behaving professionally, being empathetic to the needs of occupiers and empowered to deal promptly and effectively with requests. In addition to the prerequisites of giving good value-for-money and showing flexibility, the importance of good communication and a good relationship with occupiers is evident from research on customer service quality.

## **2.5 Property Management Service: Attitude, Behaviour, Skills, Motivation**

The heterogeneous nature of service delivery has already been mentioned; commercial occupiers, themselves not homogenous, typically interact with several different service providers including building managers, facilities managers, mechanical and electrical maintenance staff, cleaners, security staff and receptionists, as well as leasing agents and the landlord's legal advisors. Whether these people are employed directly by the landlord, or whether they are sub-contractors, they are representatives of the landlord and the service they provide to occupiers reflects upon the landlord.

According to Rasila (2010), the "personal characteristics of the contact person have a major impact on how the entire company is perceived" (p. 87). However she also states that "Personal attributes are important – if the chemistry worked, personal factors added value; if not, the issue was an unimportant nuisance" (p. 88). Superficially this conforms to Kano's description of a "Value-added quality, which provides satisfaction when fulfilled but does not cause dissatisfaction when unfulfilled" although Kano used this term to describe something which the customer would not have expected (Kano et al., 1984). In the case of property management service, an occupier is likely to expect the manager to be someone with whom s/he can have a pleasant professional relationship.

Since property management is so dependent upon the calibre and knowledge of staff, Phillips & Roper (2009) have devised a framework for talent management in real estate, comprising five key elements for (1) attracting; (2) selecting; (3) engaging; (4) developing; and (5) retaining employees. To prevent unwanted defections, it is important to keep experienced and highly valued employees happy (Levy & Lee, 2009). In a study of reward management practices amongst real estate companies Azasu (2012) investigates the extent to which various perks and incentives are used to reward managers and non-management personnel, finding that many give performance-related and / or annual bonuses and managers are often given profit shares or stock options. Similarly, several members of RealService Best Practice Group make performance related bonuses dependent upon customer satisfaction scores. As Azasu points out, however, "it is not always easy to hold individuals accountable in service industries", and there is the risk that such a bonus structure might fail to curb the "opportunistic behaviour ... predicted by agency theory" (p. 462).

Agency theory is particularly applicable to the use of third parties to supply property management services: these suppliers are agents of the principal, the property owner, and it is important that the interests of all parties are aligned to ensure the suppliers can be trusted to deliver the service that is expected by the owner and occupiers (Benjamin et al., 2006; Farncombe & Waller, 2005; Palm, 2013). In their study of trust in Corporate Real Estate outsourcing relationships, Freybote & Gibler (2011)

assert that trust complements contracts and monitoring, and, together with reputational risk, can act to mitigate opportunistic, self-interested behaviour. They discuss how trust can be enhanced by membership of professional organisations such as RICS and Corenet Global because such accreditation is perceived as a guarantee of quality and that certain standards will be adhered to.

For an organisation to aspire to excellence in customer service it is important that senior managers should lead by example, and that the organisation should have appropriate “Values” that are not merely statements on the organisation’s website or in its Annual Report, but which are understood, embraced and applied by all members of staff (Morgan et al., 2012; RealService Ltd, 2010; Williams & Whybrow, 2013). The London 2012 Olympics was famous for the 70,000 volunteer Games Makers who were trained to give good customer service by applying the “London 2012 Hosting Actions” summarised by the mnemonic I DO ACT – exhorting staff to be Inspirational, Distinctive, Open, Alert, Consistent and part of the Team (LOCOG, 2011). These actions can be applied by property managers, who, “having been recruited for their attitude, must be given the tools and authority to do their job: appropriate training to ensure they have the knowledge and skills they need and suitable back-up if they encounter an issue they cannot deal with” (Sanderson, 2012). They need to understand the business needs of their occupiers, and, as far as is feasible, to deliver a customised service tailored to the needs of each. This view is supported by the suggestion by Chin & Poh, (1999) in their research into property management in Singapore that property managers, like all service providers, “must have the leadership qualities, positive personal attributes, relevant knowledge and skills” (p. 316). They should be motivated and enthusiastic about giving excellent customer service and have customer-focused processes to make life as easy as possible for occupiers (Gountas, Gountas, & Mavondo, 2014; Grönroos, 1981; Phillips & Roper, 2009).



## 2.6 Assessment of Occupier Satisfaction – Benefits and Pitfalls

All methods of assessing customer satisfaction suffer from potential flaws, including the subjective nature of satisfaction, the extent to which a sample of respondents is representative of the population and the risk that respondents may give answers that they think the interviewers want to hear. For example, several studies have been conducted into the impact on Customer Satisfaction of “Service with a Smile” (Barger & Grandee, 2006; Clark, 2012). The scores given by customers rating *facilities* were found to be much higher when staff smiled at customers or merely wore a smiley badge whilst not actually smiling themselves. This study claimed to show that customers’ perception of a product or service is increased by smiling. However, the results could be interpreted as showing that customers did not want to criticise facilities when they felt that staff were making an effort, even though their actual perception may have been unchanged. Other studies of the effects of smiling have been conducted, including one which found that smiling waitresses earn more in tips (Tidd & Lockard, 1978), but again this could be interpreted as customers showing empathy for a waitress who was evidently trying hard, and is not necessarily proof of increased satisfaction.

Issues with the Likert-style subjective scoring questionnaires, and indeed with the reliability and validity of questionnaires in general (Fisher, 2004; p. 292; Saunders, Lewis, & Thornhill, 2003; p. 166), include the likelihood that respondents are busy and may not answer with due care and attention. If prior expectations are not taken into account, different respondents will have a different opinion of the meaning attached to a particular number on the scale. It is this limitation that underlies the debate between Cronin Jr & Taylor, (1992, 1994) and Parasuraman, Zeithaml, & Berry, (1994); Zeithaml, Berry, & Parasuraman, (1990), with the research of Cronin and Taylor suggesting that the benefits of a more parsimonious questionnaire outweigh the potential loss of information if expectations are not included. Omission of “Expectations” may not matter if the sample is very large, but may distort results for small samples. Expectations are formed from prior experience or from recommendations, as well as individual circumstances relating to the cost of the service, and perceived value for money.

If occupier satisfaction surveys are to be used as a vehicle for improving customer service, care must be taken with sample selection (Brooks & Tsolacos, 2010, p. 45). The interviewees must be representative of the population of occupiers and should be sufficiently knowledgeable about issues affecting occupiers so that they can give informed opinions. Where a property is leased by a small enterprise – an independent retailer, for example, or a small business with few employees – the opinions of the leaseholder will be of most value, although the views of the employees about aspects such as the comfort and maintenance of the property and its facilities may also be relevant. Where the

property forms just one of many rented by a large organisation, the property director may have views about administrative aspects of property management, such as lease and service charge documentation, and ease of obtaining a license to make alterations, but may have no experience of working in the property and may be unaware of local issues. Therefore, in order to get meaningful feedback, it is crucial to ask people who have the requisite knowledge and authority to give accurate, representative responses.

Sample bias may occur because those who are willing to respond to customer satisfaction surveys may be those who are more altruistic than the norm, and responses may be affected by 'courtesy bias' giving the answers they believe the researcher wants to hear (Pawson & Sosenko, 2010). Conversely, the disaffected may have more reason to respond, risking the possibility that findings from the study are unduly negative, and that expenditure on rectifying all issues may be unwarranted. Employees with the time to reply to questionnaires may not be the decision-makers in an organisation so answers may not be representative of the views of the lessee.

Jargon might be used in a questionnaire, and respondents may be unwilling to admit to ignorance of terminology (M. Jones, 2006, p. 89; Saunders et al., 2003, p. 258). If feedback is being given by a group, for example during a tenant meeting or focus group, herding behaviour might occur, with respondents being unwilling to voice 'outlying' opinions. This can lead to the situation where a customer who appears to be satisfied "defects" soon afterwards, particularly where respondents express less than "complete satisfaction" (Jones & Sasser, 1995; Reichheld, 1996).

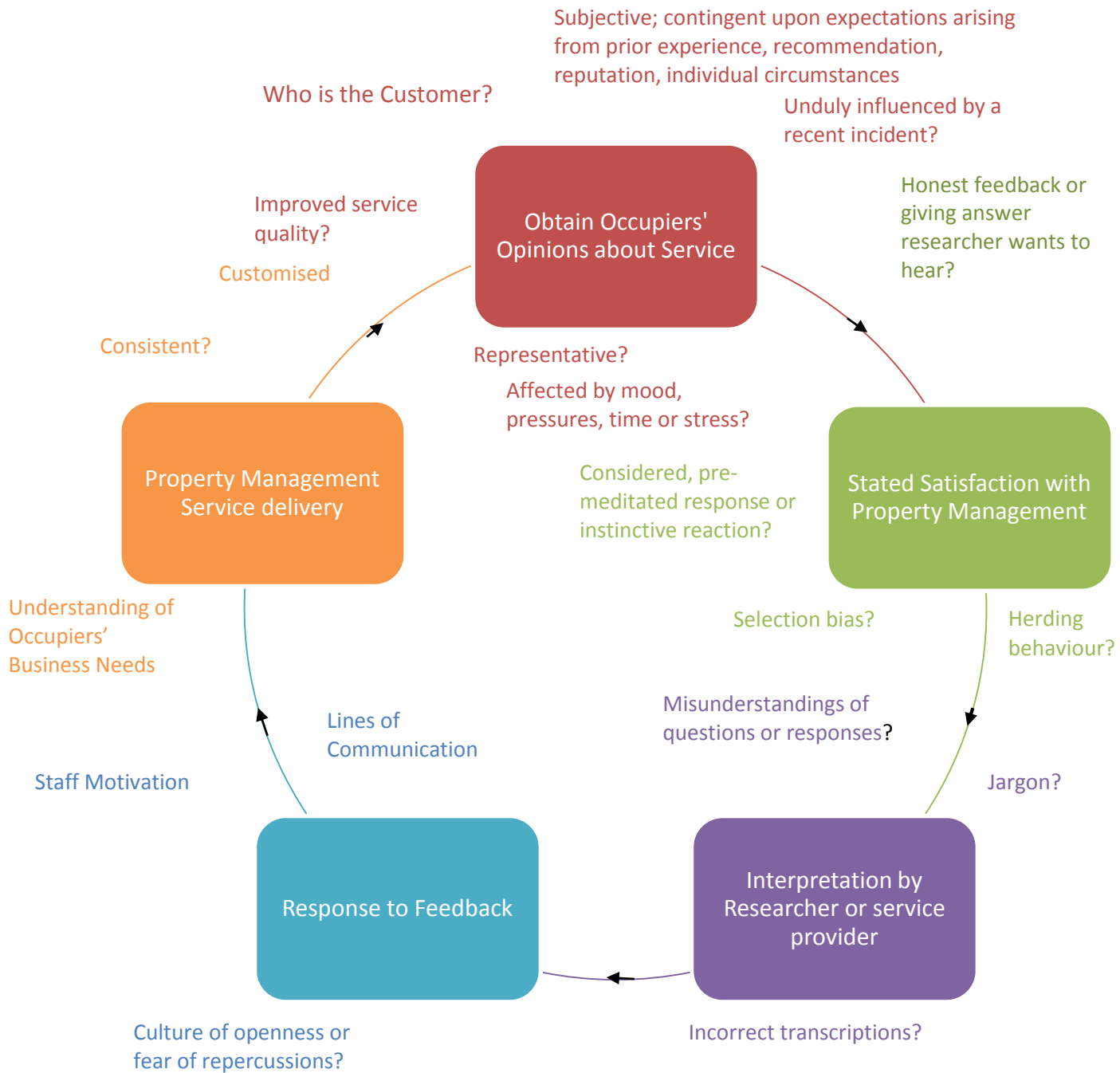
Opinions are, by definition, subjective; even with an unbiased stratified sample, the opinions of one respondent may not represent the views of all occupiers. A further complication is that opinions given on a particular day may be unduly influenced by the mood of the respondent, the pressure they are under or by a recent incident which may prejudice their recollection of the service they generally receive (Oliver, 1993). Even if respondents do have genuine opinions about their perception of customer service quality, they may not express these opinions clearly and honestly.

Lizieri (2003) discusses problems which may beset research into occupier satisfaction, and the validity of findings from case studies. The design of questionnaires may reflect the "researcher's preconceptions" thereby "contaminating the responses" (p. 1164). Similarly, the "perceptual filters" of the researcher may contort the findings from analysis of questionnaires, and the conclusions from case studies may not have wider applicability or validity.

The value of occupier satisfaction studies, and the extent to which the service provider acts upon findings, will depend upon the culture within the organisation. An over-emphasis on receiving a high stated satisfaction score can lead staff to beseech or morally blackmail customers into ticking the top boxes, regardless of their actual satisfaction, to “fix the score rather than fixing the store” (Pruden & Vavra, 2013). Targets for satisfaction scores with perverse incentives can lead to an over-emphasis on trivialities and neglect of important aspects of service. Williams & Whybrow (2013) describe staff at a call centre cutting callers off mid-sentence in order to meet the company target of answering calls within three rings! As well as ensuring the focus is on aspects that are of greatest importance to occupiers (Martilla & James, 1977; Vavra, 2002), organisations must be open to constructive criticism and use it to improve service.

These issues are highlighted in **Figure 2-2**, which depicts a feedback loop in which occupiers are asked to rate their satisfaction with property management, and the ratings and opinions are intended to improve service delivery. However, as discussed here, the diagram shows how interpreting findings from such studies is not straightforward because of the scope for misunderstanding questions and responses, the answers potentially not reflecting the genuine opinions of respondents and that they may not represent the views of all occupiers.

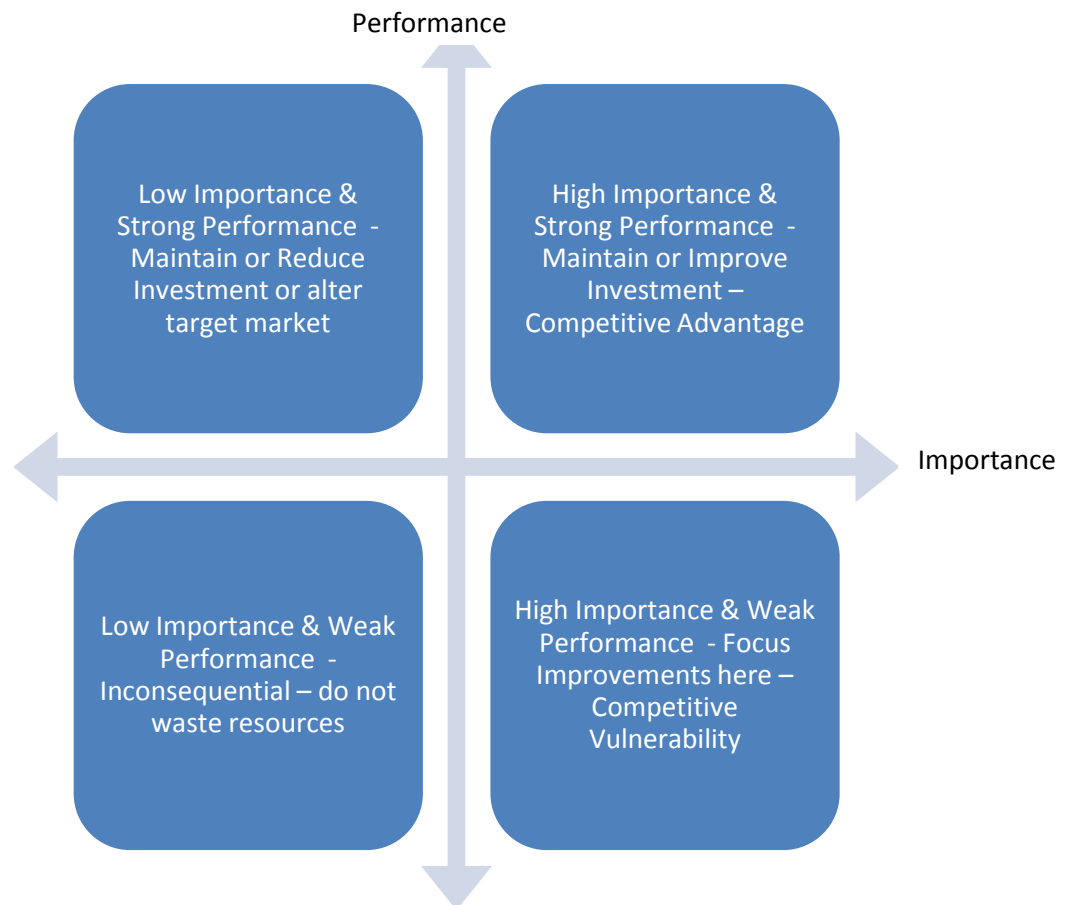
**Figure 2-2: Considerations when conducting Occupier Satisfaction Studies**



## Improvement of Property Management Service Delivery

Based on the feedback given by occupiers, property managers should devise an Action Plan to address major issues, focusing particularly on those aspects where customers perceive deficiencies or those which have most impact (Fornell, 2007; Vavra, 2002). A widely used method of categorising the components of customer service according to the impact they have on customers is by drawing a grid with four quadrants. Such grids, in the context of customer service and customer satisfaction, were first described by Martilla and James (1977). Organisations should concentrate on improving service quality in those aspects of customer service in the bottom right sector of the grid, since these are the ones perceived by customers to be of the greatest importance *and* which offer scope for improved performance (**Figure 2-3**). One method of assessing importance is to ask customers to distribute for example 100 points amongst the various items of customer service according to their relative priorities (Zeithaml et al., 1996) or simply to ask them to rank their priorities. Alternatively, the importance of items can be inferred from correlations with customers' stated overall satisfaction or stated behavioural intentions (Hair et al., 2014), a method which is employed in the quantitative analysis in Part 2 of this thesis.

Figure 2-3: A Generic Importance-Performance Grid, adapted from Fornell (2007)



## 2.7 Previous Studies of Occupier Satisfaction

Various studies into the satisfaction of occupiers of commercial property have been conducted, although few have looked at whether satisfaction affects lease renewal, advocacy of landlord and the financial performance of property. Most have concentrated on the individual sectors of retail, office and industrial, and even those such as the UK Occupier Satisfaction Index (RealService Ltd & Property Industry Alliance, 2012), that interviewed occupiers in the three main sectors, have not attempted to analyse similarities and differences between sectors.

### 2.7.1 Satisfaction of Retailers

One recent study into the satisfaction of store managers in Shopping Centres in Nigeria (Oyedokun, Oletubo, & Adewusi, 2014) looked at the importance and performance of aspects of shopping centre management. The research found that the aspect of service delivery that matters most to the respondents was the timeliness of delivery on promises made, which had a Mean Rating of 4.3 / 5 for importance. Other important aspects, with mean ratings above 4.1 / 5, were the following:

- Having a concerned and caring attitude
- Communication and contact with property manager
- Time taken to respond to tenant's complaints
- Timeliness of Maintenance and Repair Works
- Capability and Competency of management
- Letting you know when things will be done
- Transparency & Accountability in Service Charge Administration
- Timing / Schedule of Rent Payment

Respondents showed the greatest satisfaction (mean ratings for performance in excess of 4 / 5) with

- Friendliness of staff and Management
- Having a concerned and caring attitude
- Communication and contact with property manager

The authors suggest that:

*"Areas for possible improvement include time taken to respond to tenant's complaints, timeliness of delivery on promises made, transparency in service charge administration, capability and competency of management and letting tenant know when things will be done... [T]he level of actual satisfaction is slightly higher than expected satisfaction under friendliness of the staff and management."* (p. 292)

A study into the relationship between the facilities management of shopping centres in Hong Kong and customer satisfaction (Hui, Zhang, & Zheng, 2013) found that the aspects which matter most to retailers are well-managed communal facilities (Heating, Ventilation & Air-Conditioning (HVAC), lifts and washrooms), communication, courtesy, responsiveness, cleaning and marketing / promotion of the Shopping Centre.

Making use of the work of the RSBPG Best Practice Index (“Real Service Best Practice Group,” 2012) and the opinions of focus group attendees, Morgan et al., (2012) created the British Council for Shopping Centres’ Customer Care Guide, which showcases examples of Best Practice in Shopping Centre Management, and advises centre managers how to deliver excellent service to retailers. The guide has self-assessment checklists to enable centre managers to assess and monitor their performance.

### **2.7.2 Satisfaction of Occupiers in the Office Sector**

Most research into occupier satisfaction has been in the office sector. Using their PROPERTYQUAL instrument (discussed earlier) Baharum, Nawawi, & Saat (2009) received responses from occupiers of 318 office buildings, and these indicated that cleanliness, security and building services were the most important property-specific aspects of property management. From a service perspective, reliability and responsiveness were found to be of most importance to occupiers.

Research has been conducted by Appel-Meulenbroek (2008) into aspects of office buildings and building management that encourage occupiers to remain in their existing accommodation or to move elsewhere. The main “Keep Factors” were found to be the appearance of the building, its space and potential to extend, the internal climate, flexibility, quality of fittings, accessibility and parking, and amenities in the vicinity. “Facility Services” were also found to be important, although what these encompassed is unclear. The full list was guided by the Thesis of Pen, (2002).

Westlund et al., (2005) used the Swedish Real Estate Barometer, an Index of the satisfaction of office occupiers, and IPD data to investigate the relationship between customer satisfaction and the financial performance of real estate companies, although not at the individual office building level.

A recent study into the opinions of major corporate occupiers conducted on behalf of the British Council for Offices (British Council for Offices & RealService Ltd, 2015) compared the satisfaction of office occupiers in 2015 with those of a similar study conducted in 2002 (British Council for Offices & KingsleyLipseyMorgan, 2002). The 2002 Study found that “The UK office industry is failing to meet the levels of service demanded by its customers”, and that “UK occupiers remain frustrated by the

adversarial nature of the property industry” (p. 5). One UK property director expressed the opinion that: “The attitude of landlords is ‘you are lucky to be talking to us!’ I don’t expect to have to fight for a relationship when I buy a service” (p. 8). In the recent study, satisfaction with aspects such as lease flexibility, understanding of occupiers’ needs, and amenities within the office and the vicinity had improved markedly since the earlier study, and the property industry was perceived to be less adversarial.

The 2002 study into Office Occupier Satisfaction also interviewed property directors in the United States. Whereas in the UK the relationship with landlords was perceived to be confrontational and hierarchical, occupiers in the U.S. were more satisfied with the relationship with their landlords, and felt they were treated as valued customers.

As part of the research, a series of focus groups was held, and participants derived a proposed definition of “Building Performance”:

*“Building performance can be defined as the way that a building supports occupiers’ differing aims and needs, including driving quality and value, meeting sustainability objectives and providing environments that meet the needs of users, resulting in efficient and effective workplaces” (p. 32).*

The research also suggested creating a scorecard to measure building performance, aiming to achieve that “sweet spot” (p. 29) that balances the needs of landlords, property managers and occupiers.

Satisfaction with value for money was found to have increased between the 2002 and 2015 studies, and the researchers state that “occupiers consistently place value and quality ahead of cost considerations when defining building performance” (p. 29). The authors suggest that finding ways to “enhance the occupiers’ business profitability” may be more important than “seek[ing] to reduce operating costs (e.g. service charges)”. This idea is supported by Coenen, Alexander, & Kok (2012 p. 83) who propose that effective Facilities Management can contribute “Use Value”, “Social Value”, “Environmental Value”, and “Relationship Value” to an organisation.

The importance of property management was highlighted in a very recent study into office occupier satisfaction in both the Netherlands and the UK (CBRE, 2015), which found that “effective and efficient property management has a clear bearing on occupier satisfaction”<sup>11</sup>.

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<sup>11</sup> News Section of website (06/08/15)



### **2.7.3 Satisfaction of Occupiers in the Industrial Sector**

There has been little investigation of occupier satisfaction in the industrial sector; that which has been carried out has mostly looked at the extent to which the industrial unit or factory met the business needs of occupiers rather than satisfaction with service. Henneberry (1991) looked at both the “fit” (to the needs of occupiers) and the “adequacy” of industrial buildings, using 138 responses to questionnaires. He concluded that fewer than half of the respondents felt their building to be adequate in all respects, the main problem being ceiling height. The second most frequently cited issue, mentioned by 18 respondents (11.5%), was service provision, an aspect of relevance to this present research. An earlier paper, (Henneberry, 1988), emphasised the importance of matching the size, design and location of the property to the functional needs of the occupier’s business, and of the importance of flexibility in layout to adapt to the changing needs of the business.

Research into the factors affecting the satisfaction of industrial occupiers in the Czech Republic (Jaroslav Kaizr, Haynes, & Parsons, 2010) received 43 responses to questionnaires and concluded that the main determinants of satisfaction are the services provided by the landlord, the business terms, the quality of the facility, whether or not expectations are fulfilled, the location, and, primarily, the rent. This research cites that of Tsolacos et al., (2005) asserting that occupiers’ willingness to pay rent depends on the profitability of their business. This paper also cites one of the UK Occupier Index (OSI) Studies (RealService Ltd & IPD, 2009). These OSI studies will now be discussed in more detail.

### **2.7.4 Benchmarking Satisfaction of Occupiers of UK Commercial Property (OSI)**

Attempts to benchmark the satisfaction of occupiers of commercial properties in the UK began in 2004, with subsequent annual or biennial studies commissioned by the Property Industry Alliance and CORENET GLOBAL UK. The raw data for the occupier satisfaction study of 2007 was made available for this present research. For the other years, only the published summaries are available (IPD, Cfi-group, & RICS, 2005; RealService Ltd & Property Industry Alliance, 2012)

The first UK national tenant satisfaction survey was carried out in 2004 and reported in 2005 by CFI Group, founded by Claes Fornell, the originator of the Swedish and American Customer Satisfaction Indexes, in conjunction with IPD Occupiers and RICS (IPD et al., 2005). For this study, nineteen people were interviewed in depth, and 66 completed short on-line questionnaires. Tenant retention at that time was “about 40%” (p. 4), and the Index stood at 39 / 100. The scores for Landlord recommendation and tenant loyalty were similarly low (28 and 39 respectively). The methodology used for that study was the same as for the ACSI, incorporating both importance and satisfaction with performance. The actual derivation of the Index is not explained but used structural equation

modelling. The areas of greatest tenant dissatisfaction were lease flexibility, communication with landlord / agent including timely response, contract detail and bureaucracy, problem resolution and value for money.

No national study appears to have been carried out in 2005, but between 2006 and 2012 annual studies of occupier satisfaction have been conducted, to create an annual occupier satisfaction index. The methodology has changed over the years, however, making comparisons difficult. In particular, the results cannot be compared with the original tenant satisfaction index because of the change in method of calculation.

From 2006 – 2008, RealService<sup>12</sup> carried out the national survey, interviewing 237, 251 and 231 occupiers of retail, office and industrial property, with the results published in the subsequent years – OSI 2007, OSI 2008, and OSI 2009. The methodology is described in the reports (KingsleyLipseyMorgan & IPD Occupiers, 2007, 2008; RealService Ltd & IPD, 2009) as comprising “confidential, in-depth, telephone interviews with property directors and other senior personnel with responsibility for property. ... The views of small businesses, larger corporations and public sector organisations were sought” (KingsleyLipseyMorgan & IPD Occupiers, 2007, p. 4). For these three years, ‘customer satisfaction’ is defined as “the ability of the supply side of the UK commercial property industry to deliver the products and services that its occupier customers require in a way that meets, and preferably exceeds, their expectations” (ibid). The OSI questionnaire for the reports published in 2007 - 2009 asked occupiers about their satisfaction with various aspects of their occupancy, as shown in **Table 2-2**.

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<sup>12</sup> RealService (originally called KingsleyLipseyMorgan) is an independent consultancy for the UK property industry that specialises in helping landlords and property managers to meet the needs of occupiers. It was founded in 1999 by Howard Morgan, and is a distinct from its “sister organisation”, RealService Best Practice Group, RSBPG, which was mentioned earlier

**Table 2-2: UK Occupier Satisfaction Index Questionnaire**

1. Availability of commercial property of the right size and location
2. Flexibility of leases within the UK, in terms of lease length and the ability to break
3. Flexibility of leases within the UK, in terms of the ability to assign and sub-let
4. Availability of the desired lease terms at an acceptable price
5. Property industry understanding of business needs
6. Being treated as a valued customer by the property industry
7. Communication
8. Responsiveness to requests for service
9. Facilities services
10. Value for money - service charge
11. Timeliness of service charge management information
12. Quality of service provided by property advisors, lawyers and other professionals
13. Progress the UK property industry has shown in environmental initiatives
14. Availability of information on the environmental performance of the building
15. Compliance with the RICS Code of Practice for Commercial Leases
16. Compliance with the RICS Code of Practice for Service Charges
17. Overall satisfaction as an occupier
18. Change in overall satisfaction as a customer of the UK property industry over the past three years
19. Relationship with the UK property industry compared with other business to business (b2b) relationships
20. Overall value for money

Using the raw data for OSI 2007 it can be seen from **Table 2-3** that all of the questions asked in the questionnaire produce responses which are highly correlated with overall satisfaction and with occupiers' stated likelihood of renewing their lease. Both non-parametric (Kendal's Tau and Spearman's Rho) and parametric (Pearson) correlation statistics were used because the variables took the discrete integer values 1 – 5, and with such ordinal data the assumption that the data is an interval scale may not be valid. The legitimacy of using Pearson's correlation coefficient, for example, hinges on whether the gap between consecutive integers is the same. If occupiers are asked to give ratings on a scale of 1 – 5, it may well be legitimate to assume that '4' is twice as good as '2', whereas if the ratings are 'very dissatisfied', 'dissatisfied', 'neutral', 'satisfied' and 'very satisfied', it seems unlikely that 'satisfied' is twice as good as 'dissatisfied'. From the Table, it can be seen that all three statistics do in fact give very similar results, from which it can be inferred that the occupier satisfaction ratings for this sample do approximate to interval scale data. All the correlations are statistically significant at the 99% level. The strongest correlations are with

- Understanding occupiers' needs;
- Being treated as a valued customer;
- Facilities management; and
- Overall value for money.

**Table 2-3: Correlations of OSI questions with overall satisfaction using data from 2007**

		Kendall's tau	Spearman's rho	Pearson
		<b>Correlation with Overall Satisfaction</b>		
Size / Loc Availability	Correl Coeff	.321**	.361**	.387**
	N	206	206	206
Spec / Build Quality	Correl Coeff	.300**	.334**	.325**
	N	196	196	196
Lease Flexibility	Correl Coeff	.371**	.427**	.430**
	N	212	212	212
Assign / Sub-let	Correl Coeff	.300**	.340**	.345**
	N	189	189	189
Lease Terms Value for Money	Correl Coeff	.398**	.446**	.457**
	N	193	193	193
Understand Needs	Correl Coeff	.500**	.562**	.561**
	N	210	210	210
Valued Customer	Correl Coeff	.496**	.562**	.566**
	N	212	212	212
Communication	Correl Coeff	.372**	.423**	.436**
	N	209	209	209
Responsiveness	Correl Coeff	.288**	.328**	.344**
	N	205	205	205
FM	Correl Coeff	.416**	.456**	.508**
	N	139	139	139
Service Charge Value for Money	Correl Coeff	.276**	.305**	.318**
	N	162	162	162
Service from Advisors	Correl Coeff	.355**	.394**	.419**
	N	197	197	197
Environmental Progress	Correl Coeff	.237**	.272**	.294**
	N	188	188	188
Overall Value for Money	Correl Coeff	.445**	.494**	.528**
	N	213	213	213

For the occupier satisfaction index in 2008, the published summary report lists the aspects of service which were found to correlate most highly with overall satisfaction – see **Table 2-4** (KingsleyLipseyMorgan & IPD Occupiers, 2008).

**Table 2-4: Strongest correlations between aspects of service and overall occupier satisfaction from 2008 OSI Report**

Aspect of Service	Correlation with overall satisfaction
Availability of lease terms at a fair price	0.53
Communication	0.52
Understanding needs	0.52
Responsiveness to requests	0.50
Overall value for money	0.49
Value for money for service charge	0.48

The main findings from the study the following year were that occupiers perceived lease flexibility, sustainability, and landlord – tenant relationships to be improving. In particular communication, empathy and responsiveness were felt to be better than previously, although still lagging levels found in other service industries. Occupiers’ main priority was cost control, and half of respondents felt service charges were poor value and documentation about expenditure insufficiently transparent. Respondents felt that landlords were adhering to the Lease Code, and starting to implement the Service Charge Code.

From 2007 – 2009 the occupier satisfaction index was found to be 55/100, 57/100 and 57/100. The actual method of calculation is opaque<sup>13</sup>, because it involved weighting questions according to their impact on overall satisfaction. An analysis of variance calculation using the raw data for the occupiers’ stated overall satisfaction shows that mean satisfaction was slightly higher in 2008 (3.02 compared with 2.94 and 2.95 in the other years), but that the difference is not statistically significant.

For the OSI Report 2010 the questions were changed to tie in with the RICS Code for Leasing Business Premises in England & Wales, 2007. The survey used a scale of 1 – 10 for occupiers to rate satisfaction with various aspects of the industry, for example: “On a scale of 1 to 10 where 1 is extremely dissatisfied and 10 is extremely satisfied, how satisfied are you with the application for consent process?” The survey used an on-line questionnaire and received 163 responses, predominantly from the office and retail sectors. The scores for each question were weighted to take account of the size of

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<sup>13</sup> The method of calculation was not made available so the Index cannot be corroborated nor explained here

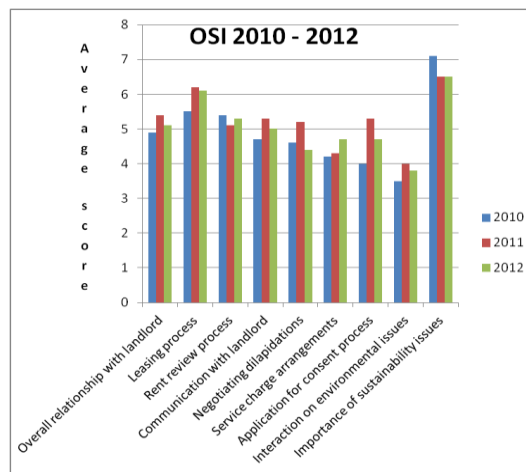
the organisations responding to the survey, and also weighted according to the capital value of each sector in the investment market. The results are shown in **Table 2-5**.

**Table 2-5: OSI Scores for aspects of Occupier Satisfaction in 2010**

OSI 2010 Questions	Weighted average score
Lease review terms and conditions achieved	5.8
Satisfaction with the leasing process	5.5
Satisfaction with the lease negotiation (rent)	5.5
Satisfaction with the rent review process	5.4
Satisfaction with the process of relinquishing a property	5.3
Satisfaction with building insurance arrangements	4.9
Satisfaction with communication with landlord	4.7
Satisfaction with negotiating a recent dilapidations claim	4.6
Satisfaction with service charge arrangements	4.2
Satisfaction with application for consent process	4.0
Satisfaction with interaction on environmental issues	3.5

**Figure 2-4** shows how the satisfaction of the sample of UK occupiers of commercial property varies between aspects of tenancy and also from year to year. However the weighting process, the small sample size and the absence of individual scores makes it impossible to assess if differences are statistically significant. In particular, differences from year to year appear to be small. It seems likely, from the graph, that UK occupiers' satisfaction with the leasing and rent review processes is higher than their satisfaction with service charge arrangements and the process of applying for consent to sublet or make alterations. There also appears to be a mismatch between occupiers' perceptions of the importance of sustainability issues and their satisfaction with landlords' engagement with such issues.

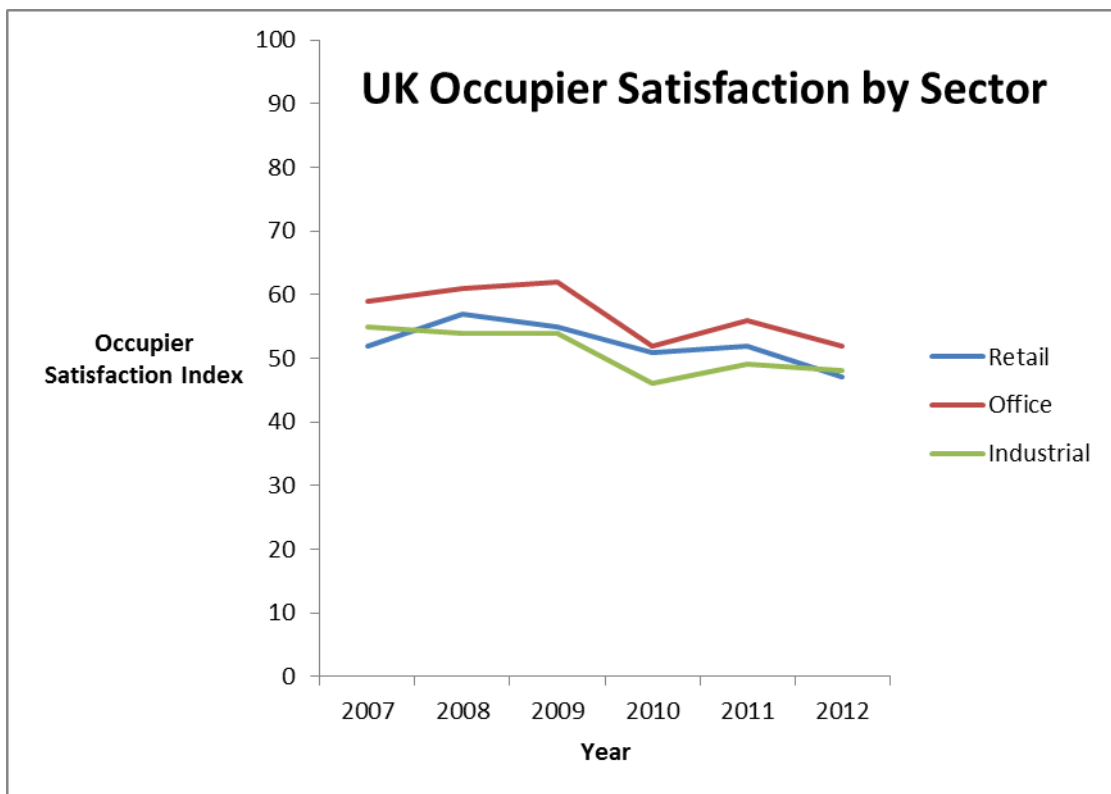
**Figure 2-4: UK Occupier Satisfaction 2010 - 2012**



Produced from data in OSI 2012 (Property Industry Alliance & GVA, 2012)

**Figure 2-5** shows the annual variation in Occupier Satisfaction Index for the three sectors of commercial property. To enable comparison, scores in years when the index was out of a maximum of 10 have been scaled so that all values are percentages. The chart reveals a gradual decline in the satisfaction index, but this is likely to be due to the different questions and methods of calculation. In general, scores for office occupier satisfaction are higher than those for retailers and industrial occupiers.

**Figure 2-5: OSI Scores By Sector**



Although the summary reports for each of the annual studies give the OSI Index by sector, in only two of the years, 2007 and 2010, are sample sizes mentioned for the separate sectors.

Sample Sizes	Retail	Office	Industrial
2007	83	108	46
2010	67	77	17

Thus it can be seen that, as with most research into occupier satisfaction, most respondents are in the office sector.



**Table 2-6** summarises the key findings and Index Values from the UK Occupier Satisfaction Studies from 2004 – 2012.

**Table 2-6: Summary of UK Occupier Satisfaction Studies 2004 - 2012**

Year of Study / Reporting	No. of Respondents	OSI Score <sup>14</sup>	Key Findings
2004-5 (IPD et al., 2005)	85	39/100	<ul style="list-style-type: none"> <li>• Satisfaction with location and standard of premises – High;</li> <li>• Satisfaction with lease flexibility, communication with landlord / agent, responsiveness, contract detail, problem resolution and value for money – Low.</li> </ul>
2006-7 (KingsleyLipseyMorgan & IPD Occupiers, 2007)	237	55/100	<ul style="list-style-type: none"> <li>• Leases perceived to be more flexible and better suited to business needs, but perhaps at too high a price;</li> <li>• Occupiers did not feel ‘valued customers’ and wanted property owners to show a greater understanding of their needs;</li> <li>• Respondents wanted more direct contact with their landlord.</li> </ul>
2007-8 (KingsleyLipseyMorgan & IPD Occupiers, 2008)	251	57/100	<ul style="list-style-type: none"> <li>• Fewer respondents gave ratings of ‘poor’ or ‘very poor’;</li> <li>• Highest level of dissatisfaction was with value for money for service charges;</li> <li>• Larger organisations showed higher levels of satisfaction, and this appeared to be as a result of obtaining better terms because of their clout.</li> </ul>
2008-9 (RealService Ltd & IPD, 2009)	231	57/100	<ul style="list-style-type: none"> <li>• Satisfaction with lease flexibility, sustainability, and landlord – tenant relationships appeared to be improving;</li> <li>• Occupiers’ main priority was cost control, and half of respondents felt service charges were poor value and documentation about expenditure insufficiently transparent.</li> </ul>
2010 (Property Industry Alliance & Corenet Global, 2010)	163	4.9/10	<ul style="list-style-type: none"> <li>• Satisfaction highest for processes of rent review, leasing, and handing back of property</li> <li>• Lowest satisfaction for service charge arrangements, environmental initiatives and obtaining applications for consent</li> </ul>
2011 (GVA, Property Industry Alliance, & Corenet Global, 2011)	159	5.4/10	<ul style="list-style-type: none"> <li>• Satisfaction with the rent review process had deteriorated compared with the previous year, although satisfaction with the leasing process and the terms and conditions achieved was reasonably high;</li> <li>• The aspects with lowest satisfaction were service charge arrangements and landlord interaction on environmental issues.</li> </ul>
2012 (Property Industry Alliance & GVA, 2012)	182	5.1/10	<ul style="list-style-type: none"> <li>• Negotiation of dilapidations was considered unsatisfactory, particularly by respondents from small and medium enterprises (SMEs)</li> <li>• Although satisfaction with service charge arrangements had improved, it was still low, at 4.7/10</li> </ul>

<sup>14</sup> Note three different methodologies were employed to calculate the “occupier satisfaction index” for 2005, 2007-9, and 2010-12

Attempts to conduct UK Occupier Satisfaction studies in 2013 and 2014 were unsuccessful because the on-line questionnaire attracted too few responses to make meaningful analysis possible<sup>15</sup>.

A Global Tenant Survey was conducted in 2013 (BOMA & Kingsley Associates, 2013a), and covered the United States, Canada, New Zealand and South Africa. 1200 occupiers of predominantly office buildings responded to the survey. Occupier satisfaction was found to be highest in the United States (4.09 / 5) and lowest in South Africa (3.43 / 5).

**Table 2-7** is taken from the report; it is apparent that all aspects included in the survey do show strong positive correlation with occupiers' overall satisfaction, but that the service features of property management have a particularly great impact.

**Table 2-7: Correlations with Office Occupiers' Overall Satisfaction (derived from BOMA Global Tenant Study 2013)**

Rating Area	Correlation with Overall Satisfaction	Category of Feature
Property Management Overall	0.780	Service
Overall Quality of Property	0.740	Physical
Property Management - Communication	0.697	Service
Maintenance / Engineering	0.678	Service
Building's Health & Hygiene Features	0.670	Health / Sustainability
Leasing Process	0.658	Service
Accounting	0.639	Service
Property Amenities	0.630	Physical
Heating & Air-Conditioning	0.614	Physical
Lobbies & Common Areas	0.609	Physical
Restrooms	0.908	Physical
Waste Removal	0.607	Health / Sustainability
Building's "Green" Practices	0.588	Health / Sustainability
Exterior Appearance	0.582	Physical
Security	0.563	Service
Recycling	0.559	Health / Sustainability
Cleaning / Janitorial	0.554	Service
Elevators	0.526	Physical

<sup>15</sup> Private discussion with BPF, March 2015

The study found that tenants occupying the largest amount of space had higher overall satisfaction, supporting the findings of the UK OSI studies (KingsleyLipseyMorgan & IPD Occupiers, 2008), and other research that has demonstrated that larger organisations have higher levels of satisfaction, apparently as a result of obtaining better terms because of their clout (Crosby et al., 2006b; Halvitigala, Murphy, & Levy, 2011). Interestingly, this view is not supported by the recent study into the satisfaction of office occupiers in the UK (British Council for Offices & RealService Ltd, 2015) in which respondents felt that “it is not the case that the big occupiers are getting the best service and smaller occupiers are losing out” (p. 16). Rather, receiving good service can be a “complete lottery”.

The Occupier Satisfaction Index and the Global Tenant Study give indications of the key aspects of most importance to occupiers of commercial property. Some aspects relate to satisfaction with the property itself, and others relate to the property management service. Occupiers’ overall satisfaction is also affected by the extent to which the building meets the needs of their business (Henneberry, 1991). Occupiers will be more aware of the property-related aspects when choosing to rent the property initially. The service-related aspects are less tangible, and at the start of the relationship, their adequacy largely be taken on trust (Palm, 2015).

## 2.8 Determinants of the Financial Performance of Commercial Property

As discussed in Section 2.3, quantifying the benefits of relationship marketing is difficult, and appears not to have been attempted previously for the property industry. Property performance depends upon many factors, including the property itself, its location, age and state of repair, its specification and amenities as well as the way it is managed.

Many researchers have applied econometric models to try to establish which factors affect rental levels and capital growth for retail, office and industrial commercial property, but no-one appears to have attempted to include occupier satisfaction as a factor in the financial performance of individual properties. The closest research of which the author is aware is that of Westlund et al., (2005) who used office occupier satisfaction data from the Swedish Real Estate Barometer and financial indicators of landlord companies to perform structural equation modelling to explore the relationship. However this was aggregated over each landlord's portfolio and did not use data at the individual property level<sup>16</sup>.

A widespread approach when investigating determinants of property performance is to use hedonic regression modelling with rent or capital value as the dependent variable and aspects of supply and demand as the independent (explanatory) variables. A review of studies prior to 2000 has been carried out by Higgins (2000). Typical variables include:

- Physical building characteristics, such as the size, age and location of the property;
- Supply variables, such as vacancy rates, total stock availability and new construction orders;
- Demand variables such as employment in the relevant sector, GDP and other productivity measures.

Sector-specific aspects are also included; for example, when modelling retail rents, relevant demand factors include population, consumer expenditure and confidence, disposable income, type of anchor store in a shopping centre, traffic (vehicular and pedestrian) and retail sales (see, for example, Sirmans & Guidrey (1993); Tay, Lau, & Leung (1999); Tsolacos (1995) and (Ke & Wang, 2016)). When seeking to explain industrial rents, explanatory variables include industrial employment, manufacturing output, industrial floor-space and building-specific features such as the number of dock high doors (Buttimer Jr, Rutherford, & Witten, 1997; Feribach, Rutherford, & Eakin, 1993; Higgins, 2000). Office rents have been found to depend upon factors including office employment, required floor-space per employee, office vacancy rates, physical building characteristics and location (Hendershott, Lizieri, & Matysiak,

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<sup>16</sup> The study was referred to in the previous section. Findings from this study are described later in this chapter.

1999; Hendershott, 1995; Sivitanides, 1998). Other explanatory variables included in some models are interest rates, bonds and equity indices, since these affect investment in real estate; an investor will invest in property only if the predicted returns exceed those from other forms of investment, on a risk-adjusted basis.

Previous studies which most closely resemble the research in this thesis are perhaps those looking at the impact of environmental performance and “eco-certification<sup>17</sup>” of buildings on rents, vacancy rates and capital value. Such studies include Addae-Dappaah & Chieh Su Jen (2011); Fuerst & McAllister (2011); and Reichardt et al. (2012). This research is discussed in the following chapter, as part of the discussion of landlord reputation, since environmental certification is one of the ways in which landlords can demonstrate that they are responsible corporate citizens. One caveat to the present research is that it is questionable whether any landlord has sufficient market presence for customer service to be a significant differentiator when a customer wants to be in a particular location. The functionality of the property and its location are likely to be overriding considerations for a prospective or current occupier, so research is needed to investigate to what extent customer service is able to exert an influence on retention rates and property performance.

Many of the complications of modelling determinants of property performance can be avoided by looking not at absolute returns but at returns relative to an appropriate benchmark which takes into account the month or year of the assessment and the nature of the property. It is this approach that is used in the empirical study in Part 3 of this Thesis, and should control for many of the vagaries and confounding factors which affect income return and capital growth.

“Controlling for confounding factors, randomness and time-varying risk preferences presents major challenges in estimating whether there are statistically significant differences between property asset managers in terms of income and capital growth” (McAllister, 2012b, p. 6). This makes it difficult to attribute improved performance to a particular factor, and explains why few attempts have been made to assess the impact of occupier satisfaction on property performance. This present research not only aims to carry out such an assessment, but also to compare and contrast the relationship for the three sectors of commercial property.

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<sup>17</sup> Certification according to schemes such as BREEAM, LEED, Energy Star etc.

## Chapter 3 The Service-Profit Chain for Commercial Real Estate

This Chapter describes the framework for the research – an extension of the “service-profit cycle” shown earlier (**Figure 2-1**). This framework describes the conceptual ways in which excellent service should affect the financial performance of commercial real estate. The three stages of the framework are discussed, and relevant previous literature is reviewed.

As discussed in the previous chapter, the mechanisms by which excellence in customer service affects profit are considered to be through increased loyalty of customers, turning customers into advocates who recommend the service company through word-of-mouth or public compliments and through enhanced reputation. This concept is known as the “service-profit chain” (Heskett et al., 1997) and the idea has been applied to real estate by Edington, who adapts a “marketeer’s representation of customer service, the ‘ladder of loyalty’” to form a ladder of retention showing the stages and activities involved in converting a prospective occupier into an advocate or “magnet occupier” and the rewards to the property owner (Edington, 1997 p. 21). The model has also been discussed in the context of managing social housing (Clapham, Clark, & Gibb, 2012, pp. 274–276), being described as a “workable concept” in academic housing studies “where marketing and service quality play a key role” (ibid, p. 480). Heskett’s model is also considered relevant to the Facilities Management of commercial property (Wiggins, 2014, p. 16), because of the “core role” played by FM in delivering services “to support the chain of events and relationships in an organisation”.

**Figure 3-1** shows a conceptual framework for the interactions between occupiers and landlords, and indicates how customer service quality, customer satisfaction, loyalty and advocacy could affect the performance of a property and the profitability of a real estate company. The framework was derived by considering the process of renting commercial property - the notional “customer journey” of Norton & Pine (2013) and Shostack (1985), and combining this with Heskett’s “Service – Profit Chain”. The framework was validated in discussions with commercial property owners and managers belonging to the RealService Best Practice Group. It considers the decisions that an occupier makes in renting commercial space in three main stages:

1. The leasing process, including the availability of suitable properties and the terms of the lease;
2. Occupancy until lease break or expiry; and
3. Advocacy and reputation.

These stages are now described briefly, with a more detailed explanation, including reference to previous research and relevant literature, in subsequent sections of this chapter.

### **Stage 1: The availability of suitable property, the lease terms and the leasing process**

Initially, a potential tenant wishes to rent office, retail, industrial or other business space and has preliminary discussions with Landlord X (typically via their leasing agent). The potential occupier might have approached the landlord for a number of reasons, including learning of the availability of a desirable property with an appropriate specification, in a convenient location at a fair price. Such reasons have little to do with customer service, although the reputation of the landlord or a prior relationship might affect whether a potential occupier makes that initial enquiry. The subsequent step, whether or not the lease gets signed, is, however, likely to be affected by the customer's satisfaction with the lease terms and the leasing process.

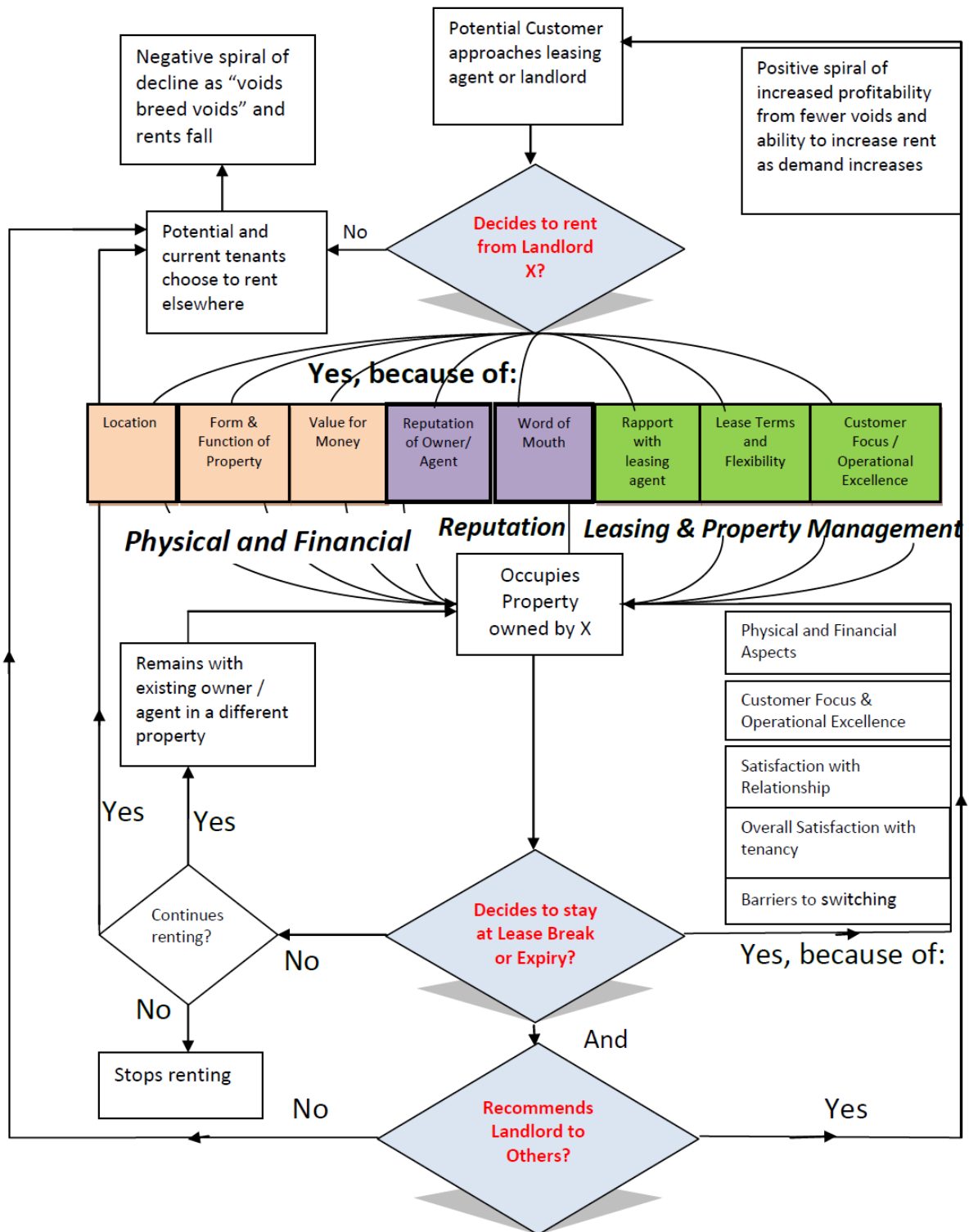
### **Stage 2: Occupancy until lease break or expiry, at which time the occupier decides whether or not to renew the lease**

Once an occupier has moved in to the premises, s/he will have contact with the owner or agent, and customer satisfaction with that relationship may influence whether or not the occupier renews the lease at lease-break or expiry. A satisfied occupier is more likely to remain, whereas an occupier who is dissatisfied with the service s/he has received during their tenancy is less likely to renew the lease.

### **Stage 3: Advocacy and reputation (or dissatisfaction and detraction) – the opinions expressed by occupiers to acquaintances and the wider world, which contribute to the reputation of the landlord or managing agent, and might affect the decision of other potential occupiers**

An occupier who is satisfied with the relationship and service received may recommend the landlord or agent to other associates seeking to rent premises. In this way, good customer service could help to minimise voids, and a landlord with a good reputation may be able to charge a rental premium. Conversely, an unhappy occupier may spread negative messages about the landlord, leading to more of the landlord's properties remaining un-let (an increased void rate). Profit should be inversely proportional to the void rate, and voids may start a downward spiral, particularly in a retail environment where empty units deter shoppers thus reducing footfall and profits for other retailers. Reputation is also affected by signalling (Akerlof, 1970; Ball et al., 2001, p. 119; Palm, 2015) for example by branding, by demonstrating a commitment to corporate social responsibility and sustainability and by obtaining appropriate professional qualifications (Benjamin et al., 2006; Hui, Lau, & Khan, 2011; G. S. Sirmans & Sirmans, 1991).

Figure 3-1: Conceptual Framework positing links between customer service & property performance





### 3.1 Stage 1: Suitability of the Property, Lease Terms, and Leasing Process

According to the proposed research framework, **Figure 3-1**, whether or not a prospective tenant signs the lease on a property is likely to be influenced by factors including the form and function of the property, its location, the reputation of landlord and property manager, the terms of the lease and the quality of the service they receive during the leasing process.

#### 3.1.1 Occupiers' Requirements

Much of the literature about commercial occupiers' property strategy is written from the perspective of the tenant organisation and what their own "in-house" property directors, property managers or facilities managers need to consider in order to maximise the utility of the premises they occupy – for example: Edwards & Ellison (2004); Gibler, Black, & Moon (2002); Haynes & Nunnington (2010); Haynes (2012); Heywood (2011); Nourse & Roulac (1993); Roulac (2001). These books and articles focus on "Corporate Property Management" and the need to ensure the company's real estate strategy is aligned with and supports the overall strategy and goals of the company. The findings from this literature are nevertheless highly relevant to this thesis, because the key to delivering the products and services required by occupiers is for the landlord and their managing agents to understand the business needs and strategy of the latter.

"Businesses need property in order to generate turnover and profits," according to Edwards & Ellison (2004, p. 9) who advise that to select appropriate premises an organisation must consider the property user characteristics, the required features of the property, the organisational objectives in relation to real estate, and institutional arrangements such as the decision whether to rent or buy. According to the Royal Institution of Chartered Surveyors, an estimated 90% of UK companies choose to rent their premises rather than to buy (cited by Financial Director Magazine (2014)). Nourse & Roulac (1993) and Roulac (2001) propose that organisations ought to consider a variety of strategies to maximise the utility of the properties they occupy, including minimising occupancy costs, increasing flexibility, promoting staff objectives, and management, marketing and sales processes. They should also consider how to improve the efficiency of production, operations and service delivery and take advantage of ways in which the property creates value for the business.

These ideas are extended by Haynes & Nunnington (2010) and Haynes (2012) who present a framework to align the property strategy of a company with its overall corporate strategy. This uses 10 'P's as a mnemonic for the aspects to take into account, starting with **Planet**, representing sustainability and corporate social responsibility. The remaining factors are **Position** (the business environment), **Purpose** (the mission and strategy of the company), **Procurement** (the decision

whether to rent or buy the property), **Place** (the location of the property as well as its specification), **Paradigm** (the culture, beliefs and values of the organisation), **Processes** (the activities undertaken by the organisation – the work processes), **People** (the staff, their psychology and preferences, and how to maximise **Performance** and **Productivity**).

Commercial landlords, lettings agents and property managers need to be able to supply property that allows organisations to align their property strategy with their business strategy; they must understand commercial occupiers' requirements. Many articles have been written and studies conducted into occupiers' priorities when looking for new premises. Most of the studies have been in the office sector, including Adnan & Daud (2010); Gibson et al. (2000); Leishman, Orr, & Pellegrini-Masini (2011); Levy & Peterson (2013); Remøy & Voordt (2014); van de Wetering & Wyatt (2011); and White (2013). Typical findings from studies which interviewed office occupiers are shown in the following lists:

**Criteria Used to Select New Office Space by Importance (Gibson et al., 2000)**

1. Location
2. Cost of property (rent, rates)
3. Ability to vacate / exit
4. Other occupational costs
5. Length of commitment
6. Expansion / contraction capabilities
7. Efficiency of layout
8. Speed of occupation
9. Opportunity to promote branding and identity
10. Inclusive package of real estate, fit out and services

**Priority of factors considered by occupiers when choosing new premises to rent (White, 2013)**

1. Location
2. Monetary Cost of Rent
3. Condition of the Premises
4. Service Charge Provisions
5. Interior Design and Layout of the Premises
6. Rent Review Clause
7. Landlord's Reputation
8. Existing Tenants' Experience of the Premises
9. Managing Agent's Reputation
10. Previous Experience with the Landlord and / or Managing Agent

White (2013) in particular finds the reputation of the landlord and managing agent and the opinions of existing tenants to be important, albeit of lower priority than the physical and financial aspects. Findings from such studies will depend upon whether occupiers are given free rein to voice opinions or whether they are required to prioritise options from a list presented by the researcher. In the former case, the findings depend upon how the researcher categorises respondents' comments; in the latter, key factors might be omitted.

In their study of factors influencing the choice of office in Kuala Lumpur, Adnan & Daud (2010) consulted not the decision-makers themselves but property consultants, agents and managers in order to obtain the opinions of "experts" – experienced real estate service suppliers. A Delphi panel method was used in which a list of factors was presented to the panellists who had to rank them in order of importance until a consensus was reached. In the study, the researchers used questionnaires and needed just two rounds to achieve consensus. The findings were classified into four key considerations; the most important criteria for each are shown in **Table 3-1**, with the full list from which these were selected being shown in **Table 3-2**.

These researchers have followed up this research with further investigation of the factors influencing the building choices of three categories of tenant in Kuala Lumpur, using a sample of twenty-eight occupiers from three industries - Finance/Banking (10), ICT & Media (9), and Oil & Gas (9) (Adnan, Daud, & Razali, 2015). They found similar priorities for each category of occupiers, with "rental and occupancy costs" being the highest priority and "afterhours operations" and cleaning/housekeeping" being the lowest priority. "Financial" and "locational" factors were of the greatest importance, although the ICT & Media sector places lower emphasis on "location" while the Oil & Gas sector places higher priority on "building" factors than the other two sectors. "Responsible Management" was found to be of moderate importance for all categories of occupier.

**Table 3-1: Factors considered by property consultants to be the most important considerations for office occupiers (Adnan & Daud, 2010)**

<b>Location</b>	<b>Lease Features</b>	<b>Building Features, Services &amp; Management</b>	<b>Monetary Consideration</b>
Branding/Image	Renewal Terms	Security & Access Control	Rental Rate
Access to Amenities	Length Lease	Responsive Management & Maintenance Team	Total Occupancy Cost
Accessibility to Public Transportation	Termination Clause	Car Park Provision & Accessibility	Cost of Fit Out
Traffic Conditions		Building Image/Identity	
Level of Crime		Modern IT & Communication Systems	

The study participants ranked the individual criteria in order of importance:

- 1 Rental rate
- 2= Security & Access Control
- 2= Responsive Management & Maintenance Team
- 4= Building Image/Identity
- 4= Car Park & Accessibility
- 6= Total Occupancy Cost
- 6= Length of Lease
- 6= Renewal Terms
- 9= Cost of Fit Out
- 9= Branding/Image of Location
- 9= Access to Amenities
- 12= Accessibility to Public Transportation & Terminal
- 12= Traffic Condition
- 12= Modern IT & Communication System
- 15 Level of Crime

**Table 3-2: Full list of Factors and Sub Factors affecting Office Occupation Decision  
(Adnan & Daud, 2010)<sup>18</sup>**

Location	Branding/Image; Access to Market, Amenities, Skilled Labour Pool; Access to Cheap/non-skilled Labour; Convenience to Residential Area; Proximity to Similar Business; Proximity to Complementary Business, Proximity to support services suppliers, Factor of Production Costs, Access to Raw Materials, Proximity to Investors, Corporate Headquarters, Financiers, Specialised services, Government Authorities related to Business; Accessibility to Public Transport Terminal, Major Trunk Roads/highways; Accessibility to Public Transportation, by Private Vehicle; Proximity to other sub urban centres; Market Size; Visibility/ Exposure to Clients; Proximity to Competitors in Similar Business; Level of Criminal Rate, Pollution; Traffic Condition.
Lease Features	Use of Premise; Indemnity; Compliance to Law and In House Regulations; Fitting Out Clause; Alteration and Renovation Clause; Payment of Monies Clauses; Termination Clause; Review/ Renewal Terms; Repair and Insurance; Assignment/Sublet; Break Clause; Lease/Contract length; Incentives.
Monetary Consideration	Rental Rate; Service Charge Rate; Total Occupancy Cost; Cost of Fit Out; Running Cost; Cost of Exiting; Cost of Internal Infrastructure, Cost of Office Administration.
Building Features & Services	Security & Access Control; Responsible management and maintenance teams; Maintenance policy; Cleaning/Housekeeping Services; Energy Conservation & Recycling Policies; Computer Based Management/Maintenance Systems; Safety Policy & Procedure; Fire Prevention & Protection; Responsive to service requests; After Hours Operation; Floor Plate Size; Floor-to-Ceiling Height; Building Size; Flexible Space Layout & Large Floor plate; Orientation of office space; Good geomancy / "feng shui"; Availability of space for future expansion; Comfortable & Secure Working Environment; Space Efficiency; Column layout & Sub-divisibility; Floor Loading; Under-floor Trunking; Riser Space for ICT & Security Systems; Adequacy of Natural Lighting; Energy Efficient/ Green Buildings; Design and Space Planning; Raised Floor; Toilet & Sanitary Facilities; Air-conditioning system; Electricity system; Modern IT & Telecommunication system; Building automation & Energy Management System; Firefighting system; Adequacy of Ventilation; Standby Power Supply; Energy Generating Capacity; Control of M & E Services; Control of Noise; Ease of Use of Entrance; Entrance Capacity; Location of Lifts, Stairs & Corridor; Capacity of Lifts; Speed of Lifts; Passenger Lifts Performance & Control; Good Lifts & Loading Bay Design; Capacity of Stairs; Adequacy of Good; Access & Circulation feature; Capacity of Corridors for movement; No of Car Parks; Car park ingress/egress to/from building; Building Way finding e.g. Building Directory/Signage; Ease of Disabled Circulation; Food & Beverage outlets; Sport & Recreational facilities; Landscaping; Bank, Postal & Retail Services; Provision of Vending & Catering Services; Conference facilities.

<sup>18</sup> It is not clear whether these were presented to the panellists or whether these emerged from the first round of the study. In the second round, panellists were asked to rate the importance of the subset of features which emerged as the most important, using a 5-point Likert response format with options ranging from 'not important' to 'very important'.

Thus it can be seen that “a Responsive Management and Maintenance Team” was considered to be of high priority in the decision-making process.

Levy & Peterson (2013), in their study of office occupiers in New Zealand, find the eight factors of most importance are location, flexibility, cost, staff needs, external pressure, marketing, sustainable building and availability. The sample comprised occupiers who had chosen to locate to a sustainable building, and the rationale behind the study was to explore the importance of sustainability as a factor in deciding which premises to rent, but the study found that location, attractiveness to staff, marketing (brand and image) and flexibility were of greater importance.

At a micro level, Nunnington & Haynes (2011) suggest that, as well as the features of the potential building itself, office occupiers should consider the following characteristics when seeking to relocate their business:

1. Accessibility to motorway;
2. Traffic flow / congestion;
3. Access to main railway station, bus and tram services;
4. Security including lighting;
5. Proximity to hotel accommodation;
6. Proximity to shops/services/facilities;
7. Proximity to restaurants/coffee shops/cafes;
8. Convenient parking; and
9. Infrastructure – gas/electricity/alternative energy sources

Although, less research appears to have been carried out into factors affecting building choice for occupiers of industrial property, Henneberry, (1988) proposes that the advantages to industrial occupiers of moving to a modern, well-designed building are that it makes it easier to attract staff, reduces energy and maintenance costs and improves efficiency because of better use of floor-space and plant layout (p. 244).

Research into the requirements of potential occupiers generally shows the most important factor to be the **location** of the property, with emphasis on convenience of access for customers, staff, clients, suppliers and for product distribution, according to the nature of the business. “Locational” considerations include the prestige of the area and the potential benefits of agglomeration – locating near similar businesses to increase footfall from customers, for example, as well as public transport availability. However location does appear to be of diminishing importance in recent studies; for example, BOMA & Kingsley Associates (2013 p. 6) found “lease-related items such as term (79

percent), tenant improvement (TI) allowance (76 percent) and flexibility (76 percent)” were cited more frequently as being of ‘High’ or ‘Very High’ priority for potential occupiers than “specific location factors”.

The second factor that is of major concern is the **overall cost** of renting the property. Total overall costs of occupancy encompass far more than the headline rent. According to Gibson et al. (2000), fit out, running costs and business support services can account for more than half the total costs of occupation of offices. In retail and other sectors, too, business rates, service charges and other bills not covered by service charges can all result in significant expenditure (Ford, 2013). Property owners and managing agents can enhance the landlord – tenant relationship by ensuring that occupiers receive value for money and that occupiers understand the costs so that they can appreciate the value. Perhaps the main determinant of customer satisfaction is comprehending the value-in-use of a product or service (Lemke et al., 2010), so occupiers need to appreciate what costs they would incur if the service were not provided.

A crucial determinant of choice is, unsurprisingly, **the property itself**: its specification or foot-plate, condition, functionality, image and, increasingly, its sustainability, encompassing aspects such as energy efficiency, water and waste usage and “carbon-neutrality”. The building must be suited to the requirements of the business, and provide a pleasant and productive working environment.

As discussed in the previous chapter, the **reputation** of the landlord and/or managing agent has an impact on the profitability of property companies, and research into occupier requirements supports the assertion that a reputation for trustworthiness and good service does play a part in the decisions made by occupiers about whether to rent a particular property (White, 2013). The reputation may come from a prior relationship or a recommendation from other corporate occupiers which has engendered trust. Likewise, occupiers are influenced by the lettings process, incorporating the **professionalism** of the lettings agent, the clarity of any documentation and the terms of the lease itself. Because of uncertainty about the future of any business, commercial occupiers require **flexibility** when seeking to rent premises - flexibility in lease terms and also flexibility in space requirements.

The exact requirements of occupiers will depend upon their precise circumstances and business needs, and some compromise may be necessary since the ideal property may not be available at the time it is desired. Nevertheless, landlords need to be aware of occupiers’ preferences in terms of location, cost and value for money, the property itself, the importance of the reputation and professionalism of landlord and managing agent, and the demand for flexible lease terms. These considerations will now be addressed in more detail.

### 3.1.2 Location<sup>19</sup>

Location has typically been the most important consideration when potential occupiers seek to rent commercial premises. For the 2010 version of their periodic study into the European Cities most attractive to corporate occupiers, Cushman & Wakefield (2010) found London, Paris and Frankfurt to be most in demand by business. The survey of 500 senior managers or directors with responsibility for choosing property showed the four factors of greatest importance to be easy access to markets, customers or clients, availability of qualified staff, quality of telecommunications and transport links.

**Table 3-3: Macro-Level priorities for occupiers seeking to rent commercial space (Cushman & Wakefield, 2010)**

Priority	Criterion	% of respondents citing factor
1.	Easy access to markets, customers or clients	61
2.	Availability of qualified staff	58
3.	Quality of telecommunications	55
4.	Transport links with other cities and internationally	51
5.	Value for money of office space	36
6.	Cost of staff	33
7.	Availability of office space	31
8.	The climate governments create for business through tax policies or financial incentives	27
9.	Languages spoken	27
10.	Ease of travelling around within the city	26
11.	Quality of life for employees	20
12.	Freedom from pollution	19

Considering the sectors separately, those seeking to rent office space are likely to focus on convenience of access for staff, whether by car or public transport, and the prestige of the location if it is used for meetings with clients or customers.

In the case of industrial real estate, Cushman and Wakefield's Manufacturing Location Index (Cushman & Wakefield, 2013) considers the 30 countries with the largest manufacturing output and the Costs, Risks and Conditions associated with each. **Costs** encompass labour, electricity, construction and the cost of registering property; **risks** include those of earthquakes or flood, political risks, economic risks such as currency fluctuations, and security of energy supply; **conditions** include availability of suitable staff, logistics arrangements, time required to bring goods to market, sustainability and corporate

<sup>19</sup> The aphorism "location, location, location" is attributed to Lord Harold Samuel, the founder of Land Securities", who is reputed to have said: "There are three things that matter in property: location, location, location", although the double repetition does seem to have been in use from the early 20<sup>th</sup> century in newspaper advertisements for real estate (Safire, 2009)



social responsibility issues and the business environment such as corporate tax rates. The authors of the report do, however, question whether **location** will be such an important factor for industrial businesses in the future, warning that the advent of 3-D printing might create a “cottage-manufacturing industry, where the consumer has direct control over product production eliminating the need for costly manufacturing hubs” (p. 7).

The preferred location for retail property is in a state of flux. For a number of years, out-of-town retail parks and prime shopping centres have been expanding, at the expense of Town Centres, the decline of which has led to the commissioning of several reports examining how to re-vitalise the nation’s High Streets (Charlton et al., 2013; Grimsey, 2013; Portas, 2011). On the other hand, prime upmarket retail destinations with their luxury brands seem to be thriving according to the global analysis conducted by Cushman & Wakefield (2013a). This report evaluates retail rental growth and highlights areas of high occupier demand, describing economic trends for 64 individual countries and the impact on retail performance. For the **UK**, the report mentions that rental values increased by 15.6% in New Bond Street, the most expensive location in the country, and that luxury locations continue to attract exceptional interest from occupiers, with around 10 international brands competing for each store. Rents in such prime locations tend to come out of the marketing budget for the luxury brands, with the shops acting more like an advertising hoarding than a retail unit. Bond Street is also described as the most upmarket or “glam” shopping venue in the UK by Javelin Group (2013) in their index of retail venues VENUESCORE. This index ranks UK shopping destinations in various categories such as shopping centre, Retail Park, factory outlet, and city centre, according to criteria including fashion, food offering, tourist-friendliness, and whether the target age-group matches the local demographic. An analysis of the extent of Mall dominance in 20 UK cities shows that 89% of the retail offering in Bristol is based in shopping centres rather than High Street whereas in Greater London the figure is just 16%, illustrating the variation of retail offerings throughout the country.

Whether an occupier seeks a prime or a secondary location, will to a large extent depend upon the product or service they offer and the amount they are willing to spend on their business accommodation. Proximity to clients appears to be of higher priority for smaller office tenants, while being located near public transport, retail and other services as well as potential employees have been found to be higher priorities for larger tenants (BOMA & Kingsley Associates, 2013a, 2013b). From a landlord’s perspective, returns on property do vary with location<sup>20</sup>, but the difficulty for investors is predicting where the areas of high demand will be. The attractiveness of a location can change as the

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<sup>20</sup> IPD produce sector and region reports showing property returns: <http://www.ipd.com/>

infrastructure changes – for example, new transport links can bring prosperity to one region at the expense of others. If a location is particularly desirable, prices for land and property will be high, so although rents will also be high, it is possible for percentage returns on investment to be lower than elsewhere.

### **3.1.3 Costs and Value for Money**

Prospective occupiers are understandably concerned about the financial commitment in renting commercial premises. The obvious aspects – rent and business rates – may account for only about half of the total costs of occupation, with fit-out, running costs (energy and utilities etc.) and providing business support accounting for the other half (Gibson et al., 2000). Large firms might assess different models for their business premises – owning versus renting or even selling existing property to a property company and renting it back<sup>21</sup> (sale and lease-back). Reasons for choosing to rent rather than own the property relate to the cost of capital (i.e. having to borrow money to purchase the building and pay interest on the debt) and that the money should be able to be put to better use as a factor of production which can be invested in the business. Small businesses require an inexpensive option for their premises, and all will want good value for money. Indeed, the global occupier satisfaction study (BOMA & Kingsley Associates, 2013a) found that occupiers' greatest concern was their rent and the total overall costs of occupation. IPD has produced a Code to help occupiers to calculate their overall occupancy costs and also other key ratios including space usage, property effectiveness and environmental sustainability metrics (IPD Occupiers, 2013).

Owners or managing agents with a large portfolio should have sufficient influence and bargaining power to be able to negotiate discounts for bulk-buying services on behalf of occupiers, thereby reducing service charges or other costs which occupiers have to pay. Members of Real Service Best Practice Group are assessed on criteria which include delivering value for money to occupiers, and practices include procurement of insurance, utilities, telephony and IT and services such as waste disposal and recycling, at lower prices than individual occupiers would be able to achieve.

For services that are included in the rent and service charge, occupiers require a “well-drafted service level agreement with a provider they can trust” (Gibson et al., 2000) and want to feel confident that service charges are fair, transparent and well-managed (Freethy, Morgan, & Sanderson, 2011; Noor, Pitt, Hunter, & Tucker, 2010; Noor & Pitt, 2009; Tucker & Pitt, 2010). Owners and agents can help occupiers understand their expenditure by adhering to the RICS Code of Service Charges in

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<sup>21</sup> Sale and Lease-back might be done for a variety of reasons, such as the need for an injection of cash into a business which will be repaid, through rent, over a number of years.

Commercial Property, including sending out budgets at least one month before the start of the service charge year, and reconciliations within four months of the end of the year (RICS, 2014).

### **3.1.4 The Property itself**

When choosing a particular building, the main criteria will depend upon the nature of the business to be conducted. Industrial units generally require some office space as well as the factory, and may have particular requirements for features such as large eaves height and dock high doors (Ambrose, 1990; Fehribach, Rutherford, & Eakin, 1993; Geho, 1997). Stores on retail parks may initially be little more than large warehouses, but require fitting out with plentiful retail space and storage, and easy access to delivery and waste / recycling areas.

Amongst the most important determinants of respondents' choice of office premises are size and layout (Leishman et al., 2011). Organisations require appropriate desk configurations for employees, which are conducive to productive working, and, typically, meeting or conference rooms. Other aspects include lift capacity – average wait time at peak periods, reception facilities, access control and security, and toilet capacity – number of cubicles per employees per floor (Nunnington & Haynes, 2011). The aesthetics; form; and function of the building must be considered, as well as its age and condition. Some occupiers will be particularly concerned about the image their property conveys to clients and customers, while others, such as call centres, may be more concerned about maximising the number of employees per unit area. Other factors considered by potential occupiers relate to information technology, maintenance and signage policy, such as the ability to brand (Nunnington & Haynes, 2011). Top of Haynes' list, perhaps guided by "Planet", the first of the 10 P's referred to earlier (Haynes, 2012, p. 1), are BREEAM rating and EPC rating, and many occupiers are indeed concerned about the sustainability of their building.

However hard property owners try to invest in buildings which are attractive to occupiers, all properties suffer from depreciation to a greater or lesser extent. Depreciation can be defined as "a real loss in the existing use value of property, in rental or capital terms" (Baum & McElhinney, 1997, p. 2). It is caused by physical deterioration and by obsolescence arising from technological, social or regulatory changes taking place (Crosby, Devaney, & Nanda, 2013). Several studies have been carried out into depreciation in commercial properties including Salway, (1986); Baum (1989); Baum & McElhinney, (1997) Dixon, Law, & Cooper (1999); Crosby, Devaney, & Law (2011); Crosby, Devaney, & Nanda (2013). These produced contradictory findings as to the causes of depreciation, perhaps because the studies were conducted at different times and in differing locations; the causes of depreciation may vary temporally as well as geographically. Depreciation might be expected to be lower in locations

where land value is high, because the value of the land should not be affected by the physical deterioration of property sited on it, and might be expected to be higher in areas where a lot of new development is taking place, rendering older properties less desirable (Dunse & Jones, 2005). In their study of industrial properties in Scotland, Dunse and Jones (2005) did find that depreciation varies with location, and is higher where more development is occurring, but their research appeared not to support the contention that high land values reduce depreciation rates, perhaps because this factor was more than offset by the rate of building of industrial units in Glasgow at the time. Other factors identified as relevant when investigating depreciation are the configuration of the property including floor to ceiling height and plan layout (Baum, 1989), the internal specification including the quality of services (Baum & McElhinney, 1997), the lease terms including lease length and delegation of responsibility for the upkeep of the building (Baum & Turner, 2004) and capital expenditure on offices by investors (Crosby et al., 2013). Prime properties appeared to depreciate faster in the most recent study (Crosby et al., 2013) and local conditions affecting supply and demand were found to have a marked impact on depreciation rates. Most studies have found that age alone has low explanatory power for rate of depreciation. Typical rates of depreciation appear to be 1-2% per year, but Dixon et al., (1999) found rates of around 3% p.a. for offices during the decade between Baum's studies, but only around 0.3% for retail and industrials during that same period.

The nature of the lease, including its length and whether operational expenditure is the responsibility of the landlord (gross lease) or the tenant (e.g. net lease plus service charge) may also affect the rate of depreciation through physical deterioration of the property. Even though the length of UK leases has reduced over the last 15 years<sup>22</sup>, leases are still longer than in some other European countries. By comparing depreciation rates with typical lease structures, Baum & Turner (2004) find that the longer leases typical of the UK, together with the service charge approach of making tenants responsible for operational expenses, means that less money is retained by investors to be spent on maintaining the property and that this correlates with faster depreciation, with single-let offices incurring the highest rates of depreciation. Since this study, the introduction of REITs in the UK has limited further the amount of money that can be retained by companies that have adopted REIT status since most has to be distributed as shareholder dividends, meaning even less may be available to rectify the deterioration of properties.

One thing owners can do to try to mitigate depreciation is to work with occupiers to ensure the property is well-tended, and that the fit-out is as flexible as possible to allow modification to meet

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<sup>22</sup> The issues of lease length and flexibility are discussed in the next Section

occupiers' needs. "A building that is less capable of adapting to the changing needs of its users, compared with other buildings within its class, will suffer relatively rapid functional depreciation; as utility falls, the willingness/ability to pay rent will also fall" (Ellison & Sayce, 2007 p. 297). Sustainable properties may retain their value better, particularly if longevity and flexibility are factored into the design process (Eicholtz, Kok, & Quigley, 2010; Grover & Grover, 2015; Parker, 2008; World Green Building Council, 2013).

There are several reasons why a customer may consider the sustainability credentials of a property when deciding to take a lease. Perhaps the most important is that "eco-certified" properties should have lower energy bills thus reducing occupiers' costs. Occupiers are concerned about reducing their use of resources<sup>23</sup>, and about employee health and well-being, so value such certification schemes. "Eco-certified" buildings also tend to be prime properties, amongst the "best in class" (McAllister, 2012a), and corporate occupiers "typically have formal and established social responsibility programs in place to address the environmental concerns of their shareholders and employees<sup>24</sup>" (Cushman & Wakefield, 2013c, p. 5) as well as legal requirements such as carbon reduction commitments. It is important to such companies that the properties they occupy support their environmental agenda and convey the image they wish to portray. The design of properties which have been certified according to the requirements of BREEAM and LEED will have incorporated factors affecting the comfort of occupiers such as air-quality, natural lighting and temperature, creating an atmosphere which is the antithesis of "sick-building syndrome"<sup>25</sup>.

Many studies have supported the view that there is a link between green buildings and the health and productivity of occupants. The following interventions have proved beneficial: providing individual temperature controls for each worker, improved ventilation, lighting designed to control glare and brightness and access to the natural environment through daylight and operable windows, all of which have been found to improve the productivity of workers and organisations (Loftness et al., 2003;

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<sup>23</sup> water consumption savings resulting from strategies such as water reuse and efficient plumbing fixtures have been estimated at 39% compared with conventional buildings (Kats, 2010)

<sup>24</sup>Energy use in commercial buildings and manufacturing plants accounts for nearly half of total US greenhouse gas emissions and energy consumption (World Green Building Council, 2013). In Europe, the construction and real estate industry has been calculated to account for 42% of energy use and 35% of European greenhouse gas emissions (Thompson & Ke, 2012)

<sup>25</sup> Defined by the US Environmental protection Agency as describing "situations in which building occupants experience acute health and comfort effects that appear to be linked to time spent in the building but no specific cause or illness can be identified." (US EPA, 1991)

Lorenz & Lützkendorf, 2008; World Green Building Council, 2013). Feige et al., (2013) are unable to prove definitively that comfort improves productivity but they are able to demonstrate that work engagement is correlated with comfort. They assert that “high user comfort can reduce the turnover rate of employees” (p. 7). Their study also finds that “building users feel the need to have an influence on their work environment and do not wish to work in buildings which are fully automated” (p. 29). In their research into the link between “Green Buildings” and employee productivity, Miller et al., (2009) found 2.88 fewer sick days were reported on average after companies moved into a new, environmentally-certified building and that 12% of the 534 responses from tenants in 154 LEED or Energy Star certified offices ‘strongly agreed’ that employees were more productive, 42.5% ‘agreed’ that employees are more productive, whilst 45% found ‘no change’. Further benefits to occupants of green buildings include reduced maintenance, and risk avoidance or insurance issues such as mould and power cuts (Wiley, Benefield, & Johnson, 2010).

### **3.1.5 Lease Length and Flexibility**

Until the late 1990s, the “FRI institutional lease” of 25 years, with upward only rent reviews and the tenant being responsible for “fully repairing and insuring” the property, was the norm. It was favoured by landlords, because it gave them security of income with low risk (Bannister, 2008; Crosby et al., 2006b; Edington, 1997; Halvitigala et al., 2011; RICS, 2009). The lease terms were skewed very much in favour of the landlord, with tenants having little influence in the contract. The 2007 RICS Code for Leasing Business Premises in England and Wales expresses the hope that “the code will help the industry in its quest to promote efficiency and fairness in landlord and tenant relationships” (RICS, 2009, p. 1). This version of the Code stems from efforts by organisations representing occupiers and threats of government legislation to try to re-balance the landlord-tenant relationship. In particular, if the accommodation requirements of a business change, tenants need more flexibility to terminate their lease or assign it to another tenant or to sublet (Crosby, Hughes, & Murdoch, 2006a).

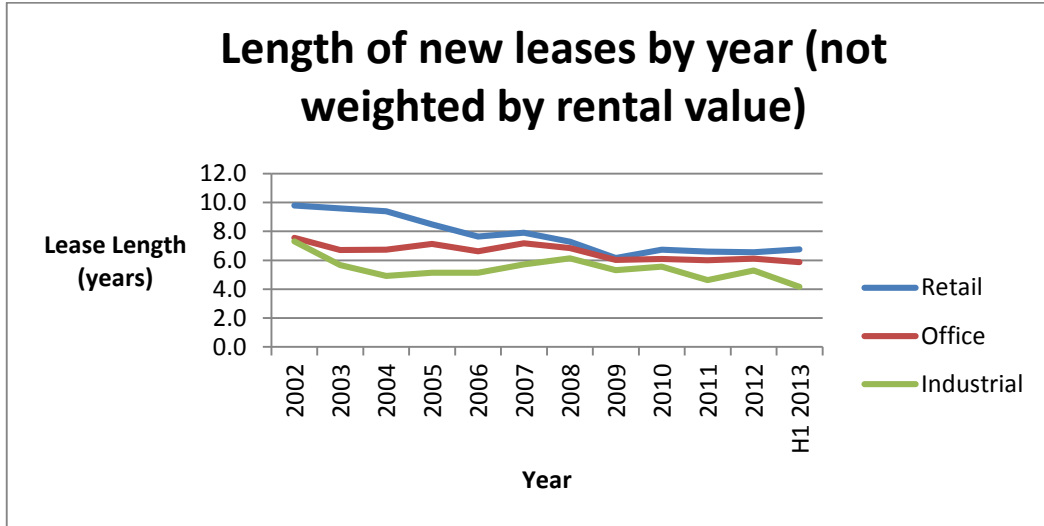
Landlords have responded to occupiers’ unwillingness to commit to the traditional long lease by reducing the length of leases and introducing break clauses – “more than 80% of new leases granted in 2012 were 1-5 years in length and the sheer number of short leases means that the average lease length has fallen to under 6 years for the first time, standing at 5.8 years” (IPD, Strutt & Parker, & BPF, 2013)<sup>26</sup>. **Figure 3-2** and **Figure 3-3** show the reduction in lease length between 2002 and mid 2013; the

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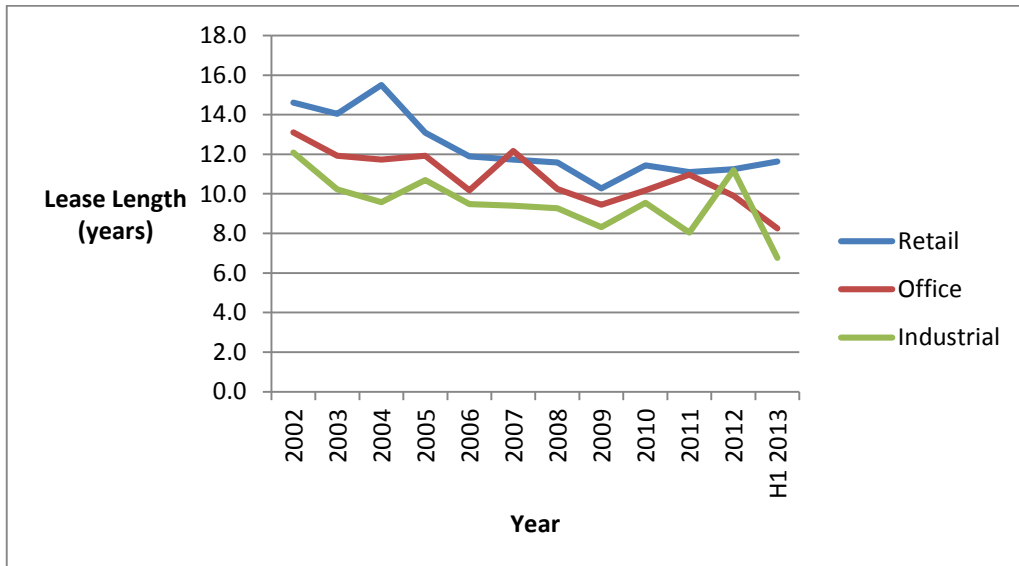
<sup>26</sup> The previous year’s Annual Lease Events Review stated that average lease length in 2011 had fallen to just 4.8 years “measured on an equally weighted basis and including the first break where applicable” (BPF & IPD, 2012; BPF, 2012); the discrepancy between figures depends upon whether leases are weighted according to rental value or whether each lease is treated equally

first graph treats each length equally regardless of the size or value of property being rented whilst the second graph weights the leases by rental value.

**Figure 3-2: Length of new leases by year (un-weighted)\***



**Figure 3-3: Length of new leases by year (value-weighted)\***



\*Graphs produced from data provided by MSCI

Shorter leases and increased flexibility generally come at a price, because landlords and other property investors need additional compensation for the risks of increased vacancy that come with shorter leases; pricing the various flexible offerings is not straightforward (Baum, 2003; French, 2001). The serviced office sector is expanding to meet the demand from occupiers for this flexible access to space, but has to apply a different business model to ensure its attractiveness to investors as well as occupiers. Income from such short-term rents is more volatile, with less certainty of high occupancy rates, so actual rents per square meter have to be higher than for longer-term lets and conventional office leases, and a larger proportion of the income is derived from value-added services (McAllister, 2001).

Nevertheless, small businesses in particular value the flexibility of serviced offices and alternative accommodation such as renting an office or hotel conference facilities for just a few hours. Lizieri (2003) discusses changing working practices as a result of “globalisation, innovation, and convergence in information and communications technology” (p. 1154) and the impact on the demand for commercial property. The accelerated pace of technological change over the past decade has only served to increase the possibilities for remote working identified by Lizieri – “downsizing, decentralisation, home-working and office intensification” (ibid, p. 1155). The efficient use of business premises is undoubtedly of great concern to occupiers (Cushman & Wakefield, 2010, p. 25) with companies being particularly keen to consolidate the space they occupy. In the U.S., the average office space per worker has declined from 225 square feet in 2010 to 176 sq. ft. in 2012 and is predicted to fall to 151 sq. ft. in 2017<sup>27</sup>.

One approach to dealing with variable demand for space by an occupier is to treat the rented premises in two parts – core and periphery. Core space is rented for a longer periods but ideally with “functional flexibility to alter it to the current business needs” (Gibson et al., 2000, p. 7). Peripheral space is needed for a shorter period of time and a premium would be paid to be granted such flexibility. Considering the office sector, users of the peripheral space might share desks by “hot-desking” and “hotelling” – a technique for logging on to a central computer server from different terminals or booking seats and desks, which may largely have been superseded by the ubiquity of laptops, tablets and Wi-Fi internet connectivity. In other sectors, peripheral space might be used for short-term storage of excess stock.

The retail sector has undergone particular change with the advent and growth of e-commerce affecting demand for “bricks and mortar” retailing (Jordan, 2012; Mueller, 2013). For example, *Retail*

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<sup>27</sup> [http://www.corenetglobal.org/files/home/info\\_center/global\\_press\\_releases/pdf/pr120227\\_officespace.pdf](http://www.corenetglobal.org/files/home/info_center/global_press_releases/pdf/pr120227_officespace.pdf)



*Futures 2018* (Centre for Retail Research, 2013) forecasts that “by 2018 total store numbers will fall by 22%, from 281,930 in 2012 to 220,000 in 2018, ... the share of online retail sales will rise from 12.7% (2012) to 21.5%, ... and town centres will lose 27,638 stores in the next five years”.

On the other hand, internet shopping is likely to increase the requirement for warehouses to store goods prior to delivery, and the exponential increase in the amount of data created by all businesses will increase the need for premises to store and back-up data. Landlords will need to offer suitable accommodation in response to the changing requirements of the retail sector. One example of lease flexibility in the retail sector is to allow small businesses to take a retail merchandising unit (RMU) – a “barrow” or stall – in shopping centres (Morgan & Sanderson, 2009). This has many advantages for all stakeholders: varying the retail mix increases footfall to the Centre, start-up retailers get the opportunity to sell without the commitments and expenditure associated with a conventional lease, service charges can be spread amongst more retailers thereby reducing costs for existing retailers in the Centre, and increasing rental income for the owners and investors. A further benefit can accrue because RMU vendors may subsequently progress to taking a conventional lease once they have tested the market.

Studies show that occupier satisfaction with the flexibility of their leases and their ability to negotiate terms has increased during the past decade (IPD et al., 2005; RealService Ltd & Property Industry Alliance, 2012), and that, as alluded to in the previous chapter, it is larger organisations that appear to have more success and clout in the negotiations than Small and Medium Enterprises (Crosby et al., 2006a, 2006b; Halvitigala et al., 2011; Property Industry Alliance & Corenet Global, 2010). Larger businesses, too, may prefer longer leases because “tenants with substantial fit-out costs ... may need 10-15 year write-off periods to maximise IRR<sup>28</sup>” (Baum, 2003, p. 7). From an owner’s perspective, more research is needed to demonstrate whether being more flexible has increased occupancy rates, and whether returns from more flexible models such as serviced offices exceed those from more traditional models of commercial property supply.

### **3.1.6 The Terms of the Lease**

In addition to the issue of lease flexibility, another contentious aspect of the landlord-tenant relationship is the division of responsibility for paying for the upkeep of a property. If the lease is a gross lease in which rent is “all-inclusive” of the costs associated with building maintenance and insurance, the tenant has more certainty about the costs of renting the property, but may find the landlord is unwilling to carry out remedial work that the tenant would like, because the cost will

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<sup>28</sup> Internal Rate of Return – used for accounting purposes to measure the overall cost of renting a property spread over the years of occupancy

decrease the income return. There is also the potential for the moral hazard that the tenant will take less care of the property, or will be extravagant with utilities if the landlord is paying for these. In the UK is common for tenants to pay a service charge to cover the costs of services such as cleaning and maintaining common parts, security provision, grounds maintenance for an industrial estate, car-park upkeep etc. There might also be a sinking fund to cover the costs of major items of expenditure in the future, such as a new roof or a new heating, ventilation and air-conditioning (HVAC) system. This “net lease” gives more certainty of income to landlords because it permits them “to recover all property running costs from tenants” (Halvitigala et al., 2011, p. 567). The obligation to pay service charges in addition to rent means that tenants with this type of net lease cannot budget so easily for expenditure, and traditionally has been a source of conflict between landlords and tenants (Eccles, Holt, & Zatolokina, 2011; Freethy et al., 2011; Noor & Pitt, 2009). Service charges are discussed in more detail in Section 3.6: “Stage 2: Occupier Satisfaction and Lease Renewal”.

Gross and net leases are not the only possibilities. For retailers in particular it is possible to have a baseline rent, perhaps 80 – 90% of what the full rent might otherwise be, supplemented by an element which is proportional to the financial performance of a store (BCSC & JonesLangLaSalle, 2012; J. Williams, 2014; Yuo et al., 2010). Such “turnover rents” are widespread in the US, where trading performance has to be transparent so that sales tax revenues can be monitored, but rare in the UK in part because “the retailer will often be required to self-certify the relevant turnover amount (as defined under the lease) to the landlord on a periodic basis” (BDO, 2013, p. 1), a process which many UK retailers are reluctant to do<sup>29</sup>.

Further financial considerations for tenants when negotiating lease terms are the incentives offered by the landlord. These are typically rent-free periods, but can also include assistance with fitting out the tenant’s demise for example. Rent-free periods in the UK, weighted by lease value, are typically of order one year (IPD et al., 2013)<sup>30</sup>

Regardless of whether a lease is gross or net of operating expenses, and whether a building is “eco-certified”, the lease can take the form of a ‘Green Lease’ - a governance framework between landlords and tenants which facilitates collaboration towards better building performance (Sayce et al., 2009). Leases can range from ‘light’ green, with parties focusing on, though not necessarily committing to, specific actions, to ‘dark’ green, where more rigorous targets, monitoring and penalty mechanisms may apply (World Green Building Council, 2013, p. 57). Such leases should “encourage landlords to

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<sup>29</sup> According to Edward Cooke, Director of the British Council of Shopping Centre’s (private conversation)

<sup>30</sup> In 2013 “the weighted average rent-free period [increased] to over 13 months” (IPD et al., 2013, p. 8)

compete for tenants by designing, building and managing sustainable buildings without sacrificing comfort or service while maximising the landlord's return on investment" (Whitson, 2006). Increasingly, companies such as Marks & Spencer are signing 'memoranda of understanding' and green leases which help owners and occupiers to conserve energy, for example, and which should act as a catalyst for closer relationships in other areas<sup>31</sup>. Other financial advantages to owners and occupiers include the possibility of attracting investors who adhere to ethical investment policies, and the avoidance of certain penalties such as environmental taxes. Of course these things will only play a part in determining rent if they are discussed during lease negotiations, yet, ironically, the information in an Energy Performance Certificate (EPC)<sup>32</sup> is typically disclosed to potential occupiers only *after* heads of terms have been agreed (Fuerst, McAllister, & Ekeowa, 2011). This seems certain to change in the UK, not simply to allow property owners to promote more emphatically the "green credentials" of their buildings, but, more importantly, because the UK Energy Act 2011 will make it illegal to let property with a low EPC rating unless the maximum package of Green Deal measures has been implemented<sup>33</sup> (Mclean & Jegede, 2014).

### **3.1.7 Service Quality in Real Estate Leasing**

Potential occupiers seeking to rent commercial property will typically do so via an agent of the landlord. The metric "Customer Effort Score" (M. Dixon et al., 2013) and the "Customer Journey" (Norton & Pine, 2013; Shostack, 1985) emphasise the need to make it as easy as possible for the potential occupier to view the property, understand the terms of the lease, organise fit-out and move in. One study into property selection and the lettings process applied Taguchi Loss Functions to real estate brokerage<sup>34</sup> (Kethley, Waller, & Festervand, 2002). The study modelled optimum and acceptable values of property characteristics; properties with the smallest loss in the priority characteristics are those which a real estate broker should suggest to potential occupiers for viewing. The method provides a way to prioritise properties for efficient preliminary selection to improve customer service and satisfaction (*albeit probably superseded by ubiquity of on-line search engines*) The technique can also be applied to other real estate functions such as selecting suppliers (Quigley & McNamara, 1992; Wei-Ning & Chinyao, 2005).

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<sup>31</sup> <http://corporate.marksandspencer.com/page.aspx?pointerid=8beddfecd4c24a04ac2d41728eb3dcd4>

<sup>32</sup> Energy Performance Certificates are produced by qualified assessors who evaluate the energy efficiency of a property, and its carbon emissions, on a scale from A to G, where A is very efficient and G is very inefficient. EPCs are mandatory whenever a building is marketed for sale or rent – see [www.epb.dfpni.gov.uk](http://www.epb.dfpni.gov.uk)

<sup>33</sup> <https://www.gov.uk/getting-a-green-deal-information-for-householders-and-landlords>

<sup>34</sup> This study actually dealt with residential real estate, but the methodology is equally applicable to commercial property

Lettings agents should ensure that all documentation associated with the search for commercial property and with the lease itself is clear. The RICS has recently launched a new type of lease in conjunction with the British Retail Consortium, written in plain English and designed to be straightforward to understand, and offer increased flexibility to occupiers and to help fill retail voids to benefit landlords (RICS & BRC, 2012). Other major landlords had previously taken the initiative and introduced simplified leases, for example Land Securities' Clearlet Lease<sup>35</sup>, which complies with the Lease Code and Service Charge Code and offers customers options such as all-inclusive service charges, to give occupiers more certainty about the cost of their property.

As indicated in the framework, **Figure 3-1**, the choice of property will be determined by its physical features and the value for money it provides, but also whether occupiers feel they can trust the landlord and whether they are confident of receiving good service. The professionalism of the lettings agent (Seiler & Reisenwitz, 2010; Seiler, Webb, & Whipple, 2000) is an important factor as it gives a first impression of the service which a prospective occupier might expect to receive. Owners who are entrusting the task of acquiring occupiers to agents must ensure that appropriate incentives and key performance indicators are in place (Ronco, 1998; Williamson, 2002).

Most research which has been carried out into customer service in real estate leasing has focused on residential real estate brokerage in the United States, where residential property comprises a sizable proportion (estimated to be 21.7% at the end of 2011) of the investment property owned by institutional investors and other major property-owning companies. In the UK the proportion is far lower (2.6% at end of 2011) (IPD, 2012), although this is now changing as major landlords are starting to make significant investments in residential property and sectors such as student accommodation are also growing fast. According to Estates Gazette (Dec 2013, p. 54), 25% of the current development pipeline of UK REITs is thought to be residential. Research into service quality in residential leasing should, however, have findings which are applicable to commercial property brokerage; although the former is more of a "Business to Consumer (B2C)" transaction, whereas the latter is a "Business to Business (B2B)" process, thus there will be differences in customer requirements.

Okuruwa & Jud, (1995) used a probit model comparing likelihood to use an agent again with length of search, difficulty with arranging financing, disclosure of fair housing law and marital status. Satisfaction was found to be inversely proportional to length of search and to be lower for those with difficulty

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<sup>35</sup> <http://www.landsecuritiesretail.com/about-us/our-approach/clearlet/>

arranging financing but higher when the broker discloses fair housing law requirements. The last of these aspects is, perhaps, the only one under the control of the broker.

Seiler et al., (2010) and Seiler et al. (2000) used variants of SERVQUAL to investigate the relationship between customer service, customer satisfaction and word-of-mouth recommendation to other potential home-buyers of the real estate broker. The following questionnaire was found to be a useful way to assess customer satisfaction as measured by their stated likelihood to recommend a real estate broker or to use their services again:

1. Real estate firms should use up-to-date technology.
2. The commission of [sic] fee charged should be in keeping with services provided.
3. Properties should be well advertised by real estate firms.
4. Real estate agents should get adequate support from their firms to do their jobs well.
5. A firm's agents should be knowledgeable.
6. Real estate agents should be instrumental in setting the best selling prices for a house.
7. Real estate agents should make suggestions for how to best prepare a house for sale.

**Service quality attributes for a One-Dimension Professionalism Scale** (Seiler et al., 2010)

The earlier study concluded that real estate agent characteristics are important, so staff need to be knowledgeable, well-trained and personable, and that tangible aspects also matter, such as the visual impact of the office and its equipment and documentation. The later study concluded that a single dimension from the RESERV model<sup>36</sup>, Professionalism, with the seven items listed above is a good predictor of a customer's likelihood to recommend a real estate broker. The items relate to the professionalism of the staff and also to giving good value for money. Whilst the full RESERV model has slightly better explanatory power, the more parsimonious seven-item scale reduces the effort required of customers and so is likely to increase response rates. A comparison of different versions of the model also found that, when measuring the likelihood of customers recommending a broker, "in real estate, it is better not to incorporate expectations into the [measurement] scale" (Seiler et al., 2010 p. 59), because "it is not clear whether [respondents] answer based on their initial expectations (which are largely contaminated by their overall satisfaction)" (p.60).

Johnson, Dotson, & Dunlap (1988) found that the determinants of real estate service quality conform to those of Parasuraman, Zeithaml, & Berry (1985) but differ in order of importance, and consist of:

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<sup>36</sup> Described in Section 2.4

service assurance and responsiveness; tangible firm characteristics; tangible product characteristics; reliability of service; and service empathy.

These studies suggest that the likelihood of translating a preliminary enquiry by a prospective tenant into a signed lease is increased by paying attention to the SERVQUAL dimensions of service quality, combined with offering properties which are desirable to occupiers (“tangible product characteristics”), and leases which provide flexibility and value for money for occupiers.

### **3.2 Stage 2: Occupier Satisfaction and Lease Renewal**

In general, under the terms of the Landlord and Tenant Act 1954<sup>37</sup>, tenants have the right to renew their lease at lease expiry. There are various grounds upon which landlord may prevent a renewal, including breaches of lease obligations by the tenant, the landlord wishing to demolish or reconstruct the property or wishing to occupy the premises (Bannister, 2008). However, landlords will usually benefit from tenants wishing to renew, since it obviates the need to seek new tenants.

If a property owner is able to increase the loyalty of its customers, Monte Carlo simulations have shown that a small increase in lease renewal rates can lead to a large increase in profit.<sup>38</sup> Performing simple calculations taking account of the loss of revenue through vacancies also highlights the cost of losing a tenant.

Correlations between aspects of customer service, overall satisfaction of occupiers and actual renewal rates (Kingsley Associates, 2004) found lease renewal rates to be 17.9% higher for those with ‘good’ or ‘excellent’ satisfaction compared with ‘poor’ or ‘very poor’. Renewal rates were 12.3% higher for occupiers who rated highly their satisfaction with property management, and 28.5% higher for those that rated their overall satisfaction ‘excellent’ compared with those rating it ‘very poor’. The article provides neither details of sample size, nor information to evaluate potential bias, although reference is made to studies of “tenants ... occupying more than a billion feet of commercial space” (p. 41). Similar analysis was performed in a study of 500 occupiers in the UK and the Netherlands (CBRE, 2015), and found that the main differences between those that renewed their lease and those that moved premises related to:

- Responsiveness to fault reporting;
- Sufficient, properly functioning lifts;
- Effective communication, particularly being given proper notice of planned works; and
- Internal climate control.

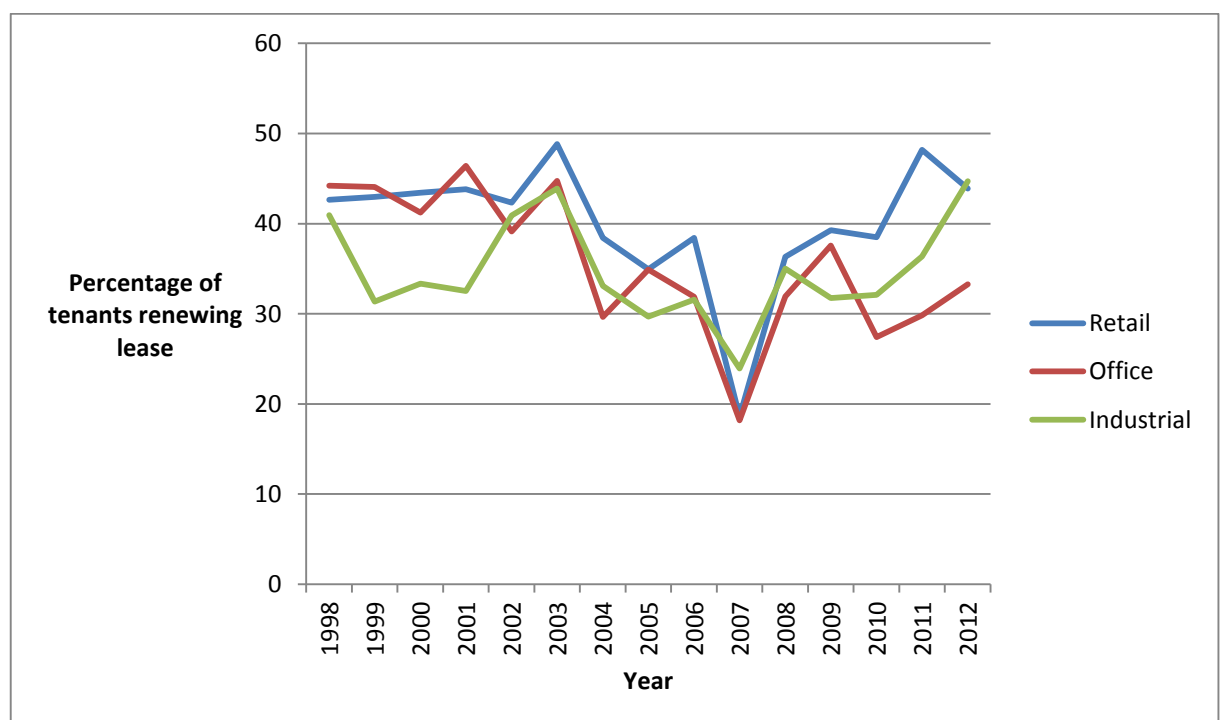
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<sup>37</sup> <http://www.legislation.gov.uk/ukpga/Eliz2/2-3/56>

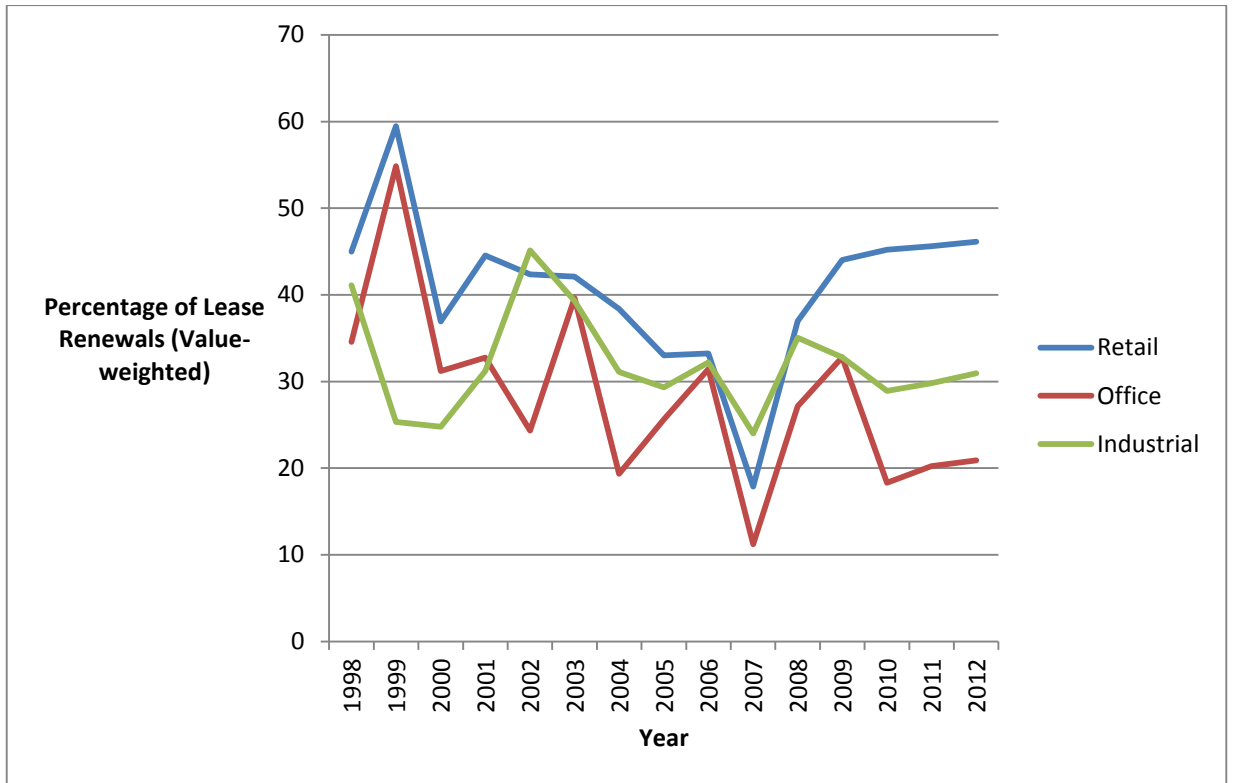
<sup>38</sup> Unpublished commercial findings (Batterton, IPD.)

This study found that only 12% of the 500 companies surveyed had moved premises last time their lease was due for renewal, and of these, two-thirds changed their footprint, of which 50% moved to larger premises. An 88% renewal rate is far higher than that found by analysis of IPD data, and may reflect survivor bias, because companies that did not renew because they went out of business would not have been included in this research. Although lease renewal rates do tend to vary widely, and depend upon location and economic conditions, IPD data shows renewal rates only around half of the rates in the CBRE study. **Figure 3-4** and **Figure 3-5** show lease renewal rates for UK commercial property from 1998 – 2012 (un-weighted and value-weighted respectively), generated using data provided by MSCI IPD. From these, it can be seen that office and retail renewal rates were particularly volatile over this period, and that rates were typically of order 30 – 40%. Within this period, renewal rates were lowest in 2007, at little more than 10% for offices (weighted by value). The following year, about one-third of office leases that expired were renewed (Hedley, 2009) but this figure fell to just 20% in 2011, a year in which around half of office tenants exercised their break clause (IPD & Strutt & Parker, 2012). The following year, 41% of commercial property leases in the MSCI UK databank were renewed, but when leases were weighted by rental value this figure dropped to just 32% (IPD et al., 2013). Lease renewal rates for UK commercial property over this 14-year period were generally highest in retail and lowest in the office sector, with industrial renewals being approximately midway between the other two sectors.

**Figure 3-4: Percentage of tenants renewing their lease at expiry (raw data courtesy of MSCI)**



**Figure 3-5: Percentage of tenants renewing lease at expiry (weighted by rental value)**



In her research into commercial property lease renewal rates in the U.S., Asser (2004, p. 6) states that “Most office building investors underwrite using a 70 to 75% renewal probability factor for market rents as the “accepted” standard”, which would appear to be a far higher figure than it would be prudent for UK underwrites to assume, based on IPD’s figures shown above, albeit lower than the CBRE (2015) study. Asser found actual renewal rates varied from 39 – 79% for the 41 Metropolitan Statistical Areas using data on 15822 leases over the period 1997 - 2004. She calculated the overall renewal probability for all leases to be 58.5% whilst when the leases were weighted by size, the weighted renewal probability increased to 76.7%. This implies that the larger the square footage of occupied space, the greater the likelihood of lease renewal, although this relationship appeared to “taper off when tenants occupy a substantial portion of the building” (p. 47). The higher proportion of renewals amongst larger properties might be accounted for by lower rents per square foot in larger properties, and the difficulty of finding suitable alternative accommodation for such firms. Asser did not have access to rents in the dataset used for the research.



These figures will vary with the economic cycle, and in a downturn a company which occupies several properties may choose to vacate one simply because its lease is the next to expire, regardless of satisfaction with the management of the property. Shops, in particular, are likely to be affected by the trend towards on-line retailing, with total store numbers in the UK predicted to fall by 22%, from 281,930 in 2013 to 220,000 in 2018 (Centre for Retail Research, 2013). Where occupiers do have viable businesses however, shorter lease lengths should make the impact of superior customer service and customer satisfaction more noticeable on lease renewal rates. It is also possible that the high retention rate found by the CBRE (2015) research reflects an improvement in Landlord-Tenant Relations in recent years, and shorter leases make lease renewal less of a risk, thereby encouraging more occupiers to renew.

Lease terms vary considerably even within a sector. Some leases allow scope for property managers to have a lot of contact with occupiers whereas FRI (full repairing and insuring) leases may involve very little interaction, particularly if the occupier pays no service charge. In the latter situation, scope for adding value to the property through “customer service” may be very limited, being restricted to aspects such as initial negotiations, straightforward legal processes, offering advice on contractual and environmental obligations, and clear documentation. Considering the retail sector, retailers in a prime shopping centre are likely to have close interaction with centre management, typically through a retail liaison manager and tenant association meetings. Conversely, in smaller centres, retail parks or High Streets there may be very little contact with the owner or manager. Opportunities for building relationships with occupiers are greater if the owner or managing agent provides services such as cleaning, security, landscaping and maintenance.

Aspects of property management which “keep, push or pull” office occupiers have been assessed for their impact on satisfaction and loyalty (Appel-Meulenbroek, 2008). Most of the factors relate to physical aspects of the property or its hinterland, but the research emphasises the need for CRM processes “to keep satisfaction at such a level that it invokes loyalty” and increases ‘retention equity’. “Keep Factors” were found to include building services, scope to extend, flexibility and locational factors that would generally have been considered when choosing the property initially, such as proximity to a city, accessibility and availability of parking. “Push factors” are those which encourage defection, whereas pull factors are those which result from a competitor attracting a customer away from the original supplier. Push and pull factors were found to relate to building maintenance, the quality of fittings, internal climate and the appearance of the building, so Appel-Meulenbroek advises that a landlord should endeavour to keep buildings up-to-date.

Customer Relationship Management theory emphasises the importance of building a good relationship with customers, in order to understand their needs and win their loyalty (Matzler et al., 1996; Reichheld & Sasser Jr, 1990). The British Council of Shopping Centres has published a Customer Care Guide advising shopping centre managers how to look after their customers – emphasising the relationship with store managers, not just shoppers (Morgan et al., 2012). According to Appel-Meulenbroek (2008), in corporate property management, “retaining a tenant requires more relationship efforts than competing through offering a good price / quality ratio [alone]” (p. 43). Such “relationship efforts” depend upon feedback from occupiers so that service suppliers understand what they are perceived to be doing well and what aspects of property management could be improved from the occupier’s perspective. For such feedback to be beneficial, property managers and occupiers must be open and honest, willing to give and receive constructive criticism without fear of retribution.

Rasila (2010) studied customer relationship quality between landlords and tenants in Finland and found that occupiers place great emphasis on relevant and timely communication. Interviewees felt that response times were unacceptably long, believing that they should receive an immediate response to requests for information. Respondents implied it is crucial for a landlord to understand the strategic needs of the occupier, whilst wanting to keep the sharing of information to a minimum and not to be inundated with excessive “operative information” (p. 88). This disparity may be hard to reconcile, although as relationship bonds are forged between owner / property manager and occupier, there may be scope for increasing mutual understanding through informal, social channels and “affective loyalty”<sup>39</sup> (Freybote & Gibler, 2011).

In their study into switching behaviour and loyalty to property service suppliers Levy & Lee (2009) categorised the main reasons for switching suppliers as: core service failure, external requirements, relationships, change in client’s requirements, attraction by competitors and pricing. Although “core service failure” was found to be one of the key issues, when something does go wrong with a service encounter, it can actually provide an opportunity to rectify the problem and in so doing to strengthen the relationship with the customer; by over-compensating for the initial problem a service provider may exceed the customer’s expectations and gain loyalty (Hart et al., 1990; Michel & Meuter, 2008). As mentioned in Section 2.3, this is termed the “service recovery paradox”, which gains partial support from the findings of Zeithaml, Berry, & Parasuraman (1996, p. 42) that “effective service recovery significantly improves all facets of behavioral intentions [compared with those with unresolved

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<sup>39</sup> Affective loyalty arises from socially oriented, relational trust whereas calculative or pragmatic loyalty arises because it is mutually beneficial or because of bonds such as contractual ties and barriers to switching (Freybote & Gibler, 2011)

problems]. However, with the possible exception of the [willingness to] pay more dimension, the improvements do not restore intentions to the levels expressed by those not experiencing problems". Magnini et al., (2007), investigating the effects of prior service failures, found that in certain cases it is possible that customer satisfaction after a service failure can indeed be higher than before. Relevant factors include whether the failure was deemed to be outside the control of the service provider, the severity of the failure and the length of the customer-supplier relationship. A simple but sincere apology and demonstration of empathy may be all that is needed to compensate for mistakes (Levy & Lee, 2009). This possibility of recovery from service failure highlights the importance of eliciting complaints from occupiers. If a dissatisfied customer makes a complaint it gives the service supplier an opportunity to rectify it and to repair the relationship (Gee et al., 2008).

DeSouza (1992) advocates a four-step process to minimise customer defections:

1. Measure Customer Retention
2. Interview Former Customers
3. Analyse Complaint & Service data
4. Identify Switching Barriers

However, it should be borne in mind that whilst barriers to switching may reduce occupier 'defections', if an occupier has to make "Hobson's Choice", choosing lease renewal as "the lesser of two evils" the advantage of a retained customer may be more than offset by damage to reputation and a reluctance by other potential occupiers to sign a lease with the property owner.

In switching suppliers ('defecting'), there are various costs: procedural, financial & relational (Gee et al., 2008). For occupiers of commercial property, the main barriers to switching relate to the financial costs and amount of upheaval involved, so the decision not to renew a lease will not be made lightly, but however excellent the service quality and however satisfied the customer, there will always be some "customer defections" (Venkateswaran, 2003). Occupiers' businesses may fail, large corporations may decide to rationalise their use of space or need to relocate for other commercial reasons, and the cost of renting the premises may be deemed too high; indeed the global occupier satisfaction study (BOMA & Kingsley Associates, 2013a) found that occupiers' greatest concern was their rent and the total overall costs of occupation.

Occupiers are more likely to renew their lease if the benefits outweigh the costs, therefore it is crucial that owners and property managers deliver good value for money and that this is appreciated by the occupiers. Wilson et al., (2001) describe some "value added services" (p. 4) which property managers can provide, such as giving strategic advice, supporting the customer's organisational strategy, enabling the achievement of economy of scale, providing an integrated service and / or electronic

service delivery. They mention the importance of defining the correct performance indicators to avoid “spending energy on minor concerns” (p. 5) and the need to determine which business processes are truly adding value. Other suggestions the researchers make include working with customers to improve understanding of why some processes must be respected, and involving customers in the review and revision of processes to find collaborative and streamlined solutions.

For services that are included in the rent and service charge, occupiers require a “well-drafted service level agreement with a provider they can trust” (Gibson et al., 2000, p. 2), and want to feel confident that service charges are fair, transparent and well-managed (Freethy et al., 2011; Noor et al., 2010; Noor & Pitt, 2009; Tucker & Pitt, 2010). Giving occupiers good value for money requires attention to be paid to the full service-delivery process rather than optimising sub-processes, good communication, and ensuring property managers behave professionally and feel valued (Jylha & Junnila, 2014; Sanderson, 2012).

Another area for adding value is that of sustainability, as discussed in the previous section. Eco-certified buildings tend to be cheaper to run and also to provide a more comfortable and productive working environment for occupants, with fewer days lost through sickness, and lower staff turnover (Baird & Dykes, 2012; Frontczak et al., 2012; Loftness et al., 2003; Miller et al., 2009; World Green Building Council, 2014).

In Sweden, the existence of a well-established Customer Satisfaction Index specific to property, the Swedish Real Estate Barometer (SREB), has enabled some analysis to be carried out into the relationship between property management quality and occupiers’ loyalty and willingness to recommend their landlord (Westlund et al., 2005). The criteria upon which the Swedish Real Estate Barometer is established are environment, location, premises, service, value-for-money, malfunction, adjustment and image. Customer satisfaction and other indicators from the SREB were found to show significant correlations with measures of real estate company profitability, although the links appeared to be not so much because of lease renewal, but rather through word-of-mouth recommendation and the reputation of the landlord, an aspect which is considered in the next Section.

### **3.3 Stage 3: Recommendation and Reputation**

If occupiers have prior experience of a particular landlord or managing agent and have been satisfied with that relationship, they may start their search for additional space or new premises by asking the owner or agent if they have suitable properties in their portfolio. Some developers are able to lease properties before they have even been built - an arrangement which is mutually beneficial as the developer need not waste resources marketing the property and the tenant can influence its specification and fit-out.

Prospective occupiers want to be able to trust their landlord and are likely to seek reassurance about their reputation before signing the lease. Some owners manage their own portfolio; others outsource it to managing agencies. Both models can be effective (Palm, 2013); what matters are the professionalism of the staff, their integrity and their trustworthiness. One indicator of likely service quality is the accreditation of service suppliers, and studies have shown that occupiers are willing to pay higher rents when property managers hold professional qualifications (Hui, Lau, & Khan, 2011; G. S. Sirmans & C. F. Sirmans, 1991).

Another way a business can try to engender trust and to enhance reputation is to demonstrate that it is a responsible corporate citizen. The benefits to occupiers of “green buildings” were discussed in Section 3.1. Some landlords obtain environmental certification of their properties to signal to prospective tenants that they are responsible corporate citizens who build sustainable properties with concern for the environment. There are a number of environmental certification schemes. Some, such as Energy Star in the US, the NABERS Energy Rating Scheme in Australia, and Energy Performance Certificates (EPCs) in the UK, are concerned solely with energy efficiency; others, such as the Green Building Council of Australia’s Green Star scheme, the UK Building Research Establishment Environmental Assessment Methodology (BREEAM) and the U.S. Leadership in Energy and Environmental Design (LEED) system, confer additional benefits to occupiers by including aspects such as water usage, waste and recycling, and the “Indoor Environment”.

During the past decade a number of studies have been carried out to see whether these advantages to occupiers of sustainability certification also confer benefits to building owners. Most of the research indicates that eco-certified properties can command a rental premium, although many occupiers now expect sustainability features to be incorporated as standard in new buildings, because “it is just part of what good ‘quality’ means” (World Green Building Council, 2013, p. 10). Miller et al. (2008) cite, possibly anecdotal, evidence that when tenants were asked at a US Commercial Real Estate Development Association (NAIOP) Green Conference if they would be willing to pay more for a green

building, they all said no. But when asked if they would pay the same for a non-green building, they said they would pay less!

Whether “Eco-certification” is worthwhile has been found to depend in part upon the attitudes of local people, including their level of education and political leanings (Dippold, Mutl, & Zietz, 2014). In their review of prior research into sustainability in Real Estate, Falkenbach, Lindholm, & Schleich (2010) consider property-level drivers (the potential for increased rental income, reduced property costs and increased value), corporate drivers (image) and external drivers such as governmental and legislative requirements. Their research using CoSTAR and NCREIF data finds a rental premium for LEED or ENERGY STAR certified buildings of order 5% and that certified buildings generally have lower vacancy rates and higher capital values. Other studies showing a rental premium include Reichardt et al., (2012), Fuerst & McAllister (2011a) and Fuerst et al. (2011).

A recent study into the effect on rent of energy efficiency studied a sample of 817 transactions for offices with Energy Performance Certificates (EPCs) in the UK (Fuerst, van de Wetering, & Wyatt, 2013). The research found a significant rental premium for energy-efficient buildings, those with good to excellent EPC ratings (A–C) compared with those rated D although the premium “appears to be mainly driven by the youngest cohort of state-of-the-art energy-efficient buildings” (p. 373). This supports the view of Reichardt et al. (2012) that certified buildings may command higher rents, but this “does not indicate causation as certified buildings tend to have superior building features” (p. 106). A more recent study by Reichardt (2014) finds a 5.4% reduction in operating expenses for LEED-certified offices but a 3.9% increase in operating expenses for Energy-Star-rated buildings, yet both command a rent premium, which equals 8.6% on average.

This finding of a rental premium, whilst consistent with many previous studies, is in contrast to the findings of Gabe & Rehm (2014) who looked at 1,526 office leases in Sydney CBD and found that at an individual lease level, there was no rental premium; overall increases in rental income appeared to accrue from increased occupancy levels. That in turn might account for the higher building operating costs identified by Reichardt (2014), as a more densely occupied office will use more energy and other resources.

Conversely, other research, also in Australia (Newell, MacFarlane, & Walker, 2014), compared 206 NABERS rated office buildings, 23 Four - Six Green Star rated buildings and 160 non-rated buildings, and found a value premium of 9.4% for the highest NABERS Energy-rated offices, and a discount in the lowest rated buildings compared with non-rated ones. A similar pattern was seen for net effective rent and for vacancy levels, with landlords needing to offer fewer rent-free months on a 10-year lease as an

incentive to rent the 5 Star NABERS Energy-rated offices compared with lower- or non-rated buildings. Similarly, highly rated Green Star offices were found to achieve 11.8% value premium and 6.6% net effective rental premium compared with non-rated buildings. Of particular relevance to the research in this thesis is the view expressed that “It is important to realise, however, that there may well be differences in the management of highly rated buildings compared to those which are low rated or not rated, and any such “management” premium will be incorporated into the “green” premium” (p. 359).

Other studies showing reduced vacancy rates in eco-certified properties include Miller, Spivey, & Florance (2008), Pivo & Fisher (2009) and Wiley et al., (2010). Using CoStar to investigate rents and sales data for a sample of Class A office buildings in America, Wiley et al. (2010) found rents to be approximately 7 – 17% higher for LEED or Energy Star certified buildings and occupancies between 10 and 18% higher. Conversely, of course, actual returns may not be greater for building owners because the properties are more expensive to buy, with a premium of \$30 and \$130/sq. ft. for EnergyStar-labeled and LEED-certified properties, respectively<sup>40</sup>. Likewise Eicholtz, Kok, & Quigley (2010, p. 2508) find that “an otherwise identical commercial building with an Energy Star certification will rent for about 3 per cent more per square foot and that the increment to the selling price may be as much as 16 percent.” The main benefit will be to developers, as the additional costs of construction, which have been found to fall within the 0% - 12.5% range (World Green Building Council, 2013, p. 21) are more than offset by the sales or rental premiums.

Reputation, whether by word-of-mouth recommendation, branding or signalling of environmental and CSR credentials, affects the performance of Real Estate companies in two ways:

1. The attractiveness of a company to investors
2. Its attractiveness to potential and current occupiers

The two ought to be linked, because investors should care about the success of a company, and without customers (occupiers) a real estate company wouldn't survive.

Most research into reputation in the property sector has focussed on measures of company performance such as return on assets, price/earnings ratio per share and Tobin's Q<sup>41</sup>, with the emphasis being on attractiveness to investors. Researchers have used the results of the annual surveys

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<sup>40</sup> Investors accept lower yields in return for lower risk; a “green building” may be less affected by depreciation of capital value and obsolescence.

<sup>41</sup> Tobin's Q statistic is defined as the market value of a company divided by the replacement cost of its assets and is used by investors to assess the likely future performance of a company.

conducted by the Hay Group and Fortune<sup>42</sup> in America, and Management Today<sup>43</sup> in the UK to evaluate the impact of reputation on the financial performance of companies (Cole, 2012). The American study into “best companies” asks senior managers to rate other companies in their own sector on the following aspects:

1. Ability to attract and retain talented people
2. Quality of management
3. Social responsibility to the community and the environment
4. Innovativeness
5. Quality of products or services
6. Wise use of corporate assets
7. Financial soundness
8. Long-term investment value
9. Effectiveness in doing business globally

The criteria used for Britain’s Most Admired Companies are similar, but global competitiveness is replaced by “quality of marketing”. In addition to asking company leaders to rate their rivals, the studies also ask investors for their opinions. Cole’s research used regression analysis to assess whether reputation was a driver of market capitalisation, and subsequently which of the nine components had most impact. The model was tested using five separate annual studies, and was extended from UK companies to American ones. Finally the regression equations were applied to individual companies to calculate the proportion of a company’s market capitalisation which can be attributed to its reputation, the ‘reputation leverage’ or return to be expected for each unit increase in reputation, and the risk profile showing how reputation is distributed amongst the components.

A later study applied the methodology to seven<sup>44</sup> of the largest REITs in the UK (Cole, Sturges, & Brown, 2013). The authors argue that investors should not place too much faith in the valuation of the assets owned by the REITs, but rather should look at the reputation of the companies, and that the corporate reputations of these REITs have driven the recent recovery in their share price. Corporate brands are described as “the collected thoughts, feelings and impressions of the company as an operating business” (p. 50), and they “create value by enhancing *investor* (as opposed to customer) confidence”. However insofar as several of the reputational criteria include things that matter to customers, such as attracting and retaining talented people, quality of management, social

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<sup>42</sup> [http://www.haygroup.com/ww/best\\_companies/index.aspx?id=155](http://www.haygroup.com/ww/best_companies/index.aspx?id=155)

<sup>43</sup> Britain’s Most Admired Companies - <http://www.managementtoday.co.uk/go/aboutbmac>

<sup>44</sup> Intu Shopping Centres was excluded as it had previously been part of Liberty International before demerging to form Capital Shopping Centres, so had too short a history as an independent entity for the study



responsibility to the community and the environment, innovation, and quality of products or services, corporate brands should also add value by giving confidence to customers.

Several studies have examined how the financial performance of REITs and other property companies such as Real Estate Operating Companies and leasing and management agencies depends upon their reputation for corporate social responsibility (CSR). Although Friedman notoriously pronounced, “The social responsibility of business is to increase its profits” (Friedman, 1970, p. 32), many studies have shown that a business can be both profitable and a good corporate citizen (Luo & Bhattacharya 2006, 2009; van Buerden & Gossling 2008). An investigation into the links between corporate social performance (CSP) and profitability found that REITs with a higher CSP rating on the Kinder, Lydenberg, and Domini (KLD) database<sup>45</sup> do seem to improve financial performance as measured by Tobin’s Q and Total Return (McAllister et al., 2012). Thompson & Ke, (2012) carried out a content analysis of the annual reports of the top 20 UK listed property companies and created two indexes based on the CSR and environmental vocabulary used. Their study found a positive correlation between Return on Assets and each of the Indexes, “suggesting that greener companies outperform others in the stock market.” (P. 7). These findings are supported by studies in other industries using ACSI and other American data (Ittner & Larcker, 1998; O’Sullivan & McCallig, 2012; P. Williams & Naumann, 2011) and reiterate the idea that reputation and profitability are linked, and that share prices of Real Estate companies do take reputation into account.

Research also confirms that reputation is important to occupiers. Studies have investigated the impact of branding, reputation and profitability in residential real estate (Anderson et al., 2008; Benjamin et al., 2006; Frew & Jud, 1986; Hui et al., 2011). These demonstrate that branding has a positive effect on capital value, rental income and sales.

Research using the Swedish Real Estate Barometer (SREB) referred to in the previous Section, combined with the Swedish Property Index of financial data compiled by IPD (Investment Property Databank), has enabled some analysis of overall customer satisfaction of office occupants and property performance (Westlund et al., 2005). Several strong correlations between customer satisfaction and measures of property performance were found, particularly towards the end of the period investigated. Total return showed a one-year lag behind customer-perceived quality, with most of the improved performance indicators being achieved via reputation - word of mouth recommendation.

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<sup>45</sup> Now known as the MSCI ESG database

This Chapter has focused on the ways in which excellence in property management might be expected to deliver superior returns to property owners, via the links between occupier satisfaction, loyalty and willingness to recommend their landlord or property manager, and the enhanced reputation thereby accruing. The remainder of this Thesis examines this relationship in more detail, and addresses the Research Questions posed in Chapter 1. The next Chapter analyses occupiers' reasons for choosing particular properties, using data from interviews conducted by RealService, in order to answer the first of the Research Questions.

# **Part 2: The Three Stages of the Research Framework**

This part of the thesis examines the mechanisms by which customer focus and operational excellence by landlords and their property managers should lead to enhanced financial performance of commercial properties. The three stages of the framework can be considered to be:

1. The ability to supply properties and services which meet occupiers' requirements;
2. Delivering a property management service which satisfies occupiers and increases their likelihood of lease renewal;
3. Reputable "branding" - cultivating a reputation for trustworthiness and fairness through occupiers behaving as advocates, and by paying attention to corporate social responsibility.

Chapter 4 examines the first of these stages by looking at occupiers' requirements when seeking to rent commercial property.

Chapter 5 focuses on occupier satisfaction, describing the data obtained from more than 4400 interviews with occupiers of commercial property and conducting preliminary analysis of the relationship between aspects of tenancy and occupiers' overall satisfaction using correlations, regressions and principal components analysis.

Chapter 6 describes the method and results of the Structural Equation Modelling which was carried out to investigate the determinants of occupiers' satisfaction with property management, their overall satisfaction, their perception of receiving value for money and their perception of their landlord.

Chapter 7 analyses the behavioural intentions of occupiers – their likelihood of lease renewal and their willingness to recommend their landlord. It uses Structural Equation Modelling supplemented by logistic regression to probe the factors influencing these intentions and ensure the results are robust to variants of model specification.

## **Chapter 4 Investigation of Occupiers' Requirements when renting Commercial Property**

### **4.1 Introduction**

This chapter addresses the first research question: "What factors affect occupiers' choice of property?" The rationale for posing this question is that for landlords to be able to provide properties and services which are desirable to occupiers, it is crucial that they understand occupiers' requirements and preferences. The literature review in Chapter 3 summarised previous research, which has mainly focused on occupiers of office buildings. This Chapter analyses responses from occupiers of UK commercial property in the retail, office and industrial sectors, and compares the results with previous findings.

The chapter begins with an explanation of the occupier survey data used for this research. It then discusses the qualities of the ideal landlord, according to corporate property directors. After this the data is analysed to show the main reasons given by occupiers for choosing the property they currently rent, as well as reasons for rejecting other properties or leaving their previous property. The results are presented for the separate sectors – retail, office and industrial. For retailers, the views of retail property directors, store managers of retail warehouses on retail parks, and store managers of stores in shopping centres are discussed separately.

## **4.2 Occupiers' Requirements: Analysis of interviews with Occupiers of Retail, Office and Industrial Property**

### **4.2.1 The Data<sup>46</sup>**

The analysis in this Chapter is based on interviews with approximately 800 occupiers of UK commercial property conducted by RealService (formerly known as KingsleyLipseyMorgan) during the period 2005 – 2010<sup>47</sup>. The company was founded in 1999 as an independent consultancy for the UK property industry, specialising in helping landlords and property managers to meet the needs of occupiers. A significant part of its work consists of conducting occupier satisfaction studies on behalf of landlords, and writing reports to help property managers improve the service they deliver. During the first 15 years of the company's existence, RealService interviewed tens of thousands of occupiers of commercial property, as well as a large number of residential tenants in the private rented sector. Clients commissioning these studies included many of the Real Estate Investment Trusts (REITs) and Real Estate Operating Companies (REOCs) with the largest commercial portfolios – including shopping centres and retail parks, multi-tenanted offices and industrial estates.

The occupier satisfaction surveys took the form of interviews which were conducted face-to-face or by telephone, and were transcribed and entered into an SQL database. All interviews were pre-arranged, at a time to suit the interviewee. The respondents had been asked by their landlord or property manager if they would be willing to take part in the survey, and all had agreed to be interviewed. Sometimes the interviewee was unable to answer all questions, for example if certain issues were dealt with by their head office. In such cases, where possible, the interview was supplemented by an interview with a member of staff at their head office who could answer these questions. No "cold-calling" was involved; all respondents knew that the purpose of the study was to elicit their opinions about the service they received, and that the results were to be used to try to improve the service. Therefore they had had time to consider issues they wanted to raise, and the interviews had been scheduled at a time to suit the respondent. This addresses some of the potential factors discussed in Section 2.6, such as giving ill-considered answers and being unduly influenced by recent incidents, that can bias results from surveys.

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<sup>46</sup> The data is discussed in more detail in Chapter 5 which uses more than 4400 of the interviews to analyse determinants of occupier satisfaction.

<sup>47</sup> The author was a consultant for RealService for many years, and conducted several hundred occupier satisfaction interviews, as well as carrying out bespoke studies for RealService clients such as the British Council of Shopping Centres.

The analysis in this chapter relates solely to answers given to two questions:

1. What are the characteristics of the ideal landlord?
2. What were the main reasons for choosing this property?

The first question was asked of more than 100 property directors of the main corporate businesses and retail multiples in the UK. It was not asked of the individual occupiers. For the second question the interviewees mostly comprised tenants of the major landlords who had commissioned the research. In this respect, it is not a truly representative sample of all commercial occupiers in the UK, with the sample skewed towards occupiers of high-end properties, such as 'class A' offices and prime shopping centres. It does not include those who chose to use serviced office space, or 'business clubs', for example, or to take very short-term leases. The sample also includes 30 interviews with potential occupiers who had chosen not to proceed with a letting of a property owned by the landlord commissioning the study; these respondents gave the reasons for choosing an alternative property. Respondents were asked to provide up to three reasons for their choice of property.

Respondents used their own words to describe their reasons for choosing the property, rather than selecting from a list of options, and some of the responses are used as quotes in the qualitative analysis which follows. For the quantitative analysis, the responses were classified into related categories, so that the bar charts in this chapter could be produced.

#### **4.2.2 The Qualities of the Ideal Landlord**

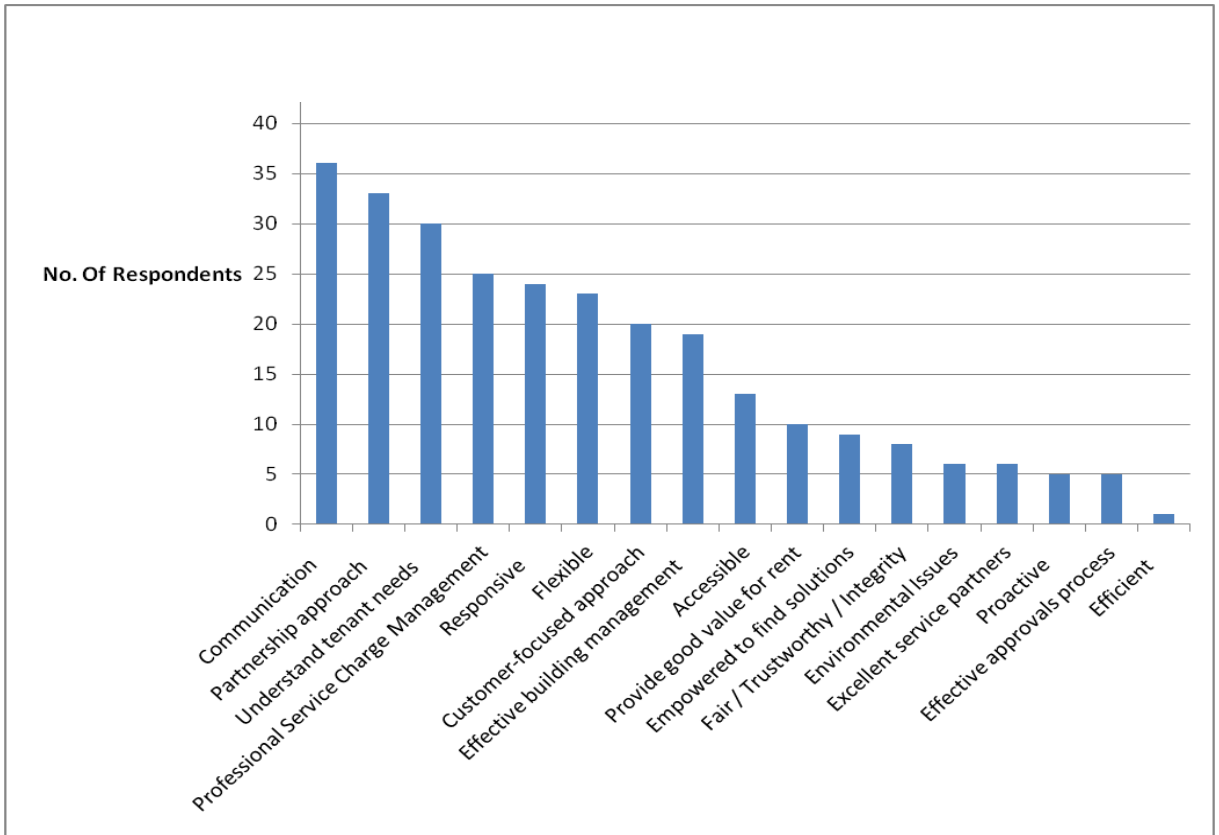
**Figure 4-1** shows the results of responses to the question, asked of more than 100 property directors of the main corporate businesses and retail multiples in the UK: "What are the characteristics of the ideal landlord?"

The consensus amongst corporate property directors was that a good landlord should understand the needs of the occupier, be flexible and communicate with the tenant, adopting a partnership approach. Respondents require:

*"Flexibility, and a willingness on the part of the landlord to strike deals in response to changing market conditions".*

Retail property directors, in particular, emphasised that landlords must "*understand retailers' margins, profits and competition*" and "*appreciate the need to drive footfall to achieve an acceptable profit margin*". Property directors also emphasized the importance of good service charge management, with timely budgets, transparency about costs and clear documentation.

**Figure 4-1: Property Directors’ Opinions about the Characteristics of an ideal Landlord**



Interviewees were also asked what landlords need to do to improve the landlord – tenant relationship. The most frequently cited suggestion was “*Communication*”, which, as shown in **Figure 4-1**, was also considered the most important quality in a landlord. Related suggestions included the need to “*build relationships with tenants*”, “*to have a single point of contact so that occupiers know who to speak to*”, “*closer liaison with tenants*”, and “*a better understanding of tenants’ business needs.*” Other suggestions related to value for money for service charges, and to flexibility – “*lease flexibility*”, “*flexibility of approach*” and “*flexibility with licenses for alterations*”.



### 4.3 Reasons for Choice of Property

The bar charts of **Figure 4-2 - Figure 4-5** summarise the reasons cited by occupiers of retail warehouses and shops, offices, and industrial units for their choice of premises.

#### **Findings from Retailers**

For the retail sector, interviews were conducted with a range of representatives, including (i) retail property directors; (ii) store managers of retail warehouses on retail parks; (iii) store managers of retail units in shopping centres.

##### **4.3.1 The views of retail property directors**

For chain stores and multiple retail organisations, the decision about which properties to rent is rarely taken at site level, but by national or regional property directors. Around 100 interviews were conducted with retail property directors who were asked what factors they consider when choosing which retail unit to rent.

For retail property directors, costs are paramount. As one said,

*“We are a global business and the UK is the most expensive country in which to expand. Our occupation cost is the key factor influencing our space requirements. We would prefer turnover-only rents.”*

In order to justify high rents, retailers require *“the opportunity to drive sales, an appropriate location and space configuration”*, and *“consistency of trade, and decent footfall”*. In addition, the availability of units of the right size and preferably in the right location was felt to be crucial, and the *“right tenant line-up”* in a centre was described as *“critical”*.

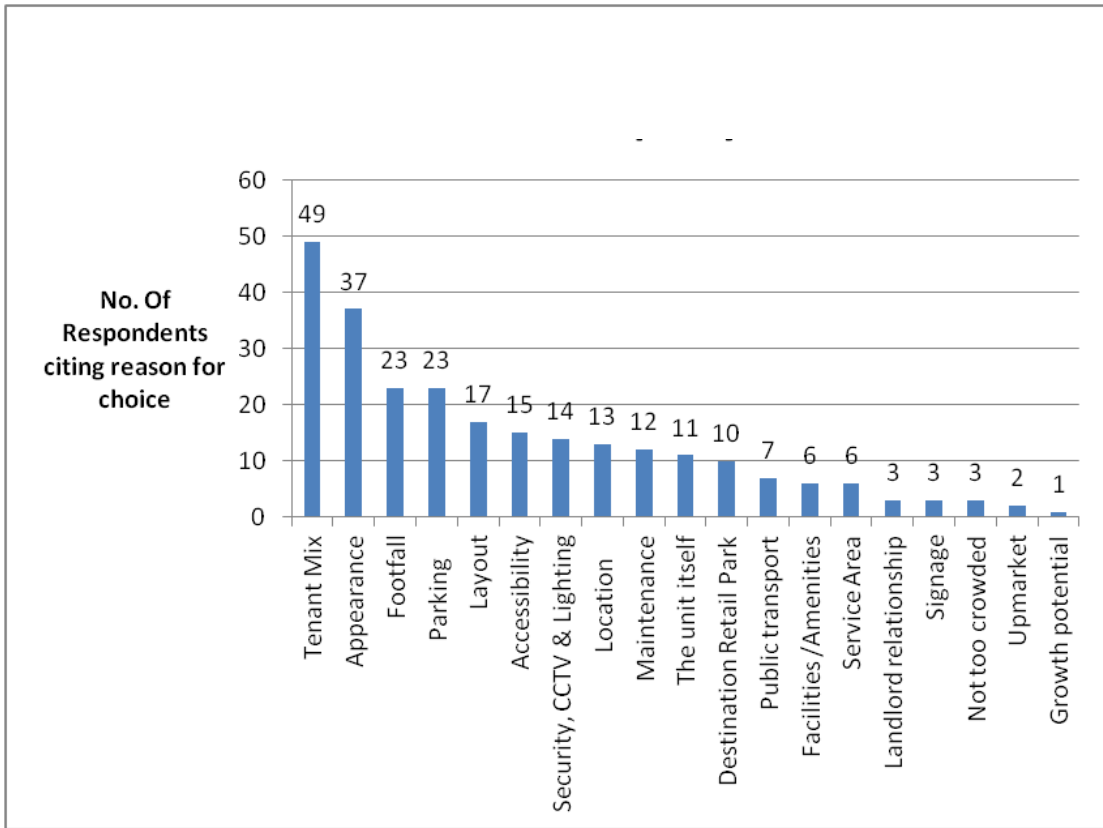
##### **4.3.2 The views of store managers**

Data relating to store managers has been separated, to allow for separate analysis of the views of store managers of retail warehouses on shopping parks with those of store managers of units within shopping centres.

#### **Retail Warehouses on Shopping Parks**

**Figure 4-2** shows the reasons cited by managers of retail warehouses on retail parks for their choice of property. The main single factor affecting their choice of property, cited by 49 of the 120 respondents (41%), was the retail mix on the park. Many respondents commented that the tenant mix is crucial for attracting customers. The location of the park was referred to explicitly by only 13 (11%) respondents. However, aspects of accessibility, including parking and public transport, were mentioned by 45 (38%) interviewees.

**Figure 4-2: Reasons cited by Retail Warehouse Managers for their choice of property**

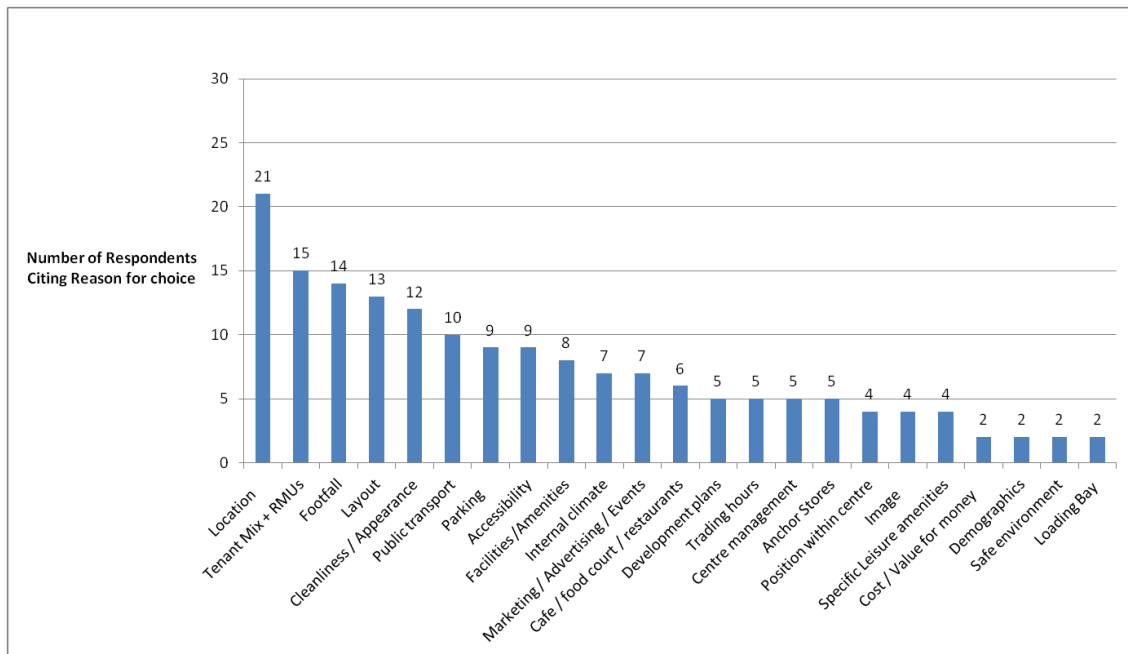


The atmosphere of the park, incorporating appearance, maintenance and layout, was cited by 66 respondents (55%), and security, including patrols, CCTV and good lighting, was also considered important. These are all aspects which property managers can influence. The unit itself, whilst important, was mentioned less frequently than the ‘macro-level’ features which drive footfall to the Retail Park: tenant mix, accessibility, free parking and appearance. Certain categories of retailer, including furniture stores and others selling big-ticket items, felt that it was important to be on a “*destination park*”, one to which shoppers make a planned excursion rather than casual shopping. Respondents appreciated amenities such as places to eat (for both staff and customers) and covered walkways, seating areas and pleasant foliage which help to increase dwell time. Three of the interviewees mentioned the relationship with the landlord as one of the main factors in their decision to take a unit on the park. Even where interviewees do not refer to the landlord explicitly, it is the landlord and the park management team who can help to create the ambiance which encourages shoppers to spend more time and money, which is the store managers’ ultimate concern.

**Store Managers in shopping centres**

**Figure 4-3** shows responses from 85 interviews with store managers in shopping centres. In the case of independent retailers, the manager’s response regarding choice of property generally reflects that of the retailer. However, for some of the other respondents, the answers may involve second-guessing the decisions made by the person with principal responsibility for signing the lease, as this is unlikely to be the store manager. This probably explains why cost / rent / value-for-money do not feature highly in the responses from store managers.

**Figure 4-3: Reasons cited by Store Managers for their choice of property**



For the store managers interviewed in the surveys, the key considerations were location (cited by 21 respondents, - 25% of the sample), tenant mix (15 respondents – 18%) and footfall (14); the last of which is largely driven by the other two factors. One respondent explained the criteria used, saying,

*“We were looking for a reasonably prime site - not prime-prime, but prime. We were looking for something off-pitch. This area has picked up. There are more shops than there used to be and even the nooks and crannies do well.”*

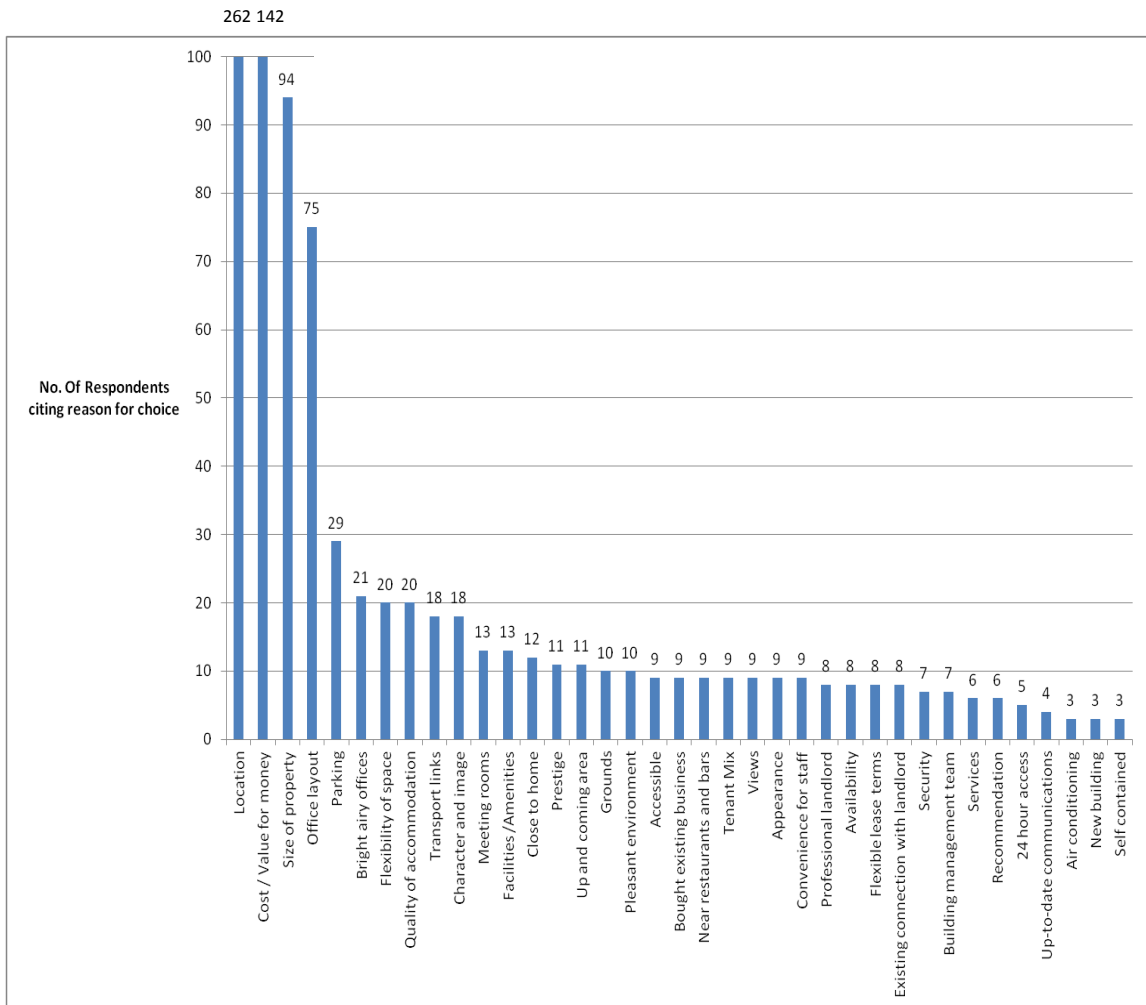
Several respondents used the phrase “up and coming” in describing the vicinity, and believed that they get better value for their rent in such an area. Footfall is also driven by public transport, parking and accessibility, and these aspects were mentioned by many of the interviewees.

In shopping malls, the decision to rent a unit hinges greatly on the presence of anchor stores in the Centre. Specific supermarkets, department stores, chemists and other major retailers were cited by name as factors influencing the decision to take space within a centre, and also which particular unit to take. Another aspect driving footfall is marketing and advertising, as well as events staged in a mall, or specific amenities such as a cinema and places for shoppers to eat, to increase dwell time. These were mentioned by 17 respondents in total (20%). A further issue is the image and appearance of a shopping centre, and the cleanliness and internal climate of the common areas; aspects which make it more pleasant for staff and shoppers alike. Since these are the responsibility of the landlord, paid for by service charges, several respondents noted that the centre management personnel were relevant to the decision to take space in a particular shopping mall. Comparing responses from retailers in shopping centres and on retail parks, customer service by property managers would appear to be more important to store managers in shopping centres than to those on retail parks.

#### **4.3.3 Findings from Office Occupiers**

Data for a much larger sample of office occupiers was available, with over 400 respondents. **Figure 4-4** shows the reasons cited by office occupiers for their choice of property. Once again, the results support most previous research in finding that the key determinant of choice of office is location (66%). Location was cited as being a factor in staff recruitment and retention, convenience for the business owner and accessibility for clients. Allied to location, availability of parking was mentioned as a consideration by 7% of respondents and proximity to public transport links by 5%.

**Figure 4-4: Reasons cited by Office Tenants for their choice of property**



The second most frequently cited factor for choice of premises was cost, rent or value-for-money, mentioned by 35% of interviewees. For one respondent it was the only consideration:

*“I had no choice. I looked at about 30 [offices] and this is the only one I could afford and was suited to us.”*

Another respondent stated,

*“We got a fantastic price on it. It was £10,000 cheaper than on the other side of town.”*

Another interviewee, mentioning both location and cost, commented,

*“The price was most important but the location too. We wanted to be outside the [London] Congestion Charge Zone.”*

For some respondents, value in use is more important than the baseline rent:

*“The fact that the video conferencing facilities and meeting rooms were provided at no extra cost was important to us. We used to spend thousands of pounds on flights but now we can*

*use video conferencing instead of flying to see clients. We were reluctant to invite clients to our previous office because there was an extra charge for the room, the projector and the coffee.”*

Another respondent also commented on the benefit to his business of the facilities, saying that

*“The big decision-maker was the availability of meeting rooms free of charge.”*

In terms of the form of the office, the size and layout was very important to the occupiers interviewed for these surveys, as was the internal climate, lighting and ambience. Several respondents chose an iconic or prestigious building because it supported the image of their business that they wanted to convey to their customers:

*“We love the exposed bricks and the rawness of the building. It's a bit shabby and really cool. Our company is playful and young and our CEO is quite cool. This building works well with his personality.”*

In addition, occupiers appreciate building security such as: *“a manned-reception”; “an attractive lobby”; “a lovely reception without being intimidating.”*

Prospective tenants recognise the importance of a pleasant environment, both internally and externally. Many interviewees commented on the importance of the surrounding area on staff productivity and well-being, with one noting that,

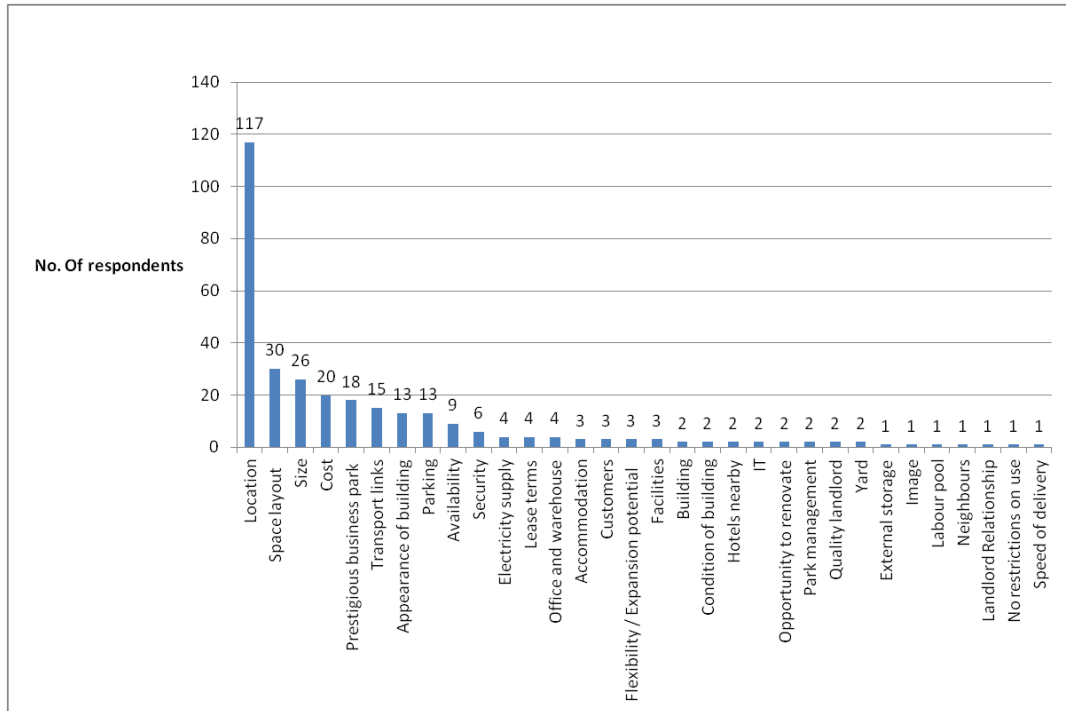
*“After a couple of weeks it registered that there was a positive impact on the team. There was a distinct improvement in morale because of the ambience. It is a big bonus that we can go out and walk in the grounds. The cafe on site also improves the convenience here.”*

For some occupiers, the nature of the tenant mix matters, either by providing the synergy that having similar businesses within a multi-tenanted office provides, or avoiding direct competition from similar service or product providers. For office occupiers, this issue is far less significant than for retailers, but its relevance does still hold in specific types of businesses, such as law or IT. Twenty-one respondents cited the landlord, the building management team, or a recommendation regarding the landlord, as being instrumental in their decision to take the particular office space. One respondent specifically commented on the professionalism of the streamlined leasing process affecting their choice to take a lease, making it *“easy in and easy out”* and *“simplified and straightforward.”*

#### 4.3.4 Findings from Occupiers of Industrial Units

For Industrial premises, approximately 150 business owners were interviewed, with respondents being asked for up to three reasons for their choice of property. **Figure 4-5** shows the reasons cited by these occupiers of industrial premises.

**Figure 4-5: Reasons cited by occupiers of industrial premises for their choice of property**



Most respondents (78%) cited the location of the industrial park as the main reason for their choice. Factors relating to the size and configuration of their unit were also considered crucial, but these were only specifically cited by 20% of respondents (space/layout), 17% (size) and 13% (cost). Typical comments included,

*“Location was very important as we wanted to be near our previous premises to make it easy for our staff. The size of the unit was important, and in the end we took two adjacent units and knocked them together. The proportions of the space were also an important factor. We need about 10% office space and 90% for our factory.”*

Others commented on the need for *“flexibility regarding space, and scope to grow”*.

Cost and Lease Terms were also key considerations; as one respondent summarised,

*“People looking at properties always have three criteria, which are location, rent and product.”*

Ease of access to the estate for staff and customers was emphasised by many interviewees, including the importance of good road access, public transport links and (preferably free) parking. The image of the estate and of the building mattered to those who have to entertain visitors or clients:

*“It's a fantastic setting and makes a great impression on customers. It gives them the impression we are doing well.”*

Some companies have specific requirements for storage, a high roof, or “a good infrastructure, a good power supply and good communications” and several mentioned the importance of security patrols on the estate. The fact that only five respondents mentioned factors relating to the landlord or estate management as affecting their choice of premises may be indicative of a looser relationship between landlord and tenant in industrial premises than in other types of commercial property.

#### **4.3.5 Why Occupiers Leave**

Interviewees were also asked about reasons for vacating properties and for moving elsewhere – the sort of push and pull factors described by Appel-Meulenbroek (2008). The main reasons given relate to changes in accommodation requirements – either consolidating several properties into one or expanding the business and needing additional stores. Most departures were at lease expiry, and pull factors to alternative properties included financial incentives and waiving of fit-out costs.

### **4.4 Conclusion**

This research supports most previous studies in finding that commercial occupiers seek a property with an appropriate specification for their business, in a convenient location at a fair price. The precise priority of factors varies with sector, and with individual business requirements. For retailers, key considerations are the tenant mix at a shopping centre or retail park, and shopper footfall. Location plays its part in this, but the appearance of the property, its accessibility and availability of parking are also fundamental to the decision to rent a particular store. Office and Industrial occupiers attach great importance to the cost and also the layout and size of the premises. Feedback from occupiers in all sectors makes it clear that landlords wishing to achieve good occupancy rates should focus on strategies that address five specific features of tenants' requirements: location; cost; building form and function; flexibility of space and lease terms; and the leasing process.

While location remains the top consideration for most occupiers, landlords must act smartly in managing their portfolios accordingly, trading properties where necessary, and employing property-specific strategies elsewhere. Sensible strategies will vary from sector to sector, for example, achieving the optimum tenant mix in retail centres and parks through employment of expert systems and analysis;



providing better transport solutions for business parks; and improving the security and aesthetic appearance of industrial units.

Landlords can also demonstrate their willingness to help keep tenants' costs down, including assistance with utility contracts. As discussed in the previous Chapter, most of the last decade's research indicates that eco-certified properties can command a rental premium and that occupiers are willing to pay more because their operating costs are reduced. Indeed, there is some indication that green-proofing a building is prerequisite to making other strategic investments in it. Many occupiers now expect sustainability features to be incorporated as standard in new buildings (World Green Building Council, 2013). While such attitudes are likely to migrate to refurbished buildings, sustainability and environmental considerations did not feature as highly as might have been expected in this analysis. In these interviews with occupiers it was apparent that concern about sustainability varied with the economic climate, with occupiers expressing greater willingness to reduce their carbon footprint when their business was doing well, but relegating sustainability in their list of priorities during the economic downturn. Similarly, Leishman et al. (2011) found that carbon-reduction interventions may deter occupiers if they interfere with the functionality of the space. Investors should undertake cost-benefit analysis when it comes to alternative refurbishment specifications to ensure such investment is justified.

The serviced office sector is expanding to meet the demand from occupiers for more flexible access to office space, and some landlords are offering short-term Industrial Lets too. In retail, pop-up stores and Retail Merchandising Units cater for start-up businesses. Other ways in which landlords are responding to occupiers' need for flexibility include providing meeting rooms for short-term hire, or temporary space on very short, flexible leases. From an owner's perspective, more research is needed to demonstrate whether being more flexible has increased occupancy rates, and whether returns from more flexible models such as serviced offices exceed those from more traditional models of commercial property supply.

Landlords are more likely to be able to supply properties that meet the needs of occupiers if they exhibit "qualities of an ideal landlord", as perceived by corporate property directors, including rapport and close liaison with occupiers, an understanding of their needs, integrity, professionalism and fairness. This should create a symbiotic relationship; such behaviour should increase the likelihood that existing occupiers renew their lease and recommend the landlord to others. The following chapters focus on the assessment of occupier satisfaction, and use several regression techniques to investigate the factors which influence occupiers' satisfaction, likelihood of lease renewal and willingness to recommend their landlord or property manager.

# Chapter 5 Research into the Satisfaction of Occupiers of UK Commercial Property

## 5.1 Occupier Satisfaction Data

This part of the research uses an original data set created from transcripts of 4482 interviews with occupiers of commercial property conducted between 2003 and 2013 by RealService. As mentioned in Chapter 4, RealService is an independent consultancy for the UK property industry, specialising in helping landlords and property managers improve the service they deliver to occupiers. When landlords commission surveys, discussions are held with each to decide what aspects should be included in the questionnaire used by interviewers, with each survey of a shopping centre, retail park, industrial estate or multi-tenanted building forming a standalone project. Interviews typically include around 20-30 questions, and although similar topics are generally covered, the same questions are not necessarily asked in different projects. This means that in the 4400+ interviews used for this research more than 400 different questions were asked, covering approximately 50 general topics.

The occupier satisfaction surveys analysed in this thesis consisted of interviews which were conducted face-to-face or by telephone. The data comprises 1293 interviews with occupiers of Industrial property (usually the owner of the business), 1334 interviews with office occupiers (the office manager or other senior member of staff), 1689 interviews with store managers in shopping centres and 166 interviews with store managers on Retail Parks.

The respondents had been approached by their landlord or property manager to ask if they would be willing to take part in the survey, and all had agreed to be interviewed. Interviews were scheduled in advance, at a time to suit the interviewee. All interviews began with an explanation of the purpose of the interview, confirmation that the interviewee was qualified to give an opinion on their organisation's satisfaction with aspects of the property and property management, and an explanation of the rating system for questions which required a numerical rating of satisfaction. Respondents were told that they could make "off-the-record" comments if they wished, or could remain anonymous, but were encouraged to be open and honest with their feedback so that their landlord or managing agent could act on the feedback to improve the service they deliver.

The interviews generally asked occupiers for their opinions about each aspect of their occupancy, and the responses were hand-written during the interview and subsequently transcribed and entered into

an SQL database. Although interviews were sometimes recorded, with the interviewees' permission, this was for quality control and training rather than to assist with the subsequent transcription. For most questions, after giving a qualitative response interviewees were asked to summarise their satisfaction with that aspect of their occupancy by giving a rating using an ordinal scale of '1' to '5', with '1' being the lowest level of satisfaction, representing 'very dissatisfied' or 'very poor'; '3' meaning 'average'; and '5' being the highest level of satisfaction - 'excellent', 'outstanding' or 'very satisfied'. After an interview had been entered into the database, a ratings check was performed by another person, to ensure the values entered were those initially written during the interview.

Occupiers were asked about perceptions only, rather than expectations, although in some interviews respondents were asked how their landlord compared with others, which gives some insight into expectations of occupiers. Some questions, such as those discussed in the previous Chapter, asked respondents to "list up to three factors"; for example, "What are the three issues that, if addressed, would have the greatest impact on your satisfaction?" Such questions enabled occupiers to raise issues of most concern to them. Typical questions asked in the occupier satisfaction interviews are given in Appendix B.

The quantitative and statistical analysis in this part (Part 2) of the Thesis is based upon occupiers' responses when asked to rate their satisfaction with various aspects of their tenancy using the '1' to '5' ordinal response format. Database administrator rights to the database were not granted, so for an initial pilot study satisfaction ratings for each property were extracted manually, field by field. However, for the main study it was agreed that the database administrator would download the data onto Excel spreadsheets, one for each of the 10 landlords whose properties are included in this research, as a data dump which could then be sorted, filtered and analysed.

From the 10 spreadsheets a single worksheet containing the following columns was produced:

Landlord	Sector	Property	Date of Interview	Tenant	Question	Rating	Rating Description
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The spreadsheet contained 244,609 rows!

### 5.1.1 Description and Classification of Variables

Using the “Sort/Filter” function in Excel, the 400+ questions were rationalised into around 40 categories, combining some related topics to achieve reasonable sample sizes. For example, questions relating to build quality, building layout and image were treated as one category, “Building Specification”. Questions were also re-worded so that each category formed a single field in the pivot tables created to produce spreadsheets for statistical analysis. Questions which were specific to only a few properties, or required qualitative responses were categorised as ‘Exclude’ and were not used as variables in the analysis.

**Table 5-1** shows the descriptive statistics for the occupier satisfaction data. The variables are grouped into satisfaction with physical aspects of the property, financial aspects, property management and overall measures of satisfaction and advocacy. The “physical” features refer to the property itself, its location and macro features which may be outside the control of the property manager such as the ability to access the property by public transport. The items grouped under “property management” include service items such as cleaning, maintenance and communication, as well as features within the property such as signage, lifts and escalators and the entrances or reception area. These aspects are more within the control of the property manager than the building-related features, and may be paid for by service charges. These groupings are not fundamental to the analysis, but are designed to assist with the display of the descriptive statistics.

By contrast, the Financial and the Dependent variables are deliberately categorised and intended to be distinct groupings. The financial variables are used in the structural equation modelling as a distinct construct and the dependent variables are employed in regressions and structural equation models. The data do not follow a normal distribution, since skewness and kurtosis values are not zero. Most of the measures of occupier satisfaction exhibit negative skewness, meaning that scores are clustered towards higher values, and positive kurtosis, meaning that the distribution is clustered in the centre, with relatively long thin tails. The only exception is “Catering” for which the sample size is very small compared with the other variables, since this question was asked in only a few projects. Non-normal kurtosis produces an underestimate of the variance of a variable. However, the methods of analysis employed for this research, structural equation modelling with SMART PLS and logistic regression, make no assumptions about the distribution of predictor variables (Hair et al., 2014, p. 10; Tabachnick & Fidell, 2013, p. 439), and are thus appropriate methods for analysing this data.

**Table 5-1: Descriptive Statistics for the variables in the data set**

	Variables	N		Mean	Std. Deviation	Skewness	Std. Error of Skewness	Kurtosis	Std. Error of Kurtosis
		Valid	Missing						
Physical Aspects	Building Specification	1728	2675	3.815	0.82	-0.696	0.059	0.802	0.118
	Estate Satisfaction	352	4051	3.742	0.696	-1.079	0.13	2.348	0.259
	Location	1051	3352	4.121	0.765	-0.806	0.075	0.646	0.151
	Parking	1112	3291	3.397	0.929	-0.358	0.073	-0.202	0.147
	Public transport	842	3561	3.635	0.965	-0.729	0.084	0.331	0.168
	Tenant mix	785	3618	3.447	0.838	-0.728	0.087	0.828	0.174
Financial Aspects	Rent Value	2047	2356	3.289	0.828	-0.407	0.054	0.329	0.108
	Service Charge Value	2128	2275	3.186	0.843	-0.427	0.053	0.088	0.106
	Trading performance	1356	3047	3.455	0.89	-0.439	0.066	0.166	0.133
Property Management Variables	Communication	3926	477	3.816	0.9	-0.767	0.039	0.562	0.078
	Responsiveness	3774	629	3.814	0.916	-0.842	0.04	0.63	0.08
	Understanding Needs	3653	750	3.635	0.904	-0.586	0.041	0.215	0.081
	Security	2910	1493	3.753	0.944	-0.748	0.045	0.324	0.091
	Health & Safety	1626	2777	4.123	0.761	-1.106	0.061	1.869	0.121
	Cleaning	2407	1996	4.013	0.7816	-0.968	0.05	1.454	0.1
	Waste & Recycling	1001	3402	3.932	0.892	-1.244	0.077	1.773	0.154
	Marketing & Events	1582	2821	3.502	0.864	-0.575	0.062	0.474	0.123
	Maintenance	2283	2120	3.797	0.824	-0.68	0.051	0.611	0.102
	Approvals & Legal Processes	982	3421	3.576	0.962	-0.734	0.078	0.452	0.156
	CSR	2225	2178	3.77	0.766	-0.91	0.052	1.68	0.104
	Entrances/ Reception	1178	3225	3.553	0.858	-0.297	0.071	-0.008	0.142
	HVAC & Lighting	1039	3364	3.178	0.973	-0.4	0.076	-0.321	0.152
	Amenities & Services	2130	2273	3.597	0.829	-0.723	0.053	0.72	0.106
	Leasing process	798	3605	3.888	0.753	-0.854	0.087	1.317	0.173
	Professionalism	1815	2588	3.721	0.858	-0.703	0.057	0.631	0.115
	Billing & Documentation	1812	2591	3.651	0.853	-0.908	0.057	1.194	0.115
	Catering	80	4323	2.55	1.413	0.241	0.269	-1.388	0.532
Lifts	828	3575	3.602	0.893	-0.799	0.085	0.684	0.17	
Signage	1458	2945	3.178	0.9	-0.322	0.064	-0.133	0.128	
Dependent Variables	Overall satisfaction	3896	507	3.859	0.705	-0.747	0.039	1.572	0.078
	Property Management	3411	992	3.872	0.83	-0.789	0.042	0.91	0.084
	Landlord Performance	2510	1893	3.735	0.749	-0.692	0.049	1.247	0.098
	Lease Renewal	991	3412	3.8	1.098	-0.812	0.078	-0.008	0.155
	Recommend 1-5	1933	2470	4.101	0.86	-1.137	0.056	1.539	0.111
	Binary-Rec 1=Y 0 = N	2510	1893	0.903	0.312	-3.657	0.049	14.336	0.098

### 5.1.2 Explanation of Variables

Most of the variables shown in **Table 5-1** should be self-explanatory. For example, 'Estate Satisfaction' was asked of occupiers on Industrial Estates and Retail Parks, and refers to occupiers' satisfaction with the whole property, as opposed to their individual unit. As mentioned above, 'Building Specification' incorporates satisfaction with the form and function of the building, its image, layout, and build quality, depending upon which variant of question was asked of occupiers. The question refers to entire shopping centres and office buildings, but, when asked of Industrial occupiers or retailers on Retail Parks, refers to their individual unit.

Satisfaction with Parking includes staff parking as well as shopper parking (for the Retail Sector) and visitor parking (for the Office and Industrial sectors). Satisfaction with public transport was included in relatively few interviews, whilst questions about Satisfaction with Tenant Mix and with Trading Performance were generally only asked of Retailers.<sup>48</sup>

Most interviews included questions about satisfaction with communication with the property manager, their responsiveness to requests, and the extent to which the property manager understood the business needs of the occupier. Satisfaction with Security encompassed the role of Security Guards in shopping centres or on industrial estates, for example, whilst questions about 'Health and Safety' were generally included only in interviews at shopping centres.

'Cleaning' refers to the cleaning of common parts, such as the malls in a shopping centre, usually paid for as part of the Service Charge, but can also include cleaning within the demise if this is organised by the landlord or their agent. 'Waste and Recycling' is grouped into a single question, although there is some overlap with 'Corporate Social Responsibility', because some occupier satisfaction studies included several questions about sustainability and environmental initiatives, of which 'Recycling' is one. Questions about occupiers' satisfaction with 'Waste and Recycling' were not asked if they were not the landlord's responsibility, unless the landlord or managing agent had encouraged occupiers to collaborate to have a single waste collection service to achieve economies of scale.

Satisfaction with Marketing and Events was only asked of retailers in shopping centres, whereas most interviews included a question about the 'Maintenance' of common parts and any other aspects for which the landlord was responsible. 'Approvals and Legal Processes' includes applications for licenses, such as those required under the terms of the lease if the occupier wishes to make alterations to the

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<sup>48</sup> A small number of interviews with occupiers of office buildings were also asked this question.

property. It also incorporates requests to change signage or hang banners outside a shop, for example, or to assign or sub-let the property.

‘Entrances / Reception’ encompasses the lobby of an office building as well as the entrances to a shopping centre. It is less applicable to retail parks and industrial estates. HVAC (Heating, Ventilation and Air-Conditioning) and Lighting is mainly applicable in Office Buildings, but a question about satisfaction with the internal climate in Malls was sometimes asked in shopping centre surveys, and is included in this category of variable. The question of satisfaction with the lifts in a property was also mainly asked of office occupiers, although retailers in shopping centres were sometimes asked about the functioning and suitability of lifts and escalators at their centre.

Many studies asked about satisfaction with Amenities or Services; these could be within the property, or perhaps in the vicinity. Only about one-quarter of interviews asked about satisfaction with the Leasing Process, in part because the interviewee may not have been involved in the actual leasing.

The ‘Professionalism’ category refers to the professionalism of the property manager, and includes questions about occupiers’ perception of being treated as a valued customer and of the customer service they receive.

‘Billing and Documentation’ relates to the accuracy, transparency and timeliness of documentation such as service charge budgets and reconciliations. As mentioned above, a question about satisfaction with ‘Catering’ was included in too few surveys to be used in the analysis. ‘Signage’ refers to the signs directing visitors to a property, typically a shopping centre, retail park or industrial estate, as well as signage within the property, to individual shops or industrial units. It is generally less relevant in offices unless the building is very large and is occupied by many businesses that have visitors.

### **The Dependent Variables**

All occupier satisfaction studies included a summary question, at the end of interviews, which asked occupiers to give a summary rating of their overall satisfaction, taking into account all the aspects that had been discussed during the interview. As well as this question on ‘Overall Satisfaction’, many interviews also asked occupiers earlier on in the interview to summarise their overall satisfaction with property management, and some asked occupiers to rate their landlord’s performance on the scale of ‘1’ to ‘5’ that was used for almost all questions. Approximately one-quarter of interviews, mainly those conducted in the earlier years, asked occupiers to rate their lease renewal intentions: how likely they were to renew their lease if the decision had to be taken today. The final two variables in **Table 5-1** relate to advocacy of their landlord by respondents.

### **Occupiers' Willingness to Recommend their Landlord or Property Manager**

As with all the categories of question in the data set, the question asking whether occupiers would be willing to recommend their landlord or property manager was asked in various ways in different occupier satisfaction studies. This was partly attributable to differing approaches to property management. Where a landlord had outsourced management to a third party, or used internal, on-site property managers, the question generally asked about willingness to recommend the property manager. Where there was more of a direct relationship between landlord and tenant, the question tended to ask about willingness to recommend the landlord. The other anomaly arises from the fact that in some studies the question required a "Yes / No" binary response (with the option to abstain), whereas in others it was asked as an ordinal response, Likert-style rating question '1' – '5'. Thus the data set contained two variables relating to advocacy: 1) Willing to Recommend – Yes / No, and 2) Willingness to Recommend – rated '1' – '5'. Each respondent was asked one or other of these questions, but not both.

The fields of data were organised in various ways in separate pivot tables, with rows sorted by sector (Retail, Office and Industrial), by landlord, by year of study, by property and by individual interviewee. The columns of the pivot tables were the re-worded categories. The pivot table values field chosen was "Average of Rating", which enabled mean ratings to be produced for each property / landlord / sector etc. Some data screening and cleaning was required, because in many of the projects, zero was used to indicate no response, and this had to be removed before calculating average ratings. Similarly, in some projects '6' had been used to indicate 'not applicable', and again such values had to be deleted and replaced with blank cells. Other spurious data required amendment, particularly where one topic was used as a proxy for another, meaning that some questions had two answers from a single respondent, in which case the mean of both ratings was used. Many checks were conducted on the accuracy of the data, from random spot-checks by querying the database, to checking that the same results were obtained whether empty cells were left blank or had the word 'NULL' inserted.



### 5.1.3 Correlations between variables

The following tables present the correlations between variables, excluding cases pairwise, for the sample as a whole. **Table 5-2** shows how satisfaction with aspects of tenancy correlates with occupiers' overall satisfaction. From this, it is apparent that satisfaction with property management shows a very strong correlation with overall satisfaction, as do factors which are to do with the relationship between property manager and occupier – understanding needs, communication and responsiveness – as well as factors which are to do with reputation and professionalism – Corporate Social Responsibility and Customer Service. Estate Satisfaction also correlates strongly with the overall satisfaction of those office and industrial occupiers who were asked about this aspect. All correlations are statistically significant at the 0.01 level. This reflects the importance of each aspect but also the large sample size.

**Table 5-2: Correlations of Satisfaction with Aspects of Tenancy with Overall Satisfaction**

	Pearson Correlation with Overall Satisfaction	N
Overall Satisfaction	1	3971
Property Management	.597**	3276
Estate Satisfaction	.556**	350
Understanding Needs	.554**	3493
CSR	.507**	2110
Customer Service / Professionalism	.503**	1598
Communication	.498**	3748
Responsiveness	.482**	3613
Marketing & Events	.442**	1586
Building Specification	.424**	1593
Leasing process	.424**	678
Trading performance	.422**	1399
Service Charge Value for Money	.400**	1962
Maintenance	.392**	2281
Entrances / Reception	.382**	1173
Rent Value for Money	.374**	1937
Cleaning	.367**	2422
Tenant mix	.355**	838
Security	.339**	2915
Signage	.327**	1511
Amenities & Services	.307**	2153
Lifts	.290**	819
Billing & Documentation	.281**	1664
Approvals & Legal Processes	.279**	874
HVAC & Lighting	.279**	1028
Health & Safety	.260**	1601
Location	.252**	1065
Waste & Recycling	.243**	979
Parking	.233**	1167
Public transport	.113**	873
**. Correlation is significant at the 0.01 level (2-tailed).		

As can be seen from **Table 5-3 - Table 5-6**, there are many significant correlations between explanatory variables, too. For physical aspects of occupancy, all correlations are positive apart from those between location and parking, between parking and public transport, and between building specification and tenant mix, although none of these negative correlations is statistically significant. For aspects which are more within the remit of the property manager, all correlations are positive apart from some relating to catering, and this aspect of occupancy is relevant to only a very small number of properties.

Whether the strong positive correlations between many of the variables mean that it is not possible to perform straightforward Ordinary Least Squares (OLS) Regressions can be tested by assessing the Variance Inflation Factor (VIF) for each variable. If the VIF exceeds about 5 multi-collinearity is said to occur. This means that coefficients on explanatory variables on OLS regressions would be strongly biased and inefficient – it would not be possible to attribute variance uniquely amongst the highly correlated explanatory variables. A variety of other techniques can however be used to examine the relationship between the independent variables (satisfaction with the physical, financial and property management aspects of occupiers' tenancy) and the dependent variables. Principal Components Analysis with Varimax Rotation can be used to create orthogonal components which can themselves be used in regressions, (Kaiser, 1970; Pallant, 2010; Tabachnick & Fidell, 2013) and the variables can be grouped into constructs and used in Structural Equation Modelling as long as the loadings of the variables on the construct with which they are associated are greater than the cross-loadings on other constructs (Hair et al., 2014). These methods are used in the subsequent quantitative analysis of the determinants of overall satisfaction, loyalty and advocacy, to address Research Question 2..

From **Table 5-7** it can be seen that the dependent variables in particular are all highly correlated; in Part 3 of this Thesis just one of these, Overall Occupier Satisfaction, is used in the analysis, acting as a proxy for satisfaction, loyalty and advocacy when investigating the impact of occupier satisfaction on property returns, to address Research Question 3.

**Table 5-3: Correlations between Satisfaction with Physical Aspects of Occupancy**

		Location	Building Specification	Parking	Public transport	Tenant mix	Estate Satisfaction
Location	Pearson Correlation	1	.199**	-.057	.117*	.284**	.391**
	N	1051	776	495	422	291	350
Building Specification	Pearson Correlation	.199**	1	.106	.086	-.188	.358**
	N	776	1728	342	261	85	337
Parking	Pearson Correlation	-.057	.106	1	-.041	.127**	.351*
	N	495	342	1112	699	770	53
Public transport	Pearson Correlation	.117*	.086	-.041	1	.012	.295**
	N	422	261	699	842	649	176
Tenant mix	Pearson Correlation	.284**	-.188	.127**	.012	1	.029
	N	291	85	770	649	785	16
Estate Satisfaction	Pearson Correlation	.391**	.358**	.351*	.295**	.029	1
	N	350	337	53	176	16	352

**Table 5-4: Correlations between Satisfaction with Financial Aspects of Occupancy**

		Rent Value for Money	Service Charge Value for Money	Trading performance
Rent Value for Money	Pearson Correlation	1	.466**	.210**
	N	2047	1807	309
Service Charge Value for Money	Pearson Correlation	.466**	1	.187**
	N	1807	2128	429
Trading performance	Pearson Correlation	.210**	.187**	1
	N	309	429	1356

**Table 5-5: Correlations between aspects within the control of property management**

		Amenities & Services	Legal Procs	Billing & Documents	Catering	Cleaning	Communication	CSR	Customer Service	Entrances / Reception	Health & Safety
Amenities & Services	Corr	1	.124**	.145**	.527**	.386**	.219**	.258**	.211**	.309**	.251**
	N	2186	634	1338	80	1186	2006	986	1134	1020	707
Approvals & Legal Processes	Corr	.124**	1	.258**	-.157	.131**	.301**	.295**	.283**	.019	.010
	N	634	1016	692	41	568	976	599	725	491	317
Billing & Documentation	Corr	.145**	.258**	1	.102	.185**	.244**	.213**	.227**	.046	.062
	N	1338	692	1833	61	889	1718	793	1079	607	415
Catering	Corr	.527**	-.157	.102	1	.526**	.477**	.643**	.299*	-.155	-.100
	N	80	41	61	83	58	79	53	49	17	43
Cleaning	Corr	.386**	.131**	.185**	.526**	1	.325**	.395**	.356**	.338**	.212**
	N	1186	568	889	58	2480	2399	1926	1367	1186	1495
Communication	Corr	.219**	.301**	.244**	.477**	.325**	1	.503**	.566**	.293**	.286**
	N	2006	976	1718	79	2399	3992	2189	1747	1168	1624
CSR	Corr	.258**	.295**	.213**	.643**	.395**	.503**	1	.560**	.247**	.258**
	N	986	599	793	53	1926	2189	2275	1358	1029	1377
Customer Service	Corr	.211**	.283**	.227**	.299*	.356**	.566**	.560**	1	.321**	.171**
	N	1134	725	1079	49	1367	1747	1358	1862	1035	663
Entrances / Reception	Corr	.309**	.019	.046	-.155	.338**	.293**	.247**	.321**	1	.106**
	N	1020	491	607	17	1186	1168	1029	1035	1221	689
Health & Safety	Corr	.251**	.010	.062	-.100	.212**	.286**	.258**	.171**	.106**	1
	N	707	317	415	43	1495	1624	1377	663	689	1629
HVAC & Lighting	Corr	.317**	.129*	.166**	.332*	.313**	.182**	.287**	.212**	.127**	.197**
	N	798	362	655	49	1009	1004	776	891	810	453
Leasing process	Corr	.214**	.314**	.181**	-.362*	.326**	.388**	.257**	.404**	.393**	.031
	N	461	426	477	45	359	704	298	429	220	132
Lifts	Corr	.326**	.033	.120*	.080	.244**	.179**	.243**	.213**	.329**	.201**
	N	663	302	441	22	815	810	768	744	741	481
Maintenance	Corr	.233**	.194**	.194**	.621**	.366**	.322**	.309**	.309**	.210**	.214**
	N	1390	737	1190	55	1649	2177	1285	1371	1093	838
Marketing & Events	Corr	.241**	.160**	.099	-.053	.312**	.410**	.350**	.381**	.263**	.266**
	N	672	275	366	23	1488	1563	1373	642	644	1453
Responsive	Corr	.218**	.350**	.227**	.390**	.331**	.639**	.468**	.547**	.252**	.203**
	N	1938	950	1669	76	2329	3787	2099	1679	1114	1555
Security	Corr	.257**	.055	.113**	.598**	.375**	.350**	.363**	.326**	.275**	.257**
	N	1461	674	1211	61	2365	2805	2070	1451	1098	1555
Signage	Corr	.228**	.096*	.066	.526**	.326**	.265**	.274**	.233**	.335**	.093*
	N	1279	587	836	54	1186	1459	1012	1084	950	729
Understand Needs	Corr	.221**	.339**	.207**	.092	.344**	.611**	.479**	.527**	.308**	.239**
	N	1891	939	1611	43	2200	3654	1993	1584	1026	1586
Waste & Recycling	Corr	.261**	.151*	.201**	.478**	.336**	.215**	.322**	.230**	.124*	.253**
	N	503	220	265	60	878	956	828	472	414	852

**Table 5-6: Correlations between aspects within the control of property management (continued)**

		HVAC & Lighting	Leasing process	Lifts	Maintenance	Marketing & Events	Responsive	Security	Signage	Understand Needs	Waste & Recycling
Amenities & Services	Corr	.317**	.214**	.326**	.233**	.241**	.218**	.257**	.228**	.221**	.261**
	N	798	461	663	1390	672	1938	1461	1279	1891	503
Approvals & Legal Processes	Corr	.129*	.314**	.033	.194**	.160**	.350**	.055	.096*	.339**	.151*
	N	362	426	302	737	275	950	674	587	939	220
Billing & Documents	Corr	.166**	.181**	.120*	.194**	.099	.227**	.113**	.066	.207**	.201**
	N	655	477	441	1190	366	1669	1211	836	1611	265
Catering	Corr	.332**	-.362**	.080	.621**	-.053	.390**	.598**	.526**	.092	.478**
	N	49	45	22	55	23	76	61	54	43	60
Cleaning	Corr	.313**	.326**	.244**	.366**	.312**	.331**	.375**	.326**	.344**	.336**
	N	1009	359	815	1649	1488	2329	2365	1186	2200	878
Communication	Corr	.182**	.388**	.179**	.322**	.410**	.639**	.350**	.265**	.611**	.215**
	N	1004	704	810	2177	1563	3787	2805	1459	3654	956
CSR	Corr	.287**	.257**	.243**	.309**	.350**	.468**	.363**	.274**	.479**	.322**
	N	776	298	768	1285	1373	2099	2070	1012	1993	828
Customer Service	Corr	.212**	.404**	.213**	.309**	.381**	.547**	.326**	.233**	.527**	.230**
	N	891	429	744	1371	642	1679	1451	1084	1584	472
Entrances / Reception	Corr	.127**	.393**	.329**	.210**	.263**	.252**	.275**	.335**	.308**	.124*
	N	810	220	741	1093	644	1114	1098	950	1026	414
Health & Safety	Corr	.197**	.031	.201**	.214**	.266**	.203**	.257**	.093*	.239**	.253**
	N	453	132	481	838	1453	1555	1555	729	1586	852
HVAC & Lighting	Corr	1	.150**	.231**	.255**	.079	.186**	.225**	.211**	.182**	.199**
	N	1042	334	631	904	424	978	943	703	839	274
Leasing process	Corr	.150**	1	.078	.250**	.059	.360**	.140**	.193**	.468**	.158
	N	334	802	183	540	64	677	427	322	669	96
Lifts	Corr	.231**	.078	1	.173**	.216**	.210**	.221**	.228**	.208**	.071
	N	631	183	831	762	461	781	815	615	684	290
Maintenance	Corr	.255**	.250**	.173**	1	.228**	.364**	.283**	.224**	.317**	.185**
	N	904	540	762	2346	786	2105	2062	1347	1968	588
Marketing & Events	Corr	.079	.059	.216**	.228**	1	.269**	.220**	.378**	.402**	.166**
	N	424	64	461	786	1600	1509	1560	741	1543	810
Responsive	Corr	.186**	.360**	.210**	.364**	.269**	1	.280**	.212**	.552**	.223**
	N	978	677	781	2105	1509	3847	2699	1385	3554	951
Security	Corr	.225**	.140**	.221**	.283**	.220**	.280**	1	.241**	.327**	.290**
	N	943	427	815	2062	1560	2699	2979	1452	2576	937
Signage	Corr	.211**	.193**	.228**	.224**	.378**	.212**	.241**	1	.236**	.151**
	N	703	322	615	1347	741	1385	1452	1522	1351	536
Understand Needs	Corr	.182**	.468**	.208**	.317**	.402**	.552**	.327**	.236**	1	.241**
	N	839	669	684	1968	1543	3554	2576	1351	3729	938
Waste & Recycling	Corr	.199**	.158	.071	.185**	.166**	.223**	.290**	.151**	.241**	1
	N	274	96	290	588	810	951	937	536	938	1024

**Table 5-7: Correlations between Dependent Variables**

		Overall satisfaction	Property Management	Landlord Performance	Lease Renewal	Binary-Recommend	Recommend 1-5
Overall satisfaction	Pearson Correlation	1	.597**	.584**	.273**	.375**	.538**
	N	3896	3276	2280	986	2446	1748
Property Management	Pearson Correlation	.597**	1	.545**	.151**	.335**	.522**
	N	3276	3411	1985	752	1933	1812
Landlord Performance	Pearson Correlation	.584**	.545**	1	.171**	.404**	.566**
	N	2280	1985	2510	852	1665	1098
Lease Renewal	Pearson Correlation	.273**	.151**	.171**	1	.211**	.183**
	N	986	752	852	991	918	258
Binary-Recommend	Pearson Correlation	.375**	.335**	.404**	.211**	1	.184**
	N	2446	1933	1665	918	2510	488
Recommend 1-5	Pearson Correlation	.538**	.522**	.566**	.183**	.184**	1
	N	1748	1812	1098	258	488	1933

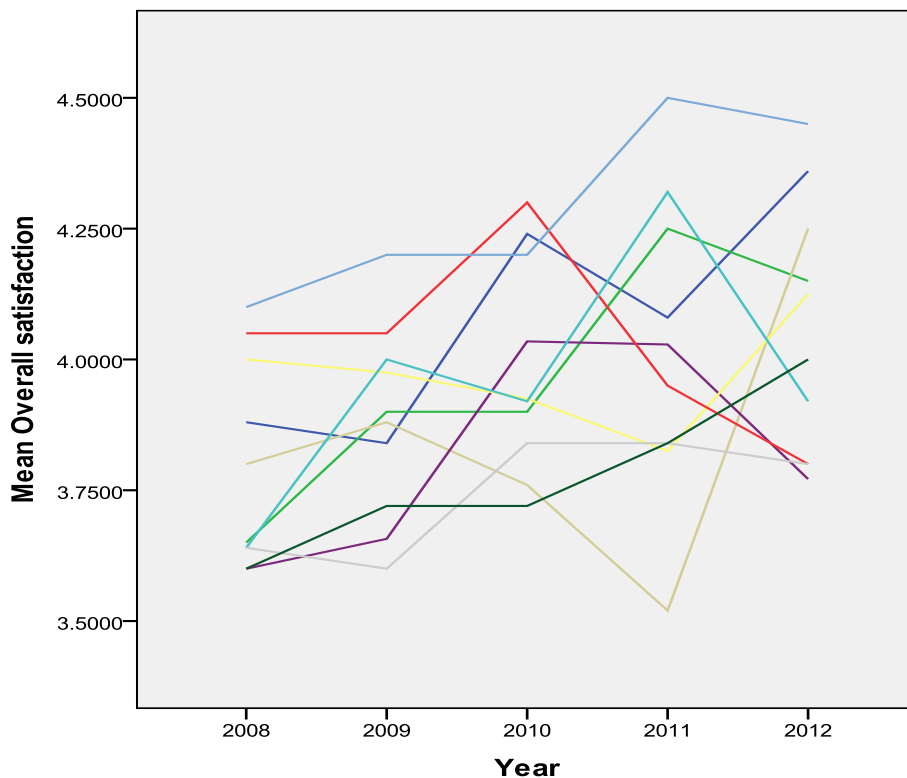
\*\* . Correlation is significant at the 0.01 level (2-tailed).

## 5.2 Temporal Stability of the Data

### 5.2.1 Changes in Occupier Satisfaction over time

Because the data was acquired over an 11-year period, it is instructive to assess whether the mean overall satisfaction of the occupiers in this study changes from year to year. An analysis of repeat studies shows that where a landlord acts upon the feedback from occupiers and addresses causes of dissatisfaction, the landlord is able to achieve an increase in annual satisfaction scores, as illustrated in the results of occupier satisfaction studies at 10 UK shopping centres over a five-year period, where the upward trend is apparent (see **Figure 5-1**).

**Figure 5-1: Mean Satisfaction of Store Managers at 10 Shopping Centres**



However, with the 4400+ studies used in this present research, each year some of the studies were inaugural, baseline studies of a property whilst others were repeat studies. Typically, inaugural studies showed lower occupier satisfaction, whereas repeat studies enabled action to be taken to improve satisfaction, as described above. **Table 5-8** shows the average occupier satisfaction for the annual samples. From this, it can be seen that there is no consistent trend, with the lowest satisfaction occurring in the 2006 sample and the highest in 2012. Analysis of variance shows that, although there

is a statistically significant difference in occupier satisfaction over the years, a value of 0.036 for Eta-squared means that the effect size is small (Pallant, 2010, p. 254)

**Table 5-8: Mean Occupier Satisfaction by Year of Study**

Overall\_Satisfaction

Year	Mean	N	Std. Deviation
2003	3.78	314	.863
2004	3.75	582	.820
2005	3.81	699	.723
2006	3.62	613	.789
2007	3.85	408	.750
2008	3.94	362	.771
2009	3.95	349	.894
2010	4.08	337	.790
2011	4.03	349	.734
2012	4.13	284	.692
2013	3.92	133	.775
Total	3.86	4430	.796

### 5.2.2 Temporal Stability of Correlations

In order to assess the temporal stability of the relationships between the variables used in this analysis and the dependent variables, correlations were performed between variables using the full sample and also splitting the data into three time periods: 2003 – 2006 (pre-recession), 2007 – 2009 (recession) and 2010 – 2013 (post-recession). For this analysis, the correlations used mean ratings from all occupiers at a property. The results are shown in **Table 5-9 - Table 5-12**. From these it can be seen that most correlations are very stable over time. The main disparity is for lease renewal intentions during the recession of 2007 – 9; the correlations during this period appear to indicate that lease renewal intentions were unrelated to occupier satisfaction. It seems probable that business requirements and circumstances were the key determinants of lease renewal during the recession. Indeed there are no positive, statistically significant correlations of the independent variables with lease renewal intentions during this period, perhaps in part because the number of cases in each pairwise correlation is small.



From Table **5-12** it can be seen that interviews did not include a question about lease renewal intentions after 2010. Similarly, from **Table 5-10** it is apparent that few occupier satisfaction surveys asked occupiers to rate their willingness to recommend their landlord or property manager on a scale of '1' to '5' in the early period of this analysis. Instead the early surveys used a 'Yes' / 'No' binary response variable which proved to be ambiguous and hence unsatisfactory, and was therefore not used for any analysis.

Correlations between the independent variables and overall occupier satisfaction are mostly very similar during the three periods, although certain variables show higher correlations during the recession, particularly Amenities and Services, Billing and Documentation, the property itself, Parking, and the Leasing Process. The last of these may reflect closer collaboration between landlord and tenant when businesses were failing and property vacancies increasing. If lease negotiations took account of the economic climate and mutually acceptable lease terms were agreed upon without undue difficulty, occupiers are likely to rate their satisfaction more highly.

**Table 5-9: Property-Level Correlations between Variables (2003 - 2013 inclusive)**

		Overall satisfaction	Lease Renewal	Recommend 1-5	Property Management
Overall satisfaction	Pearson Correlation	1	.142	.643**	.704**
	N	637	188	213	523
Lease Renewal	Pearson Correlation	.142	1	.099	.158
	N	188	189	27	141
Recommend 1-5	Pearson Correlation	.643**	.099	1	.536**
	N	213	27	240	217
Property Management	Pearson Correlation	.704**	.158	.536**	1
	N	523	141	217	544
Amenities & Services	Pearson Correlation	.341**	.144	.460**	.362**
	N	297	169	96	248
Approvals & Legal Processes	Pearson Correlation	.153*	.001	.448**	.238**
	N	241	157	71	190
Billing & Documentation	Pearson Correlation	.153**	.014	.219**	.107
	N	321	155	155	262
Building Specification	Pearson Correlation	.407**	-.210*	.500**	.425**
	N	228	97	118	185
Cleaning	Pearson Correlation	.563**	.331**	.302**	.599**
	N	424	151	102	331
Communication	Pearson Correlation	.596**	-.032	.650**	.740**
	N	620	177	230	525
CSR	Pearson Correlation	.678**	.110	.685**	.692**
	N	406	136	119	351
Customer Service / Professionalism	Pearson Correlation	.635**	.174*	.558**	.716**
	N	307	150	82	226
Entrances / Reception	Pearson Correlation	.561**	.192*	.760**	.524**
	N	195	133	18	149
Estate Satisfaction	Pearson Correlation	.530**	.024	-.076	.698**
	N	39	30	19	41
Health & Safety	Pearson Correlation	.267**	-.229	.121	.420**
	N	254	41	73	242
HVAC & Lighting	Pearson Correlation	.349**	.456**	.310	.383**
	N	151	96	38	96
Leasing process	Pearson Correlation	.344**	.347**	.495**	.213*
	N	155	89	76	104
Lifts	Pearson Correlation	.238**	.207	-.093	.205
	N	122	81	19	82
Location	Pearson Correlation	.136	-.112	.405*	.082
	N	180	151	33	131
Maintenance	Pearson Correlation	.503**	.146	.458**	.488**
	N	348	152	95	268
Marketing & Events	Pearson Correlation	.510**	-.148	.267*	.522**
	N	264	48	74	260
Parking	Pearson Correlation	.232**	-.232*	.095	.069
	N	192	121	13	154
Public transport	Pearson Correlation	-.002	.210*	.686**	.068
	N	130	100	25	125
Rent Value for Money	Pearson Correlation	.410**	.029	.583**	.375**
	N	349	152	151	276
Responsiveness	Pearson Correlation	.603**	.046	.645**	.744**
	N	617	180	229	524
Security	Pearson Correlation	.573**	.048	.256**	.608**
	N	506	170	135	413
Service Charge Value	Pearson Correlation	.455**	.004	.415**	.418**
	N	397	165	166	308
Signage	Pearson Correlation	.427**	.060	.227	.425**
	N	230	160	32	183
Tenant mix	Pearson Correlation	.554**	.285*	.364	.199*
	N	113	79	8	113
Trading performance	Pearson Correlation	.421**	.114	.157	.193**
	N	222	79	51	222
Understanding Needs	Pearson Correlation	.616**	-.017	.634**	.742**
	N	616	177	229	525
Waste & Recycling	Pearson Correlation	.338**	-.272	.182	.400**
	N	157	27	16	153

**Table 5-10: Property-Level Correlations between Variables (2003 - 2006 inclusive)**

		Overall satisfaction	Lease Renewal	Recommend 1-5	Property Management
Overall satisfaction	Pearson Correlation	1	.141	-.131	.681**
	N	209	150	16	163
Lease Renewal	Pearson Correlation	.141	1	-.103	.218*
	N	150	151	16	107
Recommend 1-5	Pearson Correlation	-.131	-.103	1	-.283
	N	16	17	17	16
Property Management	Pearson Correlation	.681**	.218*	-.283	1
	N	163	107	16	168
Amenities & Services	Pearson Correlation	.269**	.163	.153	.307**
	N	174	139	15	132
Approvals & Legal Processes	Pearson Correlation	.133	.014	.539*	.251**
	N	169	139	15	128
Billing & Documentation	Pearson Correlation	.018	.062	.501*	.023
	N	142	124	17	100
Building Specification	Pearson Correlation	.228*	-.362**	.165	.316*
	N	79	68	16	39
Cleaning	Pearson Correlation	.462**	.300**	. <sup>d</sup>	.496**
	N	172	131	1	130
Communication	Pearson Correlation	.568**	-.037	.061	.757**
	N	205	148	17	161
CSR	Pearson Correlation	.699**	.082	. <sup>d</sup>	.756**
	N	157	117	2	123
Customer Service / Professionalism	Pearson Correlation	.656**	.111	.079	.808**
	N	171	127	4	128
Entrances / Reception	Pearson Correlation	.452**	.178*	. <sup>d</sup>	.329**
	N	165	124	1	128
Estate Satisfaction	Pearson Correlation	.497*	-.088	-.060	.736**
	N	18	17	15	20
Health & Safety	Pearson Correlation	.205	-.199	. <sup>d</sup>	.448**
	N	64	33	1	62
HVAC & Lighting	Pearson Correlation	.388**	.465**	. <sup>d</sup>	.531**
	N	94	82	1	52
Leasing process	Pearson Correlation	.195	.287*	.521*	.178
	N	76	67	17	39
Lifts	Pearson Correlation	.352**	.263*	. <sup>d</sup>	.323*
	N	98	74	1	61
Location	Pearson Correlation	.214*	-.122	.536*	.085
	N	120	116	16	79
Maintenance	Pearson Correlation	.390**	.153	-.028	.436**
	N	166	122	16	147
Marketing & Events	Pearson Correlation	.491**	-.025	. <sup>d</sup>	.379**
	N	67	36	1	65
Parking	Pearson Correlation	.120	-.257**	. <sup>d</sup>	-.082
	N	148	106	1	115
Public transport	Pearson Correlation	-.042	.216	.462	.082
	N	108	82	16	106
Rent Value for Money	Pearson Correlation	.243**	-.023	.261	.184
	N	136	122	16	96
Responsiveness	Pearson Correlation	.538**	.013	.047	.774**
	N	201	148	17	158
Security	Pearson Correlation	.616**	.025	-.328	.586**
	N	191	142	16	150
Service Charge Value for Money	Pearson Correlation	.433**	-.005	.357	.418**
	N	153	128	16	113
Signage	Pearson Correlation	.376**	.042	-.347	.347**
	N	172	133	16	130
Tenant mix	Pearson Correlation	.598**	.250*	. <sup>d</sup>	.238*
	N	94	68	1	94
Trading performance	Pearson Correlation	.385**	.120	. <sup>d</sup>	.146
	N	112	74	1	112
Understanding Needs	Pearson Correlation	.613**	-.046	-.166	.756**
	N	199	145	17	158
Waste & Recycling	Pearson Correlation	.278	-.566*	. <sup>d</sup>	.392*
	N	36	15	1	34

**Table 5-11: Property-Level Correlations between Variables (2007 - 2009 inclusive)**

		Overall satisfaction	Lease Renewal	Recommend 1-5	Property Management
Overall satisfaction	Pearson Correlation	1	.002	.833**	.723**
	N	189	28	17	136
Lease Renewal	Pearson Correlation	.002	1	. <sup>d</sup>	-.438*
	N	28	28	2	26
Recommend 1-5	Pearson Correlation	.833**	. <sup>d</sup>	1	.598**
	N	17	2	24	21
Property Management	Pearson Correlation	.723**	-.438*	.598**	1
	N	136	26	21	143
Amenities & Services	Pearson Correlation	.523**	-.172	.935	.461**
	N	49	22	4	46
Approvals & Legal Processes	Pearson Correlation	.343	-.568	-.271	.273
	N	30	10	5	26
Billing & Documentation	Pearson Correlation	.410**	-.471*	.792*	.243
	N	58	21	9	38
Building Specification	Pearson Correlation	.596**	-.285	.832*	.622**
	N	61	21	8	60
Cleaning	Pearson Correlation	.536**	-.070	.714**	.508**
	N	112	11	14	62
Communication	Pearson Correlation	.580**	-.448	.773**	.670**
	N	180	19	24	135
CSR	Pearson Correlation	.641**	-.066	.173	.428**
	N	112	11	18	89
Customer Service / Professionalism	Pearson Correlation	.538**	-.086	.708	.610**
	N	73	13	7	32
Entrances / Reception	Pearson Correlation	.549*	-.896*	. <sup>d</sup>	.893**
	N	20	5	2	11
Estate Satisfaction	Pearson Correlation	.317	.040	. <sup>d</sup>	.186
	N	18	10	1	18
Health & Safety	Pearson Correlation	.196	-.829	.047	.377**
	N	82	4	14	71
HVAC & Lighting	Pearson Correlation	.397	-.369	. <sup>d</sup>	.019
	N	20	5	2	11
Leasing process	Pearson Correlation	.523**	.012	.882**	.601**
	N	30	12	7	26
Lifts	Pearson Correlation	.219	. <sup>d</sup>	. <sup>d</sup>	.557
	N	6	0	0	5
Location	Pearson Correlation	.007	-.140	.993**	.055
	N	46	28	4	42
Maintenance	Pearson Correlation	.567**	-.090	.650	.614**
	N	98	21	3	48
Marketing & Events	Pearson Correlation	.445**	-.312	.144	.545**
	N	86	8	13	84
Parking	Pearson Correlation	.477**	-.121	.999*	.522**
	N	30	10	3	27
Public transport	Pearson Correlation	-.011	.168	. <sup>d</sup>	-.242
	N	15	13	2	13
Rent Value for Money	Pearson Correlation	.414**	.022	.836**	.611**
	N	84	20	9	60
Responsiveness	Pearson Correlation	.647**	-.280	.428*	.758**
	N	182	22	23	138
Security	Pearson Correlation	.402**	-.013	.572*	.498**
	N	158	19	14	109
Service Charge Value for Money	Pearson Correlation	.462**	-.033	.333	.288*
	N	108	27	11	66
Signage	Pearson Correlation	.345*	-.181	.972*	.542**
	N	42	20	4	40
Tenant mix	Pearson Correlation	.334	.233	. <sup>d</sup>	.496
	N	10	8	1	10
Trading performance	Pearson Correlation	.631	. <sup>d</sup>	. <sup>d</sup>	.691*
	N	9	2	0	9
Understanding Needs	Pearson Correlation	.630**	-.116	.489*	.770**
	N	182	22	23	138
Waste & Recycling	Pearson Correlation	.400**	.416	. <sup>d</sup>	.510**
	N	56	8	1	54

**Table 5-12: Property-Level Correlations between Variables (2010 - 2013 inclusive)**

		Overall satisfaction	Lease Renewal	Recommend 1-5	Property Management
Overall satisfaction	Pearson Correlation	1	. <sup>b</sup>	.680**	.661**
	N	228	2	170	215
Lease Renewal	Pearson Correlation	. <sup>b</sup>	. <sup>b</sup>	. <sup>b</sup>	. <sup>b</sup>
	N	2	2	2	2
Recommend 1-5	Pearson Correlation	.680**	. <sup>b</sup>	1	.562**
	N	170	2	189	171
Property Management	Pearson Correlation	.661**	. <sup>b</sup>	.562**	1
	N	215	2	171	224
Amenities & Services	Pearson Correlation	.335**	. <sup>b</sup>	.462**	.376**
	N	66	0	70	64
Approvals & Legal Processes	Pearson Correlation	.122	. <sup>b</sup>	.456**	.019
	N	31	0	41	27
Billing & Documentation	Pearson Correlation	.204*	. <sup>b</sup>	.185*	.226*
	N	110	2	119	115
Building Specification	Pearson Correlation	.458**	. <sup>b</sup>	.500**	.393**
	N	78	0	85	78
Cleaning	Pearson Correlation	.326**	. <sup>b</sup>	.285*	.325**
	N	131	2	79	132
Communication	Pearson Correlation	.556**	. <sup>b</sup>	.684**	.669**
	N	224	2	179	220
CSR	Pearson Correlation	.534**	. <sup>b</sup>	.725**	.577**
	N	128	2	90	131
Customer Service / Professionalism	Pearson Correlation	.504**	. <sup>b</sup>	.577**	.511**
	N	52	2	61	57
Entrances / Reception	Pearson Correlation	.926**	. <sup>b</sup>	.713*	.990**
	N	6	0	11	6
Estate Satisfaction	Pearson Correlation	. <sup>b</sup>	. <sup>b</sup>	. <sup>b</sup>	. <sup>b</sup>
	N	0	0	0	0
Health & Safety	Pearson Correlation	.296**	. <sup>b</sup>	.167	.441**
	N	102	0	52	103
HVAC & Lighting	Pearson Correlation	.483**	. <sup>b</sup>	.314	.567**
	N	30	2	29	28
Leasing process	Pearson Correlation	.280	. <sup>b</sup>	.311*	.029
	N	40	2	44	32
Lifts	Pearson Correlation	.160	. <sup>b</sup>	-.022	-.113
	N	13	2	13	12
Location	Pearson Correlation	.598	. <sup>b</sup>	.576	.464
	N	7	0	7	5
Maintenance	Pearson Correlation	.584**	. <sup>b</sup>	.547**	.424**
	N	76	2	68	66
Marketing & Events	Pearson Correlation	.570**	. <sup>b</sup>	.276*	.586**
	N	104	0	53	104
Parking	Pearson Correlation	.613	. <sup>b</sup>	-.525	-.224
	N	9	0	5	8
Public transport	Pearson Correlation	. <sup>b</sup>	. <sup>b</sup>	. <sup>b</sup>	. <sup>b</sup>
	N	2	0	2	1
Rent Value for Money	Pearson Correlation	.515**	. <sup>b</sup>	.605**	.415**
	N	118	2	116	111
Responsiveness	Pearson Correlation	.510**	. <sup>b</sup>	.693**	.613**
	N	223	2	179	219
Security	Pearson Correlation	.492**	. <sup>b</sup>	.357**	.453**
	N	148	2	97	147
Service Charge Value for Money	Pearson Correlation	.298**	. <sup>b</sup>	.407**	.359**
	N	125	2	129	120
Signage	Pearson Correlation	.782*	. <sup>b</sup>	.963**	-.217
	N	8	0	5	7
Tenant mix	Pearson Correlation	.704	. <sup>b</sup>	.844	-.606
	N	6	0	3	6
Trading performance	Pearson Correlation	.465**	. <sup>b</sup>	.155	.123
	N	97	0	46	97
Understanding Needs	Pearson Correlation	.560**	. <sup>b</sup>	.683**	.658**
	N	224	2	179	220
Waste & Recycling	Pearson Correlation	.404**	. <sup>b</sup>	-.114	.222
	N	60	0	9	60

### 5.3 Descriptive Statistics for the separate Sectors

The following tables give the descriptive statistics for the variables used in the analysis, for the four sectors separately: Industrial, Office, Shopping Centre and Retail Park.

**Table 5-13: Physical Features**

Sector			Location	Building Specification	Parking	Public transport	Tenant mix	Estate Satisfaction
Industrial	N	Valid	352	1053	0	128	0	298
		Missing	941	240	1293	1165	1293	995
		Mean	4.142	3.842		2.977		3.829
Office	N	Valid	390	548	260	59	15	37
		Missing	944	786	1074	1275	1319	1297
		Mean	4.107	3.946	3.687	3.352	2.867	3.054
Shopping Centre	N	Valid	200	112	750	609	677	0
		Missing	1489	1577	939	1080	1012	1689
		Mean	4.115	3.236	3.251	3.866	3.423	
Retail Park	N	Valid	144	17	161	75	144	17
		Missing	22	149	5	91	22	149
		Mean	4.087	1.471	3.683	3.020	3.714	3.716

**Table 5-14: Financial Aspects**

Sector			Rent Value for Money	Service Charge Value for Money	Trading performance
Industrial	N	Valid	1074	949	0
		Missing	219	344	1293
		Mean	3.340	3.290	
Office	N	Valid	610	675	124
		Missing	724	659	1210
		Mean	3.399	3.153	3.698
Shopping Centre	N	Valid	342	459	1168
		Missing	1347	1230	521
		Mean	2.965	3.040	3.433
Retail Park	N	Valid	33	75	104
		Missing	133	91	62
		Mean	2.755	2.927	3.422

**Table 5-15: Property Management Aspects**

Sector			Communication	Responsiveness	Understanding Needs	Security	Health & Safety	Cleaning	Waste & Recycling
Industrial	N	Valid	1150	1087	1075	498	0	0	17
		Missing	143	206	218	795	1293	1293	1276
		Mean	3.951	3.863	3.580	3.542			1.706
Office	N	Valid	1081	1069	914	841	226	908	176
		Missing	253	265	420	493	1108	426	1158
		Mean	3.746	3.738	3.664	3.651	3.850	3.792	3.440
Shopping Centre	N	Valid	1631	1548	1596	1479	1400	1403	780
		Missing	58	141	93	210	289	286	909
		Mean	3.809	3.857	3.676	3.937	4.167	4.178	4.094
Retail Park	N	Valid	124	137	138	156	0	165	46
		Missing	42	29	28	10	166	1	120
		Mean	2.937	3.491	3.287	3.060		3.786	3.804

**Table 5-16: Property Management Aspects (continued)**

Sector			Marketing & Events	Maintenance	CSR	Entrances / Reception	HVAC & Lighting	Amenities & Services	Leasing process
Industrial	N	Valid	0	653	76	0	0	915	262
		Missing	1293	640	1217	1293	1293	378	1031
		Mean		3.833	3.608			3.585	4.043
Office	N	Valid	133	850	618	448	625	443	438
		Missing	1201	484	716	886	709	891	896
		Mean	3.506	3.755	3.597	3.757	2.966	3.436	3.861
Shopping Centre	N	Valid	1437	688	1487	662	414	678	98
		Missing	252	1001	202	1027	1275	1011	1591
		Mean	3.513	3.847	3.868	3.463	3.498	3.754	3.596
Retail Park	N	Valid	26	150	89	107	0	144	0
		Missing	140	16	77	59	166	22	166
		Mean	2.359	3.641	3.222	3.134		3.413	

**Table 5-17: Property Management Aspects (continued)**

Sector			Customer Service / Professionalism	Billing & Documentation	Approvals & Legal Processes	Catering	Lifts	Signage
Industrial	N	Valid	150	717	242	0	0	307
		Missing	1143	576	1051	1293	1293	986
		Mean	3.900	3.709	3.692			3.255
Office	N	Valid	880	630	349	51	357	321
		Missing	454	704	985	1283	977	1013
		Mean	3.744	3.567	3.581	1.725	3.400	3.189
Shopping Centre	N	Valid	740	431	342	29	471	728
		Missing	949	1258	1347	1660	1218	961
		Mean	3.717	3.667	3.515	4.000	3.755	3.169
Retail Park	N	Valid	87	49	78	0	0	161
		Missing	79	117	88	166	166	5
		Mean	3.007	3.842	3.398			3.015

## The Dependent Variables

**Table 5-18** shows the descriptive statistics for variables which are used as dependent variables in the analysis. These comprise occupiers' stated overall satisfaction with their tenancy, their satisfaction with the property management service they receive, their stated likelihood of renewing their lease if a renewal decision had to be made immediately, and the two variables relating to advocacy i.e. occupiers' willingness to recommend their landlord or property manager, as discussed in Section 5.1.2. As mentioned previously, it became apparent during the analysis that the binary recommend variable 'Yes' / 'No' was unreliable because a comparison with the verbal explanations given by interviewees made it apparent that the rating had been interpreted differently in different interviews; a response such as "I wouldn't 'not recommend' them" was sometimes scored as a 'Yes' and sometimes as a 'No answer', for example. Additionally, as can be seen from the mean scores<sup>49</sup>, the overwhelming majority of interviewees – approximately 90% - gave a response that was recorded as 'yes', so the variable was not useful in regressions or other statistical analysis.

**Table 5-18: Dependent Variables**

Sector		Overall satisfaction	Property Management	Landlord Performance	Lease Renewal	Recommend 1=y 2=n	Recommend 1-5
Industrial	N Valid	1268	1121	1073	258	639	795
	Missing	25	172	220	1035	654	498
	Mean	3.854	3.881	3.866	3.816	1.095	4.000
Office	N Valid	997	639	607	309	578	501
	Missing	337	695	727	1025	756	833
	Mean	3.878	3.720	3.697	3.347	1.118	4.128
Shopping Centre	N Valid	1540	1567	744	340	1205	636
	Missing	149	122	945	1349	484	1053
	Mean	3.865	3.949	3.637	4.176	1.090	4.205
Retail Park	N Valid	160	151	143	124	155	0
	Missing	6	15	23	42	11	166
	Mean	3.670	3.468	3.363	4.012	1.125	

<sup>49</sup> Since a score of '1' represents 'Yes', while '2' represents 'No', and the mean scores are around 1.1



## 5.4 Correlations with Overall Satisfaction for the separate Sectors

The following tables show how satisfaction with aspects of tenancy correlate with Overall Satisfaction for retailers in retail warehouses, store managers in shopping centres, office occupiers and industrial occupiers.

**Table 5-19: Correlations with Overall Satisfaction for Store Managers of Retail Warehouses**

	Pearson Correlation with Overall Satisfaction	N
Overall Satisfaction	1	161
CSR	.595**	90
Property Management	.585**	148
Customer Service / Professionalism	.548**	87
Waste & Recycling	.540**	47
Understanding Needs	.525**	136
Responsiveness	.511**	134
Security	.478**	157
Trading performance	.456**	105
Signage	.427**	161
Location	.423**	145
Cleaning	.412**	161
Marketing & Events	.391*	27
Maintenance	.361**	147
Tenant mix	.341**	145
Communication	.318**	120
Entrances / Reception	.291**	107
Parking	.262**	161
Service Charge Value for Money	.249*	76
Building Specification	0.189	18
Rent Value for Money	0.155	34
Billing & Documentation	0.123	50
Public transport	0.063	76
Amenities & Services	0.04	145
Approvals & Legal Processes	0.011	78
Estate Satisfaction	0.002	14
** . Correlation is significant at the 0.01 level (2-tailed).		
* . Correlation is significant at the 0.05 level (2-tailed).		

**Table 5-20: Correlations with Overall Satisfaction for Store Managers in Shopping Centres**

	Pearson Correlation with Overall Satisfaction	N
Overall Satisfaction	1	1540
Property Management	.608**	1498
Understanding Needs	.585**	1492
Communication	.516**	1531
CSR	.489**	1426
Marketing & Events	.470**	1434
Customer Service / Professionalism	.465**	659
Responsiveness	.444**	1453
Trading performance	.423**	1167
Leasing process	.395**	77
Tenant mix	.376**	675
Cleaning	.367**	1387
Signage	.340**	725
Rent Value for Money	.334**	292
Service Charge Value for Money	.332**	371
Security	.328**	1464
Entrances / Reception	.294**	660
Maintenance	.292**	674
Lifts	.280**	468
Health & Safety	.279**	1394
Building Specification	.245*	97
Amenities & Services	.217**	673
Waste & Recycling	.211**	777
HVAC & Lighting	.198**	412
Approvals & Legal Processes	.183**	292
Location	.169*	198
Parking	.165**	746
Billing & Documentation	.117*	358
Public transport	-0.009	607
**. Correlation is significant at the 0.01 level (2-tailed).		
*. Correlation is significant at the 0.05 level (2-tailed).		

**Table 5-21: Correlations with Overall Satisfaction for Office Occupiers**

	Pearson Correlation with Overall Satisfaction	N
Overall Satisfaction	1	997
Property Management	.646**	508
Tenant mix	.570*	15
Understanding Needs	.562**	795
CSR	.555**	514
Responsiveness	.552**	947
Communication	.548**	957
Customer Service / Professionalism	.524**	699
Service Charge Value for Money	.492**	570
Building Specification	.483**	433
Entrances Reception	.477**	403
Maintenance	.447**	817
Rent Value for Money	.447**	546
Estate Satisfaction	.427**	36
Leasing process	.418**	338
Amenities & Services	.394**	424
Cleaning	.389**	871
Security	.385**	804
Parking	.371**	257
HVAC & Lighting	.360**	613
Trading performance	.343**	124
Approvals & Legal Processes	.334**	260
Signage	.323**	315
Lifts	.323**	348
Billing & Documentation	.318**	535
Location	.289**	376
Public transport	.271*	58
Marketing & Events	.228*	122
Waste & Recycling	.226**	134
Health & Safety	.189**	204
** . Correlation is significant at the 0.01 level (2-tailed).		
* . Correlation is significant at the 0.05 level (2-tailed).		

**Table 5-22: Correlations with Overall Satisfaction for Industrial Occupiers**

	Pearson Correlation with Overall Satisfaction	N
Overall Satisfaction	1	1269
Property Management	.571**	1118
Estate Satisfaction	.554**	297
Understanding Needs	.513**	1066
Customer Service / Professionalism	.488**	149
Building Specification	.486**	1041
Responsiveness	.463**	1075
Communication	.457**	1136
Leasing process	.445**	259
Maintenance	.424**	639
Public transport	.377**	128
Service Charge Value for Money	.374**	941
Rent Value for Money	.356**	1061
Amenities & Services	.351**	907
Approvals & Legal Processes	.350**	240
Billing & Documentation	.334**	717
CSR	.300**	76
Security	.261**	486
Signage	.259**	306
Location	.188**	342
Waste & Recycling	-0.072	17
**. Correlation is significant at the 0.01 level (2-tailed).		

**Table 5-23** compares the aspects of occupancy for which satisfaction correlates most strongly with overall satisfaction for the different sectors (including aspects with correlations greater than 0.4). The strong correlations between overall satisfaction and satisfaction with property management that were noted earlier when considering the sample as a whole, are apparent for the individual sectors too. Similarly aspects such as the property manager's responsiveness to requests and understanding of occupiers' business needs correlate strongly with overall satisfaction for all sectors. However, differences between sectors are also apparent. For example, "waste and recycling" features highly for store managers in retail warehouses, who have to dispose of large amounts of packaging when their merchandise is delivered, whereas for Industrial Occupiers, who are more likely to have to organise their own waste collection, there is effectively no correlation for the small sample of occupiers who were asked this question. Security on a Retail Park, signage and the Park's location are also highly correlated with overall satisfaction, more so than for other sectors.

Interestingly, for the other sectors, although location is a crucial factor when choosing a property to rent, as discussed in the previous chapter, it appears to be less influential in determining overall satisfaction during occupancy. This may be because the decision to locate in the property has now been taken, and may be discounted in the minds of respondents when rating their satisfaction. As can be seen from **Table 5-13**, satisfaction with location appears high, with a mean rating in excess of '4' for all sectors. Of course respondents may be unwilling to give a low rating for location as this might be deemed a criticism of the lease-holder rather than the landlord or property manager; the extent to which ratings given fully reflect genuine opinions is one of the caveats with the use of surveys that was discussed in Chapter 2.

For retailers on Retail Parks and in Shopping Centres, the trading performance of their store is important in their ratings of overall satisfaction. For Office occupiers, aspects related to the office building and to value for money appear to contribute strongly to their overall satisfaction. They may be more aware of the financial aspects of their tenancy than retailers whose head office may deal with payment of rent and service charge. Tenant mix appears to be relevant, but in fact only 15 interviews with office occupiers included that question.

For Industrial occupiers, physical aspects such as the Estate itself and their unit appear to be influential in their overall satisfaction, as well as maintenance on the Estate.

**Table 5-23: Comparison of Strongest Correlations, by Sector**

<b>Retail Parks</b>	<b>Correl</b>	<b>Shopping Centres</b>	<b>Correl</b>	<b>Offices</b>	<b>Correl</b>	<b>Industrial</b>	<b>Correl</b>
<b>CSR</b>	<b>.595**</b>	<b>Property Management</b>	<b>.608**</b>	<b>Property Management</b>	<b>.646**</b>	<b>Property Management</b>	<b>.571**</b>
<b>Property Management</b>	<b>.585**</b>	<b>Understand Needs</b>	<b>.585**</b>	<b>Tenant mix</b>	<b>.570*</b>	<b>Estate Satisfaction</b>	<b>.554**</b>
<b>Customer Service</b>	<b>.548**</b>	<b>Communication</b>	<b>.516**</b>	<b>Understand Needs</b>	<b>.562**</b>	<b>Understand Needs</b>	<b>.513**</b>
<b>Waste &amp; Recycling</b>	<b>.540**</b>	<b>CSR</b>	<b>.489**</b>	<b>CSR</b>	<b>.555**</b>	<b>Customer Service</b>	<b>.488**</b>
<b>Understand Needs</b>	<b>.525**</b>	<b>Marketing &amp; Events</b>	<b>.470**</b>	<b>Responsiveness</b>	<b>.552**</b>	<b>Building Specification</b>	<b>.486**</b>
<b>Responsive-ness</b>	<b>.511**</b>	<b>Customer Service</b>	<b>.465**</b>	<b>Communication</b>	<b>.548**</b>	<b>Responsiveness</b>	<b>.463**</b>
<b>Security</b>	<b>.478**</b>	<b>Responsiveness</b>	<b>.444**</b>	<b>Customer Service</b>	<b>.524**</b>	<b>Communication</b>	<b>.457**</b>
<b>Trading performance</b>	<b>.456**</b>	<b>Trading performance</b>	<b>.423**</b>	<b>Service Charge Value</b>	<b>.492**</b>	<b>Leasing process</b>	<b>.445**</b>
<b>Signage</b>	<b>.427**</b>			<b>Building Specification</b>	<b>.483**</b>	<b>Maintenance</b>	<b>.424**</b>
<b>Location</b>	<b>.423**</b>			<b>Entrances / Reception</b>	<b>.477**</b>		
<b>Cleaning</b>	<b>.412**</b>			<b>Maintenance</b>	<b>.447**</b>		
				<b>Rent Value</b>	<b>.447**</b>		
				<b>Estate Satisfaction</b>	<b>.427**</b>		
				<b>Leasing process</b>	<b>.418**</b>		

These correlations give an indication of determinants of Overall Satisfaction, although correlation does not necessarily imply causation. Additional analysis was conducted to gain a deeper understanding of the relationship between occupiers' satisfaction with each aspect of their occupancy and their Overall Satisfaction (the dependent variable). Ordinary Least Squares Regression was performed for each sector, using the individual aspects of occupancy as independent variables, and also carrying out Principal Components Analysis and performing regressions using the resulting components.

## 5.5 Preliminary Analysis of Retailer Satisfaction

### 5.5.1 Assessment of Retailer Satisfaction using OLS Regression

As mentioned in the description of the data, the occupier satisfaction data comprises 1689 interviews with store managers in shopping centres and 166 interviews with store managers on Retail Parks.

#### OLS using data from Retailers in Shopping Centres

Using the data for retailers in shopping centres, the Variance Inflation Factor (VIF) for the individual variables is not excessive although there is some multicollinearity between Communication, Understanding Needs, Corporate Social Responsibility, Professionalism and Responsiveness, for which the VIF is around 2. This is well below the value of 5 for which multi-collinearity is considered problematic (Hair et al., 2014); indeed some texts, such as Pallant (2010) suggest up to 10 is acceptable. **Table 5-24** gives the coefficients on the independent variables where Overall Occupier Satisfaction is the dependent variable. The coefficient of determination for the regression,  $R^2$ , is 0.685 (adjusted  $R^2 = 0.470$  which takes account of the large number of independent variables).

From the standardised coefficients it can be seen that the independent variables which make the greatest contribution to Overall Satisfaction are Communication, Corporate Social Responsibility, Location, Marketing, Tenant Mix, Trading Performance and Understanding Needs. The relatively high VIF for Professionalism and Responsiveness means that the contribution of these to Overall Satisfaction may be being under-estimated as it is likely to overlap with the contributions of Communication, Understanding Needs and CSR. By analogy with the SERVQUAL dimensions of Parasuraman, Zeithaml, & Berry (1985), discussed in Chapter 2<sup>50</sup>, the key determinants therefore seem to relate to Empathy (Communication and Understanding Needs), Assurance (CSR and Professionalism), and Tangibles (Location and Tenant Mix). The apparent significance of the Responsiveness dimension may be diminished by multi-collinearity with aspects of Empathy and Assurance. Aspects which comprise the Reliability dimension include Cleaning, Documentation and Maintenance, each of which has a small but positive coefficient. However some of the variables have negative coefficients, including Amenities and Legal Processes. The value for Amenities is surprising and illogical, implying that dissatisfaction with amenities actually increases overall satisfaction; the value for legal processes may be because these are mostly dealt with by head office staff rather than by store managers, at least in the case of retail multiples / chain stores. Bivariate correlations with overall

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<sup>50</sup> The SERVQUAL Dimensions of the refined model are Assurance, Empathy, Reliability, Responsiveness and Tangibles

satisfaction were positive for Amenities and Legal Processes (Table 5-20) so the negative coefficients must be an artifice of the OLS regression analysis, including multi-collinearity.

**Table 5-24: Regression Coefficients for Retailer Satisfaction**

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
	B	Std. Error	Beta			Tolerance	VIF
(Constant)	.066	.390		.168	.867		
Amenities	-.073	.037	-.080	-1.977	.049	.810	1.235
Legal Processes	-.055	.032	-.070	-1.749	.081	.846	1.182
Documentation	.035	.030	.047	1.136	.257	.778	1.285
Building	.027	.071	.015	.388	.698	.945	1.059
Cleaning	.051	.046	.050	1.098	.273	.641	1.561
Communication	.128	.038	.174	3.365	.001	.501	1.996
CSR	.084	.040	.106	2.112	.035	.528	1.894
Professionalism	.015	.040	.019	.366	.715	.521	1.919
Entrances	.071	.041	.074	1.741	.082	.749	1.336
Lifts	-.038	.033	-.045	-1.163	.245	.882	1.134
Location	.161	.058	.108	2.797	.005	.888	1.126
Maintenance	.046	.030	.064	1.510	.132	.750	1.334
Marketing	.094	.036	.112	2.607	.009	.719	1.390
Parking	.051	.027	.074	1.871	.062	.862	1.160
Responsiveness	.009	.034	.014	.268	.789	.520	1.923
Security	.027	.031	.038	.869	.385	.682	1.466
ServChargeVal	-.007	.032	-.008	-.206	.837	.823	1.215
Signage	.020	.036	.024	.564	.573	.749	1.336
Tenant Mix	.133	.034	.160	3.956	.000	.815	1.227
Trading Perf	.202	.031	.258	6.471	.000	.839	1.192
Understanding	.075	.040	.103	1.883	.060	.449	2.226
Recycling	-.004	.036	-.004	-.109	.913	.918	1.090



### **Retailers on Retail Parks**

The relatively small sample size for retail warehouses means that results using this sample alone are unlikely to be reliable or statistically significant. If all independent variables for which the number of observations exceeds 40 are used in an OLS regression, multi-collinearity is problematic, with Variance Inflation Factors in excess of 12 for some variables. The coefficients on independent variables vary widely according to which variables are included in the regression. For this reason, the table of correlations of independent variables with occupier satisfaction shown earlier, (**Table 5-19**), is perhaps the most effective way to observe the key determinants of occupier satisfaction for this sample of retailers on retail parks.

From this, it can be seen that Corporate Social Responsibility (which is predominantly environmental responsibility and sustainability) correlates most strongly with retail warehouse managers' overall satisfaction. Satisfaction with property management, and perception of receiving professional customer service, also correlate very strongly with overall satisfaction. As discussed earlier, retailers have to deal with large amounts of packaging when their merchandise is delivered, and the importance of having an effective system for disposing of this is evident from the high correlation with overall satisfaction of "waste and recycling". The other key issues influencing overall satisfaction appear to be the extent to which the Retail Park manager understands retailers' business needs, and his or her responsiveness to their requests.

#### **5.5.2 Retailer Satisfaction using Principal Components Analysis**

Although for retailers in shopping centres OLS has been possible using this data, it is instructive to carry out Principal Components Analysis as well, to assess the extent to which the SERVQUAL Dimensions represent the factor structure of the data.

Principal components analysis is a form of factor analysis, a data reduction technique which can be used to combine the items into underlying factors. By selecting a small number of such factors which together account for most of the variance, and by using Varimax rotation, the resulting factors will be orthogonal and can be used in regression analyses and in structural equation modelling. These techniques enable the underlying factors which have greatest impact on occupier satisfaction to be identified (Sanderson, 2014). For data to be suitable for PCA, the sampling adequacy should be assessed. Sampling adequacy improves as the number of variables increases; the number of factors decreases; the sample size increases; and as the correlation between variables increases (Kaiser, 1970, p. 405). A widely-used measure of sampling adequacy (MSA) is the Kaiser-Meyer-Olkin (KMO) statistic. According to Pallant (2010 p. 183), KMO should exceed 0.6 for factorability, although Kaiser suggests a

value greater than 0.8 for “good factor-analytic data.” The other test for whether data is suitable for factor analysis is Bartlett's test of sphericity which assesses whether correlations between the variables, examined simultaneously, are not significantly different from zero. For this test, a non-significant result is desired i.e.  $p < 0.05$ .

More than 90% of the retailer satisfaction data was from interviews with store managers in shopping centres, the remainder coming from interviews with store managers on retail parks. As was found when attempting OLS with data from managers on retail parks the sample size for the latter is too small for sampling adequacy (166 cases and 20 variables) so no clear factor structure emerged for retail parks. However, using the data for retailers in shopping centres, meaningful results were obtained. An assessment of sampling adequacy for the sample gave a KMO of 0.834 and a non-significant Bartlett statistic when all variables were included. This implies suitability of the data for PCA or other form of Factor Analysis. The analysis used Varimax Rotation, and explored the optimum factor structure by considering Catell's Scree Plot (with the factors retained being those with eigenvalues above the “elbow” of the graph, the point of inflection at which the gradient becomes markedly less negative). Kaiser's Criterion of retaining only those for which the eigenvalue is greater than 1.0 was also used, and indicated that for retailers 7 components should be retained. This was further confirmed by parallel analysis, since a randomly generated matrix of 24 variables and 1689 respondents produced only seven components with eigenvalues smaller than those in the Table of Total Variance Explained (**Table 5-25**). Alternative factor structures were investigated, and in order to obtain a component matrix with conceptually meaningful components after rotation, the variable Public Transport had to be omitted. This reduced the KMO statistic to 0.769, which is still an acceptable value (Pallant, 2010); the Bartlett statistic remained non-significant, as required.

The resulting optimal solution in terms of variance explained and conceptually meaningful components are shown in **Table 5-25** and **Table 5-26**. Only loadings above 0.3 are shown. The names given to the components are intended to summarise the variables which comprise each component: Property Management (comprising nine variables), Retail Success, Value, Services, Legal, Shopper Access and Responsibility. Although a five-factor solution using the SERVQUAL dimensions is achievable, as will be shown in the next chapter, for Retailers these seven components would also be legitimate dimensions for assessing occupier satisfaction.

**Table 5-25: Variance Explained by Components using Retailer Responses**

Component	Total Variance Explained								
	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	5.710	24.825	24.825	5.710	24.825	24.825	4.161	18.090	18.090
2	2.208	9.599	34.424	2.208	9.599	34.424	2.048	8.906	26.996
3	1.756	7.637	42.061	1.756	7.637	42.061	2.011	8.741	35.738
4	1.285	5.585	47.647	1.285	5.585	47.647	1.886	8.200	43.938
5	1.151	5.003	52.650	1.151	5.003	52.650	1.428	6.211	50.149
6	1.068	4.645	57.295	1.068	4.645	57.295	1.385	6.023	56.171
7	1.023	4.447	61.742	1.023	4.447	61.742	1.281	5.571	61.742
8	.941	4.093	65.835						
9	.905	3.934	69.768						
10	.833	3.620	73.389						
11	.781	3.396	76.784						
12	.661	2.875	79.660						
13	.653	2.838	82.498						
14	.628	2.732	85.230						
15	.572	2.487	87.717						
16	.519	2.258	89.975						
17	.481	2.091	92.066						
18	.464	2.017	94.083						
19	.375	1.631	95.714						
20	.286	1.241	96.955						
21	.276	1.198	98.153						
22	.233	1.013	99.166						
23	.192	.834	100.000						

Extraction Method: Principal Component Analysis.

**Table 5-26: 7-Factor Component Matrix for Retailer Satisfaction**

	Rotated Component Matrix						
	Prop Mgmt	Retail Success	Value	Services	Legal	Shopper Access	Responsibility
Communication	.767						
Understanding	.804						
Responsiveness	.841						
Professionalism	.727						
Entrances				.505			
Lifts					.431	.653	
Signage		.446					
Amenities				.646			
Legal Processes					.779		
Documentation			.588		.489		
Safety							.801
Recycling			.362				.585
Cleaning	.367			.664			
Maintenance	.438						
Security	.476			.380			
Tenant Mix		.627					
Marketing	.447	.454					
Parking						.780	
Location		.745					
RentVal			.788				
Service Charge			.735				
Value							
Trading		.666					
Performance							
CSR	.727						

A regression with Retailers' overall satisfaction as dependent variable and the seven components as independent variables has a coefficient of determination,  $R^2$ , of 0.550, meaning that the seven components together explain 55% of the variability in occupier satisfaction.

**Table 5-27** gives the following coefficients for the components. From this, it can be seen that all coefficients are statistically significant, and that the Property Management and Retail Success components have the most impact on retailers' satisfaction. This reinforces the findings from the OLS regression using the variables separately, in which the variables of most importance in determining the overall satisfaction of retailers were found to be Communication, Corporate Social Responsibility, Location, Marketing, Tenant Mix, Trading Performance and Understanding Needs.

**Table 5-27: Regression Coefficients for Retailers' Overall Satisfaction**

	Coefficients <sup>a</sup>				
	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	3.847	.006		609.791	.000
Prop Mgmt	.378	.006	.526	59.986	.000
Retail Success	.340	.006	.473	53.911	.000
Value	.078	.006	.109	12.422	.000
Services	.068	.006	.095	10.851	.000
Legal	.071	.006	.099	11.286	.000
Shopper Access	.084	.006	.116	13.269	.000
Responsibility	.054	.006	.075	8.578	.000

a. Dependent Variable: Overall satisfaction

## 5.6 Office Occupier Satisfaction: PCA and OLS Regression

### 5.6.1 Assessment of Office Occupier Satisfaction using OLS Regression

For office occupiers, the Variance Inflation Factor (VIF) for the individual variables is somewhat higher than for retailers, with several variables having VIF around 2.5. **Table 5-28** gives the coefficients on the independent variables where Overall Occupier Satisfaction is the dependent variable. The coefficient of determination for the regression,  $R^2$ , is 0.467 (adjusted  $R^2 = 0.369$ ) which is somewhat lower than the regression for retailers. The more major issue, however, is that the only coefficient which is statistically significant is that for the building specification variable. This may be attributable to multicollinearity between independent variables, and highlights the needs to explore the relationships further using principal components analysis.

**Table 5-28: Regression Coefficients for Office Occupier Satisfaction**

	Coefficients <sup>a</sup>						
	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
	B	Std. Error	Beta			Tolerance	VIF
(Constant)	.821	.400		2.052	.043		
Property Management	.022	.086	.032	.258	.797	.382	2.620
Responsiveness	.098	.082	.138	1.196	.235	.433	2.311
Understanding Needs	.079	.068	.121	1.166	.247	.534	1.873
Communication	.078	.092	.103	.854	.395	.397	2.516
Amenities & Services	.006	.057	.011	.112	.911	.556	1.798
Building Specification	.227	.082	.248	2.749	.007	.709	1.410
HVAC & Lighting	.057	.061	.082	.942	.349	.764	1.309
Maintenance	.043	.066	.059	.650	.517	.691	1.447
Lifts	.047	.063	.070	.749	.456	.656	1.524
Entrances Reception	.062	.084	.086	.739	.462	.423	2.365
Security	.018	.077	.024	.236	.814	.577	1.733
Approvals & Legal Processes	.003	.044	.007	.075	.941	.652	1.533
Billing & Documentation	.000	.053	.000	.002	.998	.632	1.581
Location	.051	.068	.064	.739	.462	.777	1.288
Service Charge Value	.066	.069	.108	.966	.336	.464	2.153
Rent Value for Money	.007	.065	.012	.109	.913	.486	2.060
Leasing process	-.018	.051	-.040	-.357	.722	.457	2.186

a. Dependent Variable: Overall satisfaction

### 5.6.2 Office Occupier Satisfaction using Principal Components Analysis

The data from office occupiers was also suitable for factor analysis (KMO = 0.808, non-significant Bartlett's Test of Sphericity), and in this case the optimal factor solution was found to consist of 6 components, together comprising 68.7% of the total variance in Overall Occupier Satisfaction (**Table 5-29**). Other variants were considered, with an 8-factor solution also producing a clear factor structure, and explaining 77.8% of total variance in Overall Satisfaction, but this required including factors with eigenvalues as low as 0.75. Since the eigenvalue can be thought of as a scale factor of enlargement, a value of less than one means that the matrix rotation is actually shrinking rather than maximising the variance of the component. PCA is not an exact science, and compromises have to be made, and subjectivity used in deciding the optimal solution. Such considerations include the indicators referred to in the previous section, such as Catell's Scree Plot and Kaiser's Criterion, as well as whether the rotated factor structure results in conceptually meaningful components. In this case two of the components actually have an eigenvalue a little less than 1 (0.933 and 0.861) but the resulting matrix produces meaningful components which can be considered as Relationship, Value, Services, Building, Legal and Location.

**Table 5-29: Variance Explained by Components using Responses from Office Occupiers**

Total Variance Explained 6 Component Solution									
Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	5.310	31.233	31.233	5.310	31.233	31.233	2.777	16.337	16.337
2	1.958	11.515	42.748	1.958	11.515	42.748	2.304	13.554	29.891
3	1.522	8.952	51.700	1.522	8.952	51.700	2.036	11.974	41.865
4	1.103	6.489	58.189	1.103	6.489	58.189	1.908	11.225	53.090
5	.933	5.486	63.675	.933	5.486	63.675	1.410	8.294	61.384
6	.861	5.064	68.738	.861	5.064	68.738	1.250	7.355	68.738
7	.793	4.665	73.403						
8	.750	4.414	77.817						
9	.680	3.997	81.815						
10	.614	3.613	85.427						
11	.521	3.067	88.494						
12	.438	2.577	91.072						
13	.423	2.491	93.562						
14	.328	1.928	95.490						
15	.297	1.747	97.237						
16	.246	1.449	98.686						
17	.223	1.314	100.000						

Extraction Method: Principal Component Analysis.

**Table 5-30: 6-Factor Component Matrix for Satisfaction of Office Occupiers**

**Rotated Component Matrix<sup>a</sup>**

	Component					
	Relations hip	Value	Services	Building	Legal	Location
Property Management	.642					
Understanding Needs	.731					
Communication	.830					
Responsiveness	.828					
Amenities & Services			.450	.507		
Building Specification				.606		
HVAC & Lighting				.698		
Maintenance				.579		
Lifts			.816			
Entrances / Reception			.763			
Security			.653			
Approvals & Legal Processes					.923	
Leasing process		.456			.560	
Billing & Documentation		.729				
Location						.870
Rent Value for Money		.789				
Service Charge Value for Money		.852				

a. Rotation converged in 6 iterations.



An OLS Regression using the components as orthogonal independent variables and overall occupier satisfaction as the dependent variable produced a coefficient of determination,  $R^2$ , of 0.366 and, as can be seen from **Table 5-31**, the Relationship Factor is by far the most important in determining overall occupier satisfaction. Four of the six factors are statistically significant at the 5% level, ( $p < 0.05$ ), and one at the 10% level. These five coefficients are positive. The only negative coefficient is for the factor relating to legal processes (leasing and approvals), and this is not statistically significant. It is possible that few of the interviewees had been involved in the actual leasing process or had need to request licenses to make alterations, for example.

**Table 5-31: Regression Coefficients for Office Occupiers' Overall Satisfaction**

Coefficients <sup>a</sup>								
Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics		
	B	Std. Error	Beta			Tolerance	VIF	
(Constant)	3.865	.104		37.183	.000			
RelationFac	.332	.055	.469	6.010	.000	.891	1.122	
ValueFac	.105	.051	.161	2.063	.041	.892	1.120	
1 ServicesFac	.095	.055	.140	1.722	.088	.819	1.220	
BuildingFac	.287	.055	.423	5.233	.000	.829	1.206	
LegalFac	-.081	.063	-.103	-1.290	.200	.846	1.182	
LocationFac	.282	.078	.280	3.606	.000	.898	1.113	

a. Dependent Variable: Overallsatisfaction

## 5.7 Industrial Occupier Satisfaction: OLS and PCA Regressions

### 5.7.1 Assessment of Industrial Occupier Satisfaction using OLS Regression

For Industrial occupiers, the Variance Inflation Factor for the individual variables is higher than for both the other sectors, with several variables having VIF around 2.5 and Property Management having a VIF of 3.4. **Table 5-32** gives the coefficients on the independent variables where Overall Occupier Satisfaction is the dependent variable. The coefficient of determination for the regression,  $R^2$ , is 0.619 (adjusted  $R^2 = 0.531$ ) but these relatively high values belie the issue that the only statistically significant coefficients are those for Estate Satisfaction and Landlord Performance, with Building Satisfaction being statistically significant at the 90% level of confidence. As with the data for office occupiers, this may be attributable to multi-collinearity between independent variables, and again justifies the decision to conduct additional analysis using PCA, and, in the next chapter, structural equation modelling.

**Table 5-32: Regression Coefficients for Industrial Occupier Satisfaction**

	Coefficients <sup>a</sup>						
	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
	B	Std. Error	Beta			Tolerance	VIF
(Constant)	-.322	.488		-.659	.512		
Property Management	.089	.110	.108	.814	.418	.291	3.432
Communication	.022	.084	.029	.262	.794	.423	2.367
Responsiveness	.066	.077	.090	.864	.391	.475	2.104
Understanding Needs	.033	.078	.047	.431	.668	.429	2.332
Building Specification	.140	.077	.162	1.817	.073	.652	1.534
Estate Satisfaction	.287	.102	.270	2.814	.006	.558	1.792
Location	.029	.080	.029	.365	.716	.802	1.248
Amenities & Services	.043	.062	.055	.687	.494	.809	1.236
Signage	-.021	.059	-.030	-.353	.725	.719	1.390
Leasing process	.031	.100	.032	.307	.760	.467	2.141
Approvals & Legal Processes	.023	.056	.036	.411	.682	.671	1.491
Billing & Documentation	.072	.063	.096	1.158	.251	.747	1.338
Security	-.022	.054	-.035	-.403	.688	.688	1.454
Maintenance	.040	.072	.050	.557	.579	.650	1.539
Rent Value for Money	.022	.079	.025	.276	.783	.607	1.649
Service Charge Value	.012	.075	.015	.164	.870	.599	1.670
Landlord Performance	.221	.102	.231	2.158	.034	.451	2.219

a. Dependent Variable: Overall satisfaction

### 5.7.2 Industrial Occupier Satisfaction using Principal Components Analysis

Using the data from interviews with occupiers of industrial property, various solutions resulted with little to choose between them. In order to obtain a non-significant Bartlett’s test, the Corporate Social Responsibility variable had to be excluded from the data, and replaced with the Landlord Performance variable. This combination of data produced a Kaiser-Meyer-Olkin Measure of Sampling Adequacy of 0.831 and explained 81.2 % of the total variance in Overall Satisfaction, with a 9-Factor solution (**Table 5-33**). However, three of the components have rather small eigenvalues, and the resulting rotated matrix gives three components which each comprise a single variable.

**Table 5-33: Variance Explained by Components using Responses from Industrial Occupiers<sup>51</sup>**

Component	Total Variance Explained					
	Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	5.504	32.377	32.377	3.280	19.293	19.293
2	1.547	9.098	41.475	1.666	9.797	29.090
3	1.441	8.477	49.952	1.558	9.164	38.254
4	1.112	6.539	56.491	1.496	8.800	47.054
5	1.050	6.174	62.665	1.297	7.631	54.686
6	.969	5.702	68.367	1.212	7.127	61.813
7	.812	4.777	73.144	1.134	6.671	68.484
8	.698	4.107	77.252	1.094	6.437	74.921
9	.664	3.906	81.158	1.060	6.237	81.158

Extraction Method: Principal Component Analysis.

<sup>51</sup> This Table appears different from the equivalent tables for retailers and office occupiers (**Table 5-25** and **Table 5-29**) because those were produced by allowing the data to define the number of components, which resulted in an intuitively meaningful factor structure, whereas for Industrial Occupiers the most logical structure was obtained by stipulating the number of components.

**Table 5-34: 9-Factor Component Matrix for Satisfaction of Industrial Occupiers**

Rotated Component Matrix <sup>a</sup>									
	Component								
	Relationship	Business Needs	Estate	Value	Maintenance	Location	Legal Processes	Documentation	Services
Property Management	.818								
Communication	.843								
Responsiveness	.829								
Understanding Needs	.696	.388							
Building Specification		.724				.394			
Estate Satisfaction			.411		.501				
Location						.925			
Amenities & Services									.930
Signage			.719						
Leasing process		.788							
Approvals & Legal Processes							.916		
Billing & Documentation								.913	
Security			.833						
Maintenance					.859				
Rent Value for Money				.834					
Service Charge Value				.744					
Landlord Performance	.562	.394							

Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser Normalization.

a. Rotation converged in 9 iterations.

The data for industrial occupiers had only 45 cases for which complete data was available for all nine components. Nevertheless an OLS Regression using the components as orthogonal independent variables and overall occupier satisfaction as the dependent variable produced a high coefficient of determination,  $R^2$ , of 0.745 (adjusted  $R^2 = 0.679$  which takes account of the large number of independent variables) with statistically significant, positive coefficients for 8 of the components (the Services component having  $p = 0.071$ ), see **Table 5-35**. As with offices, the Relationship factor is by far the most important in determining overall occupier satisfaction. The only factor with a (tiny) negative coefficient is Documentation, which, if treated together with the Legal factor would form a combined component with strongly positive coefficient.

**Table 5-35: Regression Coefficients for Industrial Occupiers' Overall Satisfaction (9-Factor Solution)**

Coefficients<sup>a</sup>

	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
	B	Std. Error	Beta			Tolerance	VIF
(Constant)	3.915	.067		58.254	.000		
Relationship9Fac	.462	.073	.627	6.343	.000	.746	1.341
Business_Needs9Fac	.236	.070	.324	3.379	.002	.794	1.259
Estate9Fac	.134	.061	.212	2.185	.036	.772	1.295
Value9Fac	.148	.066	.208	2.254	.031	.853	1.172
Maintce9Fac	.149	.065	.202	2.306	.027	.951	1.052
Location9Fac	.188	.064	.278	2.936	.006	.812	1.232
Legal9Fac	.272	.064	.398	4.232	.000	.826	1.211
Doc9Fac	-.014	.086	-.018	-.168	.868	.653	1.531
Services9Fac	.099	.053	.175	1.864	.071	.831	1.203

a. Dependent Variable: Overall Satisfaction

As an illustration of alternative solutions, a 6-factor solution is shown below (**Table 5-36** and **Table 5-37**). This explains 68.4% of total variance, and an OLS Regression using the resulting components has a Coefficient of Determination which is only slightly smaller than the regression using 9 components ( $R^2 = 0.719$ , adjusted  $R^2 = 0.675$ ). In this the coefficients on all six components are positive and statistically significant (to 2 decimal places), with the Relationship factor explaining the largest amount of **Table 5-38**.

The drawback with this solution is that the components themselves are less clear-cut, with cross-loadings meaning that several variables “straddle” components.

**Table 5-36: Variance Explained by Components using Responses from Industrial Occupiers**

Total Variance Explained						
Component	Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	5.504	32.377	32.377	3.198	18.810	18.810
2	1.547	9.098	41.475	2.044	12.025	30.835
3	1.441	8.477	49.952	2.016	11.859	42.694
4	1.112	6.539	56.491	1.668	9.812	52.506
5	1.050	6.174	62.665	1.433	8.430	60.936
6	.969	5.702	68.367	1.263	7.431	68.367

Extraction Method: Principal Component Analysis.

Total Variance Explained									
Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	5.622	31.235	31.235	5.622	31.235	31.235	3.217	17.874	17.874
2	1.547	8.593	39.828	1.547	8.593	39.828	2.127	11.815	29.689
3	1.454	8.080	47.908	1.454	8.080	47.908	2.045	11.363	41.052
4	1.138	6.322	54.230	1.138	6.322	54.230	1.637	9.097	50.149
5	1.094	6.079	60.309	1.094	6.079	60.309	1.483	8.237	58.386
6	.970	5.387	65.696	.970	5.387	65.696	1.316	7.310	65.696
7	.960	5.334	71.030						
8	.802	4.455	75.485						
9	.684	3.800	79.285						
10	.621	3.449	82.734						
11	.569	3.162	85.896						
12	.478	2.656	88.552						
13	.473	2.626	91.178						
14	.409	2.273	93.451						
15	.379	2.106	95.557						
16	.322	1.788	97.345						
17	.306	1.697	99.043						
18	.172	.957	100.000						

Extraction Method: Principal Component Analysis.

**Table 5-37: 6-Factor Component Matrix for Satisfaction of Industrial Occupiers**

	Component					
	Relationship	Estate	Business Needs	Value	Services	Location
Property Management	.820					
Communication	.836					
Responsiveness	.832					
Understanding Needs	.676		.394			
Building Specification			.566		.409	.383
Estate Satisfaction		.613				
Location						.925
Amenities & Services					.661	
Signage		.661				
Leasing Process			.757			
Approvals & Legal Processes			.655			
Billing & Documentation				.786		
Security		.791				
Maintenance		.522		.391		
Rent Value for Money				.354	.660	
Service Charge Value for Money				.706		
Landlord Performance	.543		.442			

**Table 5-38: Regression Coefficients for Industrial Occupiers' Overall Satisfaction (6-Factor Solution)**

	Coefficients <sup>a</sup>						
	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
	B	Std. Error	Beta			Tolerance	VIF
(Constant)	3.935	.062		63.506	.000		
Relationship	.427	.067	.590	6.370	.000	.861	1.161
Estate	.204	.055	.344	3.692	.001	.848	1.179
Business Needs	.366	.068	.479	5.355	.000	.924	1.082
Value	.145	.069	.191	2.098	.043	.889	1.124
Services	.106	.053	.189	1.999	.053	.830	1.205
Location	.174	.058	.279	2.981	.005	.844	1.184

a. Dependent Variable: Overall Satisfaction

## 5.8 Discussion of Preliminary Analysis

The analysis in this chapter has demonstrated the importance the relationship between occupiers and property managers plays in determining occupiers' overall satisfaction.

For Retailers in Shopping Centres, the OLS regression in Section 5.5.1 found the independent variables which make the greatest contribution to Overall Satisfaction to be Communication, Corporate Social Responsibility, Location, Marketing, Tenant Mix, Trading Performance and Understanding Needs.

For managers of the Retail Warehouses in this sample, the strongest correlations with overall satisfaction were satisfaction with Corporate Social Responsibility (which includes aspects of environmental responsibility and sustainability), satisfaction with property management, and perception of receiving professional customer service. The other key determinants of overall satisfaction appear to be satisfaction with the way waste is dealt with on the retail park, the extent to which the Park Manager understands retailers' business needs, their responsiveness to retailers' requests, Park security and the trading performance of the store.

For office occupiers, regression using Principal Components showed the Relationship Factor to be by far the most important in determining overall occupier satisfaction. This component comprises satisfaction with Property Management, Understanding Needs, Communication and Responsiveness.

For Industrial Occupiers, too, the Relationship Factor was also the most influential in determining occupiers' overall satisfaction in both the 6-factor and the 9-factor solution.

These findings support the analysis shown in Chapter 2, in which responses from the 2007 UK Occupier Satisfaction Index Study were correlated with occupiers' Overall Satisfaction and their stated likelihood of lease renewal. The strongest correlations in that analysis were with relationship aspects such as Communication and Understanding Occupiers' Business Needs. It also supports findings from the Global Office Occupier Satisfaction Study, in which the strongest correlations with Overall Occupier Satisfaction were with satisfaction with Property Management. It also highlights some differences between sectors, such as the importance of security, waste disposal, and signage on retail parks, and the importance of value for money for office occupiers as well as the less obvious relevance of tenant mix in an office building or business park (although this aspect was only included in 15 of the office interviews). For industrial occupiers, satisfaction with their Estate and their Individual Unit appear to be key determinants of their overall satisfaction.



## 5.9 Applying SERVQUAL Dimensions across the Sectors

The drawback with using principal components analysis and regressions to examine the relationship between aspects of property management and occupiers' overall satisfaction is that the components differ between sectors, so it is difficult to draw clear inferences from the analysis and to apply the findings to property management in practice. Therefore the main analysis which follows builds upon previous research by grouping the variables into the five SERVQUAL dimensions. The advantages of this are that the same dimensions can be used for each sector (although the variables comprising the dimensions may differ), and that the findings are conceptually straightforward to apply in practice.

**Table 5-39** shows the way in which the variables were categorised into the five SERVQUAL dimensions for analysis. The categorisation was achieved firstly by intuition, followed up with Principal Components Analysis stipulating five factors, and Scale Reliability Testing, which led to the exclusion of some of the original variables, as shown in the table. In every case apart from one, the variables combined to form a single component with eigenvalue greater than one (Kaiser's criterion), with the items forming a logical combination, as shown by Cronbach's Alpha. The one exception was the SERVQUAL dimension of *Reliability* for retailers in shopping centres, in which the four items – Maintenance, Cleaning, Billing & Documentation and Waste Management – form two components, with the first accounting for 37% of the variance and the second accounting for 26%. However, the eigenvalue for the second component is only 1.05, compared with 1.48 for the first component. The first component has an eigenvalue which is much larger than that generated by Monte Carlo PCA for Parallel Analysis (Pallant, 2010 p. 199) using a random data matrix of the same size, whereas the second component is approximately equal to that generated from the random data. Therefore, considering the four sectors as a whole, the occupier satisfaction data can legitimately be grouped into the five SERVQUAL dimensions for use in the subsequent analysis.

The independent variables were not combined to form a Likert scale, which was the approach of the original SERVQUAL methodology, nor was data available to assess occupier' expectations of service, so this research does not examine the gap between perceptions and expectations. Rather the transformation was achieved by taking the mean ratings for the data items to create one SERVQUAL dimension, as indicated in **Table 5-39**. This maximised the sample size, because if the SERVQUAL dimensions had been created by adding the individual data items, missing data would have skewed the results, whereas averaging the data allowed each dimension for each sector to have a statistically meaningful sample size, as shown in **Table 5-40**.

**Table 5-41** shows that there are some fairly high correlations between the SERVQUAL versions of the independent variables and this could potentially affect the reliability of the coefficients in regressions. However multicollinearity diagnostics indicate tolerance and variance inflation factors are well within acceptable limits (**Table 5-42**). As discussed earlier, multicollinearity is considered not to be a problem if tolerance > 0.1 i.e. VIF < 10. For Industrial and Retail properties, all tolerances are greater than 0.6. For offices, multicollinearity is slightly greater, with tolerances between 0.49 and 0.77, but these are nonetheless well within acceptable ranges.

**Table 5-39: Data items comprising each SERVQUAL dimension, by sector**

SERVQUAL Dimension	Occupier Satisfaction Studies	Applicability to Sector			
		Industrial	Office	Retail - Shopping Centre	Retail Park
Tangibles	<b>Physical Aspects</b>				
	➤ Location	Y	Y	Y	Y
	➤ Property Specification	Y	Y	Y	Y
	➤ Estate	Y			Y
	➤ Parking		Y	Y	Y
	➤ Public Transport			Y	Y
	➤ Tenant Mix			Y	Y
	<b>Service Aspects</b>				
	➤ Marketing & Events			Y	
	➤ Amenities	Y	Y	Y	Y
	➤ HVAC		Y	Y	
	➤ Lifts		Y	Y	
	➤ Signage	Y		Y	Y
	➤ Reception		Y	Y	Y
Reliability	➤ Maintenance	Y	Y	Y	Y
	➤ Cleaning		Y	Y	Y
	➤ Billing & Documentation	Y	Y	Y	Y
	➤ Waste Management		Y	Y	Y
Responsiveness	➤ Responsiveness	Y	Y	Y	Y
	➤ Approvals & Legal Processes	Y	Y	Y	Y
Assurance	➤ CSR	Y	Y	Y	Y
	➤ Security	Y	Y	Y	Y
	➤ Health & Safety			Y	
	➤ Professionalism & Customer Service	Y	Y	Y	Y
	➤ Leasing Process	Y	Y		
Empathy	➤ Understanding Needs	Y	Y	Y	Y
	➤ Communication	Y	Y	Y	Y

**Table 5-40: Descriptive Statistics for the SERVQUAL Dimensions, by Sector**

Sector		Mean	Std. Deviation	N
Shopping Centre	SQ_Tangibles	3.556	.732	1509
	SQ_Reliability	4.061	.626	1531
	SQ_Responsiveness	3.835	.876	1557
	SQ_Assurance	3.915	.626	1658
	SQ_Empathy	3.736	.780	1653
Retail Park	SQ_Tangibles	3.377	.445	165
	SQ_Reliability	3.747	.535	165
	SQ_Responsiveness	3.525	.895	146
	SQ_Assurance	3.215	1.010	158
	SQ_Empathy	3.115	.899	150
Office	SQ_Tangibles	3.588	.766	949
	SQ_Reliability	3.700	.729	1122
	SQ_Responsiveness	3.736	.920	1100
	SQ_Assurance	3.750	.758	1255
	SQ_Empathy	3.687	.865	1100
Industrial	SQ_Tangibles	3.736	.648	1147
	SQ_Reliability	3.778	.837	976
	SQ_Responsiveness	3.834	.888	1104
	SQ_Assurance	3.749	.911	662
	SQ_Empathy	3.767	.833	1158

**Table 5-41: Correlations between SERVQUAL dimensions for Sectors Separately**

Sector			SQ_Tangibles	SQ_Reliability	SQ_Responsiveness	SQ_Assurance	SQ_Empathy	
Retail – Shopping Centre	SQ_Tangibles	Pearson Correlation	1	.275**	.268**	.345**	.389**	
		N	1509	1435	1431	1508	1501	
	SQ_Reliability	Pearson Correlation	.275**	1	.344**	.442**	.386**	
		N	1435	1531	1457	1529	1524	
	SQ_Responsiveness	Pearson Correlation	.268**	.344**	1	.429**	.587**	
		N	1431	1457	1557	1554	1555	
	SQ_Assurance	Pearson Correlation	.345**	.442**	.429**	1	.563**	
		N	1508	1529	1554	1658	1648	
	SQ_Empathy	Pearson Correlation	.389**	.386**	.587**	.563**	1	
		N	1501	1524	1555	1648	1653	
	Retail Park	SQ_Tangibles	Pearson Correlation	1	.331**	.239**	.223**	.159
			N	165	165	146	158	150
		SQ_Reliability	Pearson Correlation	.331**	1	.595**	.525**	.512**
			N	165	165	146	158	150
SQ_Responsiveness		Pearson Correlation	.239**	.595**	1	.635**	.720**	
		N	146	146	146	142	139	
SQ_Assurance		Pearson Correlation	.223**	.525**	.635**	1	.694**	
		N	158	158	142	158	145	
SQ_Empathy		Pearson Correlation	.159	.512**	.720**	.694**	1	
		N	150	150	139	145	150	
Office		SQ_Tangibles	Pearson Correlation	1	.317**	.271**	.455**	.363**
			N	949	833	831	926	824
		SQ_Reliability	Pearson Correlation	.317**	1	.410**	.457**	.418**
			N	833	1122	1040	1098	1056
	SQ_Responsiveness	Pearson Correlation	.271**	.410**	1	.523**	.716**	
		N	831	1040	1100	1069	1070	
	SQ_Assurance	Pearson Correlation	.455**	.457**	.523**	1	.605**	
		N	926	1098	1069	1255	1070	
	SQ_Empathy	Pearson Correlation	.363**	.418**	.716**	.605**	1	
		N	824	1056	1070	1070	1100	
	Industrial	SQ_Tangibles	Pearson Correlation	1	.261**	.341**	.327**	.367**
			N	1147	843	963	522	1017
		SQ_Reliability	Pearson Correlation	.261**	1	.236**	.395**	.282**
			N	843	976	830	650	879
SQ_Responsiveness		Pearson Correlation	.341**	.236**	1	.247**	.643**	
		N	963	830	1104	538	1101	
SQ_Assurance		Pearson Correlation	.327**	.395**	.247**	1	.390**	
		N	522	650	538	662	569	
SQ_Empathy		Pearson Correlation	.367**	.282**	.643**	.390**	1	
		N	1017	879	1101	569	1158	

\*\* . Correlation is significant at the 0.01 level (2-tailed).

**Table 5-42: Multicollinearity diagnostics for the SERVQUAL dimensions**

Sector		Collinearity Statistics	
		Tolerance	VIF
Retail			
	SQ_Tangibles	.862	1.160
	SQ_Reliability	.817	1.223
	SQ_Responsiveness	.651	1.536
	SQ_Assurance	.736	1.358
	SQ_Empathy	.601	1.665
Office			
	SQ_Tangibles	.773	1.294
	SQ_Reliability	.758	1.319
	SQ_Responsiveness	.555	1.801
	SQ_Assurance	.570	1.753
	SQ_Empathy	.488	2.049
Industrial			
	SQ_Tangibles	.855	1.170
	SQ_Reliability	.770	1.298
	SQ_Responsiveness	.718	1.393
	SQ_Assurance	.736	1.359
	SQ_Empathy	.609	1.643

This chapter has described the data obtained from occupier satisfaction interviews and conducted some preliminary analysis, including highlighting the role of property management in occupiers' overall satisfaction. The following two chapters use structural equation modelling to address the second research question:

- Question 2: *What are the determinants of occupier satisfaction, loyalty and advocacy?*

Chapter 6 analyses the interview data described in this chapter, and reveals the factors that are most influential in determining occupiers' perceptions: their satisfaction with property management, overall satisfaction, perception of receiving value for money and their opinion about their Landlord, for Retail, Office and Industrial properties. The subsequent Chapter investigates behavioural intentions i.e. occupiers' willingness to recommend their landlord or property manager and their stated likelihood of lease renewal.

## **Chapter 6 Determinants of Occupier Satisfaction: Structural Equation Modelling using SMART PLS**

This chapter describes and uses the tool SMART PLS<sup>52</sup> to examine relationships between aspects of property management service and occupiers' satisfaction with property management, their overall satisfaction, their perception of their landlord, and their perception of receiving value for money. Following an explanation of the use of the tool and the interpretation of its output, the analysis is carried out for the three sectors separately. For each sector structural equation modelling is performed, allowing the key determinants of occupier satisfaction to be assessed. The tests of validity of the models are reported in Appendices D – F. Variants of the model are also assessed to check the robustness of the findings. Importance-Performance Analysis (IPMA) is performed for each sector, showing where there is most scope for improving the satisfaction of the 4400+ interviewees whose responses were used for this analysis<sup>53</sup>. IPMA was conducted for the constructs 'Property Management', 'Overall Satisfaction', 'Value for Money' and 'Landlord Reputation'. At the end of the chapter, the key findings are discussed for each sector, similarities and differences between the sectors are noted, and the implications for landlords and property managers are highlighted.

This chapter considers occupiers perceptions and their ratings of satisfaction with aspects of the property management service. The subsequent chapter addresses behavioural intentions: likelihood of lease renewal and occupiers' willingness to recommend their landlord.

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<sup>52</sup> The tool can be obtained from <http://www.smartpls.com>

<sup>53</sup> The total number of interviews was 4482 but not all gave ratings for overall satisfaction so some data could not be included in this analysis

## **6.1 Methodology**

### **6.1.1 Use of SMART PLS to investigate the links between service quality, occupier satisfaction, lease renewal intentions and advocacy of their landlord**

SMART PLS is a tool that has been used in marketing research to identify factors affecting consumers' behaviour, and is ideally suited to investigating determinants of occupier satisfaction. It allows the researcher to create a model that shows postulated relationships between variables and constructs, and to test the strength and significance of the paths. The paths (relationships) are guided by prior research and theory. In the case of the service-profit chain for commercial real estate, relevant prior research includes the work of Heskett, Sasser, & Schlesinger (1997) and the SERVQUAL model of service quality of Parasuraman, Zeithaml, & Berry (1985, 1988), together with variants devised by Gummesson and Grönroos, discussed in Schneider & White (2004) and in Chapter 2 of this thesis. In particular, SMART PLS makes no assumptions about the distribution of data, so is not limited by the fact that occupier satisfaction data does not follow a normal distribution.

SMART PLS uses manifest variables (both formative and reflective indicators) in an outer model to investigate latent constructs in an inner structural model. The manifest variables are the variables for which data is gathered by the researcher. Formative indicators are considered to cause the latent construct, and the paths are drawn as arrows from indicator to construct. Reflective indicators are considered to be caused by the construct. The latent constructs are underlying combinations of the data which are not measured or observed directly. The technique, structural equation modelling using partial least squares, is similar to using principal components analysis as a dimension reduction technique, creating latent constructs (factors / components) which can be used as independent variables in multivariate regressions. With SMART PLS the researcher draws a diagram to define the relationships between manifest variables and latent constructs, runs the algorithm to calculate weights and loadings for the various paths in the model, and then checks the validity of the model. If the various tests of validity hold, the researcher interprets the results of the calculation. By contrast, PCA involves empirically determining the number and composition of the latent constructs using criteria such as the size of the eigenvalues (Kaiser's Criterion) or Catell's scree plot, as described in the previous chapter. These can then be rotated to maximise the variance explained by the constructs, and, by using Varimax rotation, can be orthogonalised to be used as independent variables in least squares regressions. Both techniques - structural equation modelling and PCA / Regression - are designed to quantify the relative importance of variables and constructs in explaining the variance in aspects of interest to the research. Tests of validity must be conducted on the formative indicators, the reflective indicators and the structural (inner) model (Hair et al., 2014).



### **6.1.1.1 Tests of validity for formative indicators**

Formative indicators must not be highly correlated as they are all meant to contribute a different facet to the latent construct they are assumed to cause. Therefore to check that multi-collinearity is not a problem, the Variance Inflation Factor (VIF) should not be too high. As mentioned in the previous chapter, Hair et al., (2014) suggest a maximum VIF of 5 i.e. a minimum tolerance of 0.2 (where tolerance is the reciprocal of VIF). This is because the outer weights that are calculated for formative indicators, which show the relative importance of each variable in explaining the construct with which they are associated, are obtained by multiple regression with each indicator as an independent variable. If independent variables are highly correlated it is impossible to assign variance uniquely to each variable, meaning coefficients (i.e. path weightings) are biased and incorrectly estimated by the tool. The statistical significance of each path weighting is assessed by a bootstrapping procedure, in which repeated sampling with replacement from the data is used to determine the applicability of the results to the wider population. This is necessary because the data does not follow a normal distribution, so parametric tests of significance are not appropriate. A t-statistic in excess of 1.96 means a confidence interval of 95% (a p-value below 0.05).

Ideally tests for convergent validity (redundancy analysis) would also be conducted to check that all the formative indicators contribute to the construct they are deemed to cause. This necessitates using the construct additionally with reflective indicator(s) and obtaining a path coefficient in excess of 0.8 between the exogenous and endogenous versions of the latent variable (Hair et al., 2014, p. 121). Suitable reflective indicators have to be defined at the research-design stage, to ensure appropriate questions are asked or data gathered. For this present research, that would require additional questions reflecting each latent construct to have been asked. Since such questions were not included in the occupier satisfaction studies, the technique of PLS-SEM is supplemented in this thesis by the PCA / OLS regression already described, and by the use of variants of the model. Whether variables actually contribute to a construct is also apparent from the path weights and from the table of cross-loadings.

Whilst the main aspect of interest for formative indicators is the path weight, and its statistical significance, if a path is non-significant it is of interest to check the path loading, which is equivalent to the “bivariate correlation between each indicator and its construct” (Hair et al., 2014, p. 129). If the outer loading exceeds 0.5 it is of absolute importance even if not of relative importance.

### **6.1.1.2 Tests of validity for reflective indicators**

For reflective indicators, the path coefficients of interest are Outer Loadings. The checks on validity are for composite reliability (internal consistency), indicator reliability, convergent validity and discriminant validity (Hair et al., 2014, p. 97; Kwong-Kay Wong, 2013). Composite reliability is conventionally measured by Cronbach's Alpha, and SMART PLS does calculate this, but additionally provides a variant which takes account of the differing loadings of the reflective indicators on a construct. Like Cronbach's Alpha, values of order 0.7 – 0.9 are desirable. Higher values imply the reflective indicators are actually measuring the same phenomenon and hence in combination are not valid measures of the construct (Cronbach, 1951; Hair et al., 2014, p. 102). Indicator reliability is tested by checking that all reflective indicators have statistically significant outer loadings in excess of  $\sqrt{0.5}$  (i.e. 0.708) so that the variance shared between the indicator and its construct is greater than measurement error variance. Convergent validity is established by checking that the Average Variance Explained (AVE) of a construct is greater than 0.5, so that the construct explains more than half of the variance of its indicators.

Various tests are used to assess discriminant validity, which relates to the latent constructs being unique and distinct from the others. A latent construct should be able to account for more variance in the observed variables associated with it than either measurement error or other constructs in the model (Farrell & Rudd, 2009). The two most common approaches are the Fornell-Larcker Criterion (Fornell & Larcker, 1981) and an examination of cross-loadings, to check that each indicator loads more strongly on the construct with which it is associated than on other constructs, analogous to the dimensions associated with components in PCA. The Fornell-Larcker Criterion states that each construct's AVE should exceed its squared correlation with any other construct. However Henseler, Ringle, & Sarstedt, (2014) have found that both methods are fallible, and that a superior approach to detecting violations of discriminant validity is to use the Heterotrait – Monotrait ratio of correlations (HTMT) whereby if the HTMT ratio exceeds a threshold, it indicates lack of discriminant validity. Thresholds of 0.85 or 0.9 are suggested. The rationale for the ratio is that if the indicators of two constructs have correlations significantly smaller than one, then they represent two separate constructs.

### 6.1.1.3 Assessment of the Inner, Structural Model

Hair et al., (2014) suggest five criteria must be examined when assessing the structural model:

1. The significance of path coefficients
2.  $R^2$  – the coefficients of determination for target constructs (i.e. those that depend upon other constructs)
3.  $f^2$  – the effect size of the relationship between constructs
4. Stone-Geisser  $Q^2$  – the predictive relevance of a construct on a target construct
5.  $q^2$  – the effect size of this predictive relevance

As with the outer model coefficients, the significance of the path coefficients in the structural model can be assessed by bootstrapping.

$R^2$  is the amount of variance explained in a latent endogenous construct, and what constitutes a meaningful value varies according to the nature of the research. Hair et al. suggest that values of 0.75, 0.5 and 0.25 can be described as strong, moderate or weak (Hair, Ringle, & Sarstedt, 2011). Hair et al. (2014) suggest using Cohen's (1988) guidelines for interpreting  $f^2$ , namely that values of 0.02, 0.15 and 0.35 represent small, medium and large effects.

Stone-Geisser  $Q^2$ , the predictive relevance of the model, is obtained using a blindfolding procedure, in which the model is run several times, omitting certain cases each time, and assessing how well the path model is able to predict the actual observed values of indicators. The difference between the actual values of the omitted data points and the predicted values enables  $Q^2$  to be derived.

$$Q^2 = 1 - SSE/SSO$$

SSE is the sum of the squared prediction errors and SSO is the sum of the squared observations (Hair et al., 2014, p. 195).

The selection is done by specifying the “omission distance” between cases, for example an omission distance of 7 involves running the model but omitting every 7<sup>th</sup> case and comparing results from these sub-samples. For a construct to have predictive relevance,  $Q^2$  should exceed zero (Stone, 1974). The effect size of each individual construct can be estimated by evaluating  $Q^2$  both with and without the construct; the strength of the effect is assessed using the same values as when assessing  $f^2$ . Predictive relevance is only applicable to reflectively measured endogenous constructs (Hair et al., 2014, p. 178).

Relationships between constructs comprise direct effects and indirect effects. Direct effects are those between a construct and the target construct. Indirect effects occur when one or more intervening

construct(s) mediate(s) the effect between the first construct and the target construct. The total effect of the first construct on the target construct comprises the sum of the direct and indirect effects.

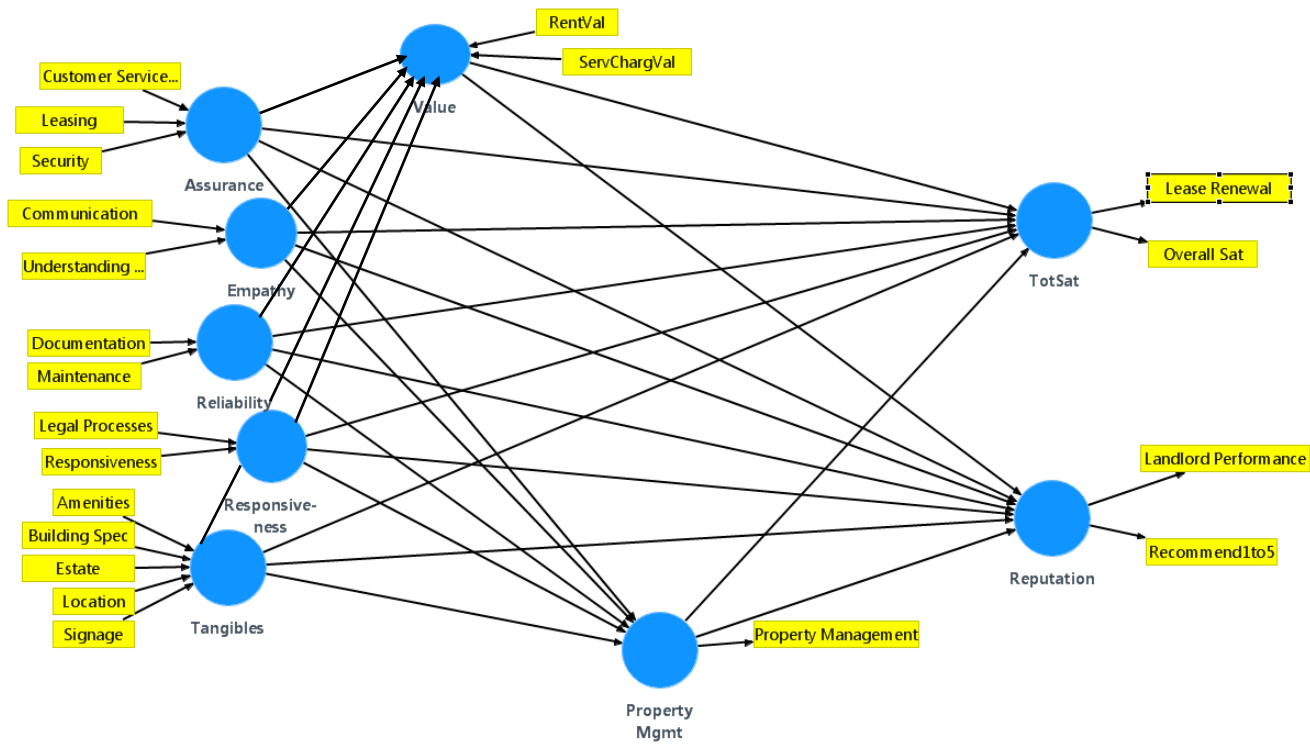
For this thesis, the structural models are the same for each sector, but the indicator variables differ according to their relevance to a sector (or indeed whether the data needed to include a variable in the model was collected for that sector in the original occupier satisfaction studies). As discussed in the previous chapter, **Table 5-39** shows which variables were included in each path diagram, categorised by SERVQUAL dimension.

**Figure 6-1** illustrates one of the path models used in this analysis. The latent constructs in this model are the five dimensions of SERVQUAL, together with “Value”, since perception of value for money acts as a moderating construct on satisfaction with other aspects (Levy & Lee, 2009; Tucker & Pitt, 2010; Wilson et al., 2001). The formative indicators use data obtained from the occupier satisfaction studies described earlier in this chapter. For this part of the research, they are deemed to be occupiers’ assessment of the quality of each aspect of property management, for example the quality of communication, the quality of the security service, the quality of documentation etc. The indicators combine to reveal occupiers’ satisfaction with the latent constructs of assurance, responsiveness etc.

The three other latent constructs are deemed to be endogenous, caused by latent constructs in the model, but measured via reflective indicator variables. Property Management is measured by occupiers’ rating of their overall satisfaction with property management. This construct also feeds in to the constructs of Total Satisfaction and Reputation, and these are each measured by two reflective indicators. The inclusion of Property Management as a separate construct enables an assessment of whether the five SERVQUAL dimensions account fully for the impact of property management on occupiers’ overall satisfaction, or whether there are other factors – omitted variables.

Total Satisfaction is measured by occupiers’ assessment of their overall satisfaction and also their stated likelihood of lease renewal. Reputation is assessed by occupiers’ rating of their landlord’s performance and their willingness to recommend their landlord or property manager. Two of these indicators, stated likelihood of lease renewal and willingness to recommend, are also used as dependent variables in the next chapter on behavioural intentions, in a complementary analysis to explore determinants of loyalty and advocacy, other facets of the “Service – Profit Chain”.

**Figure 6-1: Example of a Path Diagram for Occupiers of Industrial Property**



All ratings are on a scale of ‘1’ to ‘5’. Criticisms of attempts to perform quantitative analysis using ordinal response ratings have been made because of the difficulty in determining whether it is truly interval data i.e. whether the gaps between consecutive scores are equal. If a question asks “How would you rate your satisfaction ....?” with options “Very dissatisfied, dissatisfied, neutral, satisfied, very satisfied” then it is not clear that “satisfied” is twice as good as “dissatisfied”! However if the wording asks for a rating on a scale of ‘1’ to ‘5’, as was the case in the interviews for this research, researchers have demonstrated the legitimacy of performing quantitative and statistical analysis (see for example Carifio & Perla (2007) and Norman (2010)). Indeed Hair et al., (2014, p. 9) emphasise that a well-presented Likert scale, with symmetry about a middle item, is “likely to approximate an interval-level measurement” and that “the corresponding variables can be used in SEM”. The similarity of the parametric and non-parametric correlation coefficients in the analysis conducted in Chapter 2 (**Table 2.3**) also supports the treatment of these ordinal response ratings as interval data.

The data contains many missing values, as shown in the descriptive statistics given earlier in this Chapter, because not all questions were asked in all satisfaction studies, even within the same sector. The previous version of SMART-PLS was unable to tolerate missing values, and required either mean replacement or deletion of all cases with incomplete data. Mean replacement would have minimised variability in the data, significantly reducing the reliability of path coefficients, and the removal of

missing data would have reduced the sample size markedly, and would also have tended to skew findings as data would not have been “missing at random” but rather missing depending upon whether the landlord commissioning the study wanted to include it for a particular property or portfolio. Although SEM with PLS can cope with small sample sizes, the conventional opinion being that the minimum pre-requisite is “at least 10 times the largest number of formative indicators used to measure a single construct” (Hair et al., 2014, p. 20), “larger sample sizes increase the precision (consistency) of PLS-SEM estimations” (ibid, p. 16). Therefore Multiple Imputation was carried out, to fill in missing values with those obtained by internal regressions, and several full sets of data were created and used for analysis. However, a new version of the tool has recently been released, SMART-PLS V3, and this allows deletion of data pairwise, rather than casewise, meaning that incomplete data can be analysed without having to remove entire cases. The results from both versions have been compared, and are similar, so only the results using the new version of the tool are included in this thesis.

Variants of the models were investigated. For example ‘Value’ was included in or excluded from the structural model and the path weights and significance were compared. It was tested i) as a separate latent construct with formative manifest variables; ii) as a construct influenced by the SERVQUAL constructs; and iii) omitted as a construct, but with the value for money variables being used as reflective indicators associated with the ‘Overall Satisfaction’ construct. Results for each variant are included, and demonstrate the robustness of the key relationships to alternative model specifications. To obtain the statistical significance of every coefficient in this research, 5000 samples were used for the bootstrapping procedure, a process which took several hours of computer processing time to generate each table of results.

Following an examination of the outer and structural models, and the strength of the relationships and significance of the coefficients, SMART PLS can then be used to obtain Importance-Performance Matrices which show which aspects of customer service matter most to occupiers (as described in Chapter 2 and shown in **Figure 2.3**). The aspects of service which lie in the bottom right quadrant, for which performance is weak but the impact on occupiers is high, are the ones that property managers and landlords should focus on. Because the satisfaction data used in this study is from occupiers of property owned and managed by many different landlords and managing agents, satisfaction with performance overall will be very variable, and the resulting matrix will be a generalisation of importance and performance over a large cross-sectional sample and many years. Importance – Performance Analysis would be particularly helpful when used with data from a specific occupier satisfaction study, so that property managers and landlords can identify particular issues for their

occupiers, rather than generic ones. However, it is nevertheless of interest to analyse this data to investigate if any obvious generic issues do emerge.

In the Importance-Performance analysis which follows the structural equation modelling, missing data is treated in two ways:

- I. By excluding missing values pairwise in the regression algorithm employed by SMART PLS;
- II. By replacing missing values with the mean for each indicator variable.

This acts as a further test of the robustness of the results.

## 6.2 Analysis of Retailer Satisfaction using SMART PLS

The analysis in Chapter 5 indicated that, although there are strong similarities between retailers in shopping centres and on retail parks, there are also some differences. In addition, the interview data asked slightly different questions of these two categories of retailer; for example, the surveys for retail parks did not include questions about aspects such as lifts and cleaning. Therefore the two sets of responses are treated separately in this analysis of retailer satisfaction. The following section uses data from the 1689 interviews with store managers in shopping centres.

### 6.2.1 The Structural Model for Retailers in Shopping Centres

One model showing proposed relationships between manifest (i.e. indicator) and latent variables for the satisfaction of retailers in shopping centres is shown in **Figure 6-2** below. For this variant of the model, the five SERVQUAL dimensions and the construct 'Value' [for money] have formative indicator (manifest) variables. The effect of these constructs on the constructs 'Property Management', 'Total Satisfaction' and 'Reputation' is evaluated using the reflective indicators associated with these endogenous constructs. The 'Property Management' construct, for example, is measured by the reflective indicators Centre Management<sup>54</sup> and Marketing. The SERVQUAL constructs are assumed to influence occupiers' perception of 'Value'. Other variants of the model are evaluated later as robustness checks.

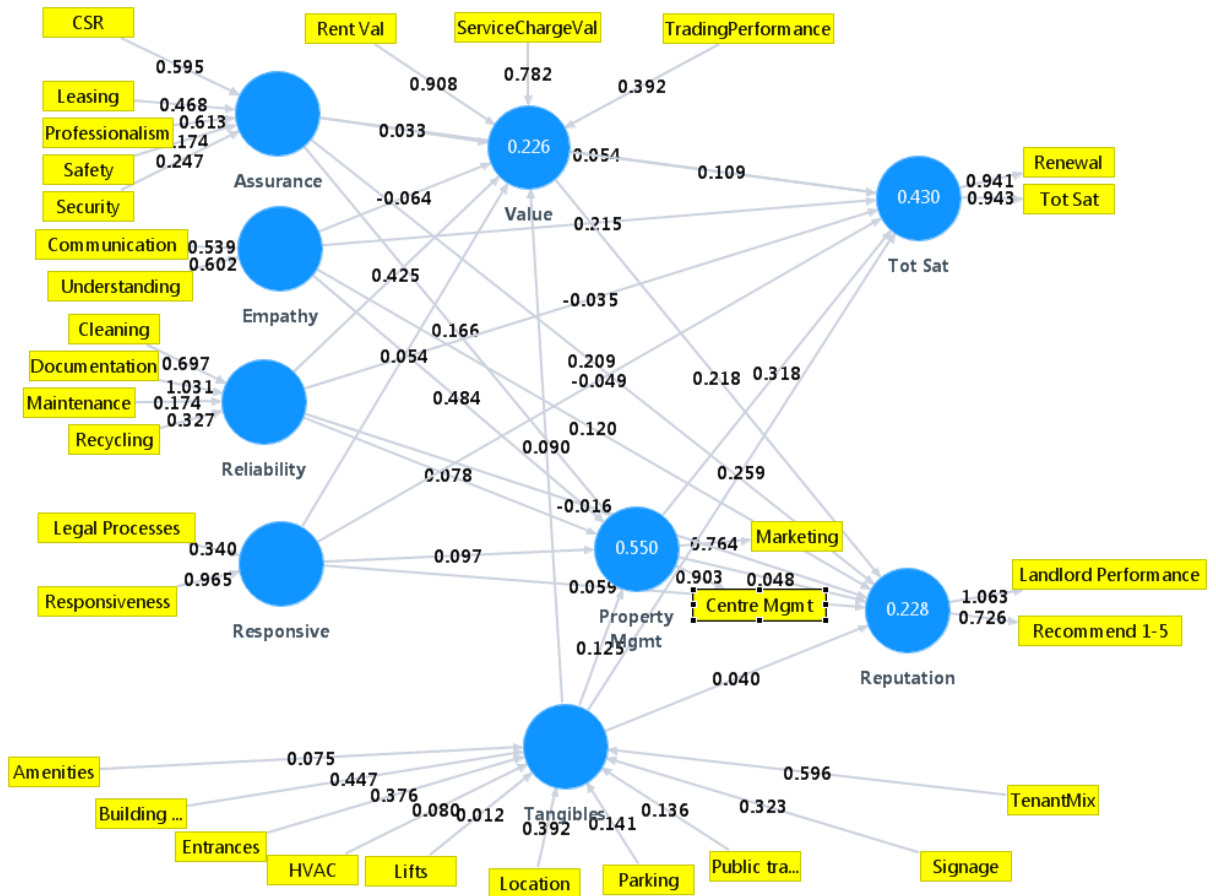
The diagram shows the path weights for formative indicators, the loadings for reflective indicators and the coefficients of determination,  $R^2$  for the endogenous constructs. These are examined and discussed in more detail in Appendix D.

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<sup>54</sup> The Reflective Indicator 'Centre Management' means the rating given by retailers to their satisfaction with the quality of management of their shopping centre or retail park. For office occupiers and industrial occupiers, the equivalent indicator is 'property management' and is the sole indicator for the 'Property Management' construct since 'Marketing' is not applicable for these sectors.



**Figure 6-2: Path Diagram for Retailer Satisfaction**



**Assessment of Outer Model**

Table 6-1 gives the Outer Weights of the Formative Indicators which shows their relative importance in explaining the latent constructs with which they are associated. Thus, for example, Corporate Social Responsibility, the Leasing Process and Professionalism are of most importance in explaining ‘Assurance’, whilst safety (Health and Safety) and Security appear less influential. In the occupier satisfaction studies, questions were asked about perception of “Customer Service” and about professional behaviour, and these were all grouped into the category “Professionalism”. For ‘Empathy’, both Communication and Understanding Business Needs are of approximately equal importance, whereas for ‘Reliability’ the main indicators are the quality of Documentation and Cleaning. The efficiency and efficacy of Legal Processes, such as applications for licenses to make alterations or for advertising banners, apparently has relatively little impact on the ‘Responsiveness’ construct. This may be because Head Office personnel, such as Property Directors of chain stores, do not devolve responsibility for dealing with legal processes to the store managers who are the respondents to the questionnaires. Tenant Mix, the Shopping Centre itself and its location appear to be the most influential determinants of the ‘Tangibles’ construct, whilst Trading Performance is of

some importance in the 'Value' construct, albeit of less importance than satisfaction with Rent and Service charge. The statistical significance of the paths and confidence intervals were obtained by bootstrapping.

**Table 6-1: Outer Weights with bias-corrected confidence intervals, showing relative importance of formative indicators in measurement model for Retailers**

Outer Weights	Original Sample	Sample Mean	Standard Error	T Statistic	P Values	Conf Interval Lower	Conf Interval Upper
Amenities -> Tangibles	0.075	0.077	0.127	0.593	0.554	-0.166	0.316
<b>Building Spec -&gt; Tangibles</b>	<b>0.447</b>	<b>0.429</b>	<b>0.208</b>	<b>2.151</b>	<b>0.034</b>	<b>0.104</b>	<b>0.874</b>
<b>CSR -&gt; Assurance</b>	<b>0.595</b>	<b>0.571</b>	<b>0.117</b>	<b>5.104</b>	<b>0.000</b>	<b>0.357</b>	<b>0.774</b>
<b>Centre Mgmt &lt;- Property Mgmt</b>	<b>0.748</b>	<b>0.747</b>	<b>0.018</b>	<b>42.355</b>	<b>0.000</b>	<b>0.715</b>	<b>0.778</b>
<b>Cleaning -&gt; Reliability</b>	<b>0.697</b>	<b>0.760</b>	<b>0.151</b>	<b>4.611</b>	<b>0.000</b>	<b>0.421</b>	<b>0.905</b>
<b>Communication -&gt; Empathy</b>	<b>0.539</b>	<b>0.538</b>	<b>0.046</b>	<b>11.681</b>	<b>0.000</b>	<b>0.419</b>	<b>0.605</b>
<b>Documentation -&gt; Reliability</b>	<b>1.031</b>	<b>0.734</b>	<b>0.399</b>	<b>2.585</b>	<b>0.011</b>	<b>0.404</b>	<b>1.453</b>
<b>Entrances -&gt; Tangibles</b>	<b>0.376</b>	<b>0.356</b>	<b>0.097</b>	<b>3.872</b>	<b>0.000</b>	<b>0.180</b>	<b>0.514</b>
HVAC -> Tangibles	0.080	0.078	0.139	0.575	0.566	-0.156	0.397
<b>Landlord Performance &lt;- Reputation</b>	<b>1.038</b>	<b>1.014</b>	<b>0.067</b>	<b>15.429</b>	<b>0.000</b>	<b>0.936</b>	<b>1.115</b>
<b>Leasing -&gt; Assurance</b>	<b>0.468</b>	<b>0.489</b>	<b>0.223</b>	<b>2.099</b>	<b>0.038</b>	<b>0.164</b>	<b>0.991</b>
<b>Legal Processes -&gt; Responsive</b>	<b>0.340</b>	<b>0.321</b>	<b>0.139</b>	<b>2.446</b>	<b>0.016</b>	<b>0.135</b>	<b>0.682</b>
Lifts -> Tangibles	0.012	0.002	0.131	0.091	0.928	-0.286	0.248
Location -> Tangibles	0.392	0.387	0.205	1.912	0.059	0.013	0.768
<b>Maintenance -&gt; Reliability</b>	<b>0.174</b>	<b>0.184</b>	<b>0.081</b>	<b>2.141</b>	<b>0.035</b>	<b>-0.028</b>	<b>0.301</b>
<b>Marketing &lt;- Property Mgmt</b>	<b>0.498</b>	<b>0.498</b>	<b>0.018</b>	<b>28.219</b>	<b>0.000</b>	<b>0.463</b>	<b>0.528</b>
Parking -> Tangibles	0.141	0.129	0.103	1.364	0.176	-0.095	0.305
<b>Professionalism -&gt; Assurance</b>	<b>0.613</b>	<b>0.622</b>	<b>0.193</b>	<b>3.180</b>	<b>0.002</b>	<b>0.378</b>	<b>1.019</b>
Public transport -> Tangibles	0.136	0.117	0.116	1.170	0.245	-0.040	0.372
<b>Recommend 1-5 &lt;- Reputation</b>	<b>0.673</b>	<b>0.700</b>	<b>0.122</b>	<b>5.524</b>	<b>0.000</b>	<b>0.440</b>	<b>0.899</b>
<b>Recycling -&gt; Reliability</b>	<b>0.327</b>	<b>0.337</b>	<b>0.108</b>	<b>3.025</b>	<b>0.003</b>	<b>0.054</b>	<b>0.478</b>
<b>Renewal &lt;- Tot Sat</b>	<b>0.658</b>	<b>0.676</b>	<b>0.080</b>	<b>8.216</b>	<b>0.000</b>	<b>0.503</b>	<b>0.792</b>
<b>Rent Val -&gt; Value</b>	<b>0.908</b>	<b>0.660</b>	<b>0.299</b>	<b>3.034</b>	<b>0.003</b>	<b>0.396</b>	<b>1.273</b>
<b>Responsiveness -&gt; Responsive</b>	<b>0.965</b>	<b>0.963</b>	<b>0.027</b>	<b>35.178</b>	<b>0.000</b>	<b>0.865</b>	<b>0.992</b>
Safety -> Assurance	0.174	0.154	0.127	1.373	0.173	-0.178	0.335
<b>Security -&gt; Assurance</b>	<b>0.247</b>	<b>0.253</b>	<b>0.081</b>	<b>3.073</b>	<b>0.003</b>	<b>0.075</b>	<b>0.380</b>
<b>Service Charge Val -&gt; Value</b>	<b>0.782</b>	<b>0.658</b>	<b>0.187</b>	<b>4.178</b>	<b>0.000</b>	<b>0.450</b>	<b>0.992</b>
<b>Signage -&gt; Tangibles</b>	<b>0.323</b>	<b>0.297</b>	<b>0.086</b>	<b>3.737</b>	<b>0.000</b>	<b>0.188</b>	<b>0.495</b>
<b>Tenant Mix -&gt; Tangibles</b>	<b>0.596</b>	<b>0.579</b>	<b>0.108</b>	<b>5.504</b>	<b>0.000</b>	<b>0.387</b>	<b>0.779</b>
<b>Tot Sat &lt;- Tot Sat</b>	<b>0.889</b>	<b>0.881</b>	<b>0.025</b>	<b>34.916</b>	<b>0.000</b>	<b>0.841</b>	<b>0.930</b>
Trading Performance -> Value	0.392	0.598	0.304	1.288	0.201	-0.014	0.898
<b>Understanding -&gt; Empathy</b>	<b>0.602</b>	<b>0.605</b>	<b>0.044</b>	<b>13.602</b>	<b>0.000</b>	<b>0.528</b>	<b>0.707</b>

Statistically significant ( $p < 0.05$ ) paths are shown in **Bold**.

### **Assessment of the Structural Model**

**Table 6-2** shows which paths have most effect on retailers' satisfaction with property management, their advocacy or opinion of their landlord, their overall satisfaction and their satisfaction with value for money according to this model. The table shows Total Effects, which combines the direct paths (**Table 6-3**) and Indirect Effects (**Table 6-4**). Thus 'Empathy' can be seen to be of most importance in determining retailers' satisfaction with the target construct 'Property Management'; 'Assurance' and perception of 'Value' have most impact on the 'Reputation' construct; 'Empathy', 'Property Management' and 'Tangibles' are all important determinants of 'Overall Satisfaction'; whilst 'Reliability' has most impact on perception of 'Value for Money'. This illustrates the concept of direct and indirect effects: 'Empathy' has a strong effect on 'Total Satisfaction' directly and also through the mediating construct, 'Property Management'.

**Table 6-2: Paths in the Structural Model for Retailers**

Total Effects	Property Mgmt	Reputation	Tot Sat	Value
Assurance	0.166	0.224	0.111	0.033
Empathy	0.484	0.129	0.361	-0.064
Property Mgmt		0.048	0.318	
Reliability	0.078	0.081	0.035	0.425
Responsiveness	0.097	0.076	-0.012	0.054
Tangibles	0.125	0.065	0.308	0.090
Value		0.218	0.109	

**Table 6-3: Direct Path Coefficients**

Path Coefficients	Property Mgmt	Reputation	Tot Sat	Value
Assurance	0.166	0.209	0.054	0.033
Empathy	0.484	0.120	0.215	-0.064
Property Mgmt		0.048	0.318	
Reliability	0.078	-0.016	-0.035	0.425
Responsiveness	0.097	0.059	-0.049	0.054
Tangibles	0.125	0.040	0.259	0.090
Value		0.218	0.109	

**Table 6-4: Indirect Effects**

Indirect Effects	Property Mgmt	Reputation	Tot Sat	Value
Assurance		0.015	0.056	
Empathy		0.009	0.147	
Reliability		0.097	0.071	
Responsiveness		0.016	0.037	
Tangibles		0.026	0.049	

Relationships of particular interest include the paths from 'Property Management' to 'Reputation' and to 'Total Satisfaction'. The former is small and non-significant, while the latter path is of much greater weight and significance. The relationship between 'Empathy' and 'Property Management' is clearly a strong one, and this can also be seen in **Figure 6-3** which shows the effect size to be between 'moderate' and 'large' according to Cohen's (1988) criteria<sup>55</sup> ( $f^2 = 0.287$ ). Other notable relationships are between 'Reliability' and 'Value', 'Property Management' and 'Total Satisfaction', 'Assurance' and 'Property Management', 'Assurance' and 'Reputation', and 'Tangibles' and 'Total Satisfaction', the effect size being 'small' to 'moderate' in each case.

The coefficients of determination for the constructs in the structural model (**Figure 6-2**) are shown below.

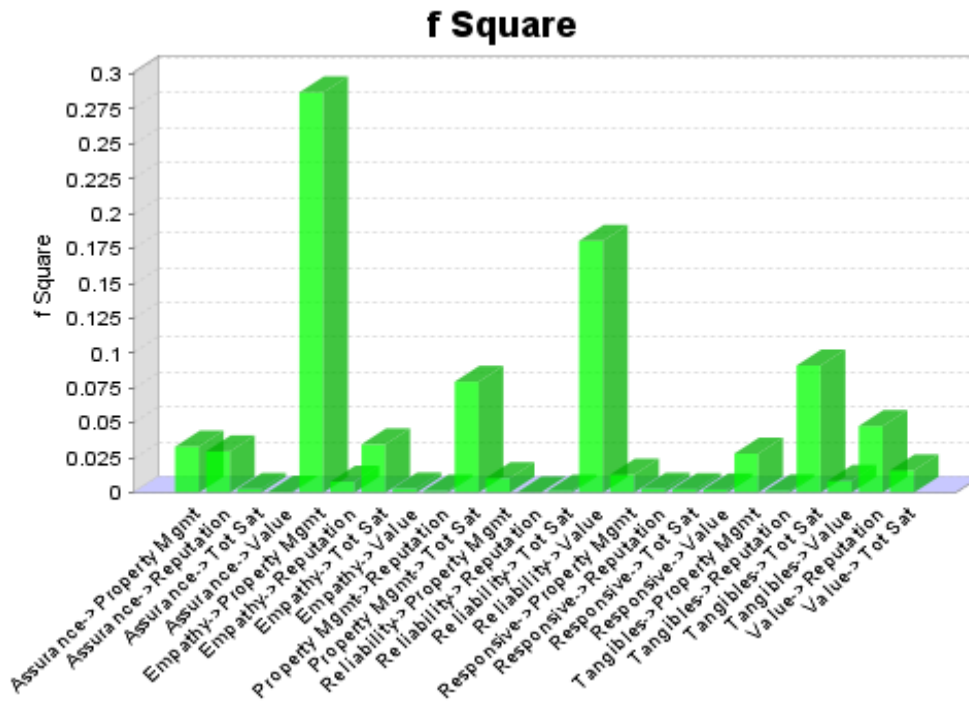
	<b>R Square</b>
Property Mgmt	<b>0.550</b>
Reputation	<b>0.228</b>
Tot Sat	<b>0.430</b>
Value	<b>0.226</b>

The values for 'Property Management' and 'Total Satisfaction' are 'moderate' according to Hair's suggested criteria mentioned earlier, whilst  $R^2$  for 'Reputation' and 'Value' are 'weak'.

---

<sup>55</sup> Cohen's criteria for  $f^2$ , discussed earlier, are that values of 0.02, 0.15 and 0.35 represent small, medium and large effects respectively

Figure 6-3: Effect Size for Retailer Model



f Square	Property Mgmt	Reputation	Tot Sat	Value
Assurance	0.033	0.030	0.003	0.001
Empathy	<b>0.287</b>	0.008	<b>0.035</b>	0.003
Property Mgmt		0.001	<b>0.079</b>	
Reliability	0.010	0.000	0.001	<b>0.180</b>
Responsive	0.013	0.003	0.003	0.002
Tangibles	<b>0.028</b>	0.002	<b>0.091</b>	0.008
Value		<b>0.048</b>	0.016	

**Robustness checks using Variants of the Model**

**Table 6-5** shows that the paths in the structural model are affected relatively little when different path models are investigated. This robustness check lends support to the inferences about the key relationships between perception of service quality and occupier satisfaction, occupier loyalty and the reputation of the landlord. Further analysis of reputation through advocacy was also conducted using logistic regression, the results of which are reported in the next chapter. The strength of the link between retailers’ perception of the latent ‘Empathy’ construct and their satisfaction with property management is clear from the Table. So, too, is its importance in occupiers’ overall satisfaction, together with ‘Tangibles’ such as the image of the shopping centre itself. ‘Assurance’ and ‘Value for Money’ clearly have a strong effect on the reputation of owners of shopping centres. ‘Reliability’ is seen to have an impact on retailers’ perception of ‘Value’ in the only version of the model which treats ‘Value’ as dependent upon the SERVQUAL constructs.

**Table 6-5: Effect on Structural Model Coefficients of modifying the Model for Retailers**

Path Coefficients	Original Model: Value endogenous with SERVQUAL constructs				Model Variant: Value not mediated by SERVQUAL constructs			Satisfaction with Property Management as a Reflective Variable associated with Tot Sat	
	Property Mgmt	Reputation	Tot Sat	Value	Property Mgmt	Reputation	Tot Sat	Reputation	Tot Sat
Assurance	0.166	0.209	0.054	0.033	0.164	0.227	0.047	0.231	0.139
Empathy	0.484	0.120	0.215	-0.064	0.467	0.125	0.197	0.141	0.472
Property Mgmt		0.048	0.318			0.055	0.295		
Reliability	0.078	-0.016	-0.035	0.425	0.106	-0.052	0.017	-0.044	0.092
Responsiveness	0.097	0.059	-0.049	0.054	0.099	0.081	-0.042	0.080	0.060
Tangibles	0.125	0.040	0.259	0.090	0.111	0.045	0.221	0.050	0.198
Value		0.218	0.109			0.129	0.212	0.177	0.087

### 6.2.1.1 Importance – Performance Matrices for Retailers in Shopping Centres

In this section, the Importance-Performance Matrices for retailers in shopping centres are derived. These show which aspects of customer service matter most to retailers for the target constructs of Satisfaction with Property Management, Overall Satisfaction, Landlord Reputation and Perception of receiving Value for Money. Aspects in the bottom right-hand quadrant, for which performance is weak but the impact on occupiers is high, are the ones that property managers and landlords should focus on.

**Table 6-6: Manifest Variable Performances: standardised on scale 1 - 100**

<b>Indicator</b>	<b>MV Performances</b>
<b>Legal Processes</b>	37.651
<b>Service Charge Val</b>	40.579
<b>Rent Val</b>	40.734
<b>Building Spec</b>	42.441
<b>Documentation</b>	52.874
<b>Lifts</b>	54.569
<b>Landlord Performance</b>	56.388
<b>Signage</b>	61.596
<b>Parking</b>	61.605
<b>Leasing</b>	62.873
<b>Maintenance</b>	63.502
<b>HVAC</b>	65.547
<b>Marketing</b>	65.883
<b>Trading Performance</b>	65.931
<b>Professionalism</b>	67.382
<b>Entrances</b>	67.698
<b>Recycling</b>	67.789
<b>Tenant Mix</b>	68.436
<b>Public transport</b>	68.871
<b>Amenities</b>	68.979
<b>Understanding</b>	69.685
<b>CSR</b>	70.050
<b>Responsiveness</b>	70.676
<b>Communication</b>	74.392
<b>Centre Management</b>	76.481
<b>Overall satisfaction</b>	76.611
<b>Security</b>	76.864
<b>Lease Renewal</b>	78.959
<b>Safety</b>	80.704
<b>Cleaning</b>	80.728
<b>Location</b>	81.216
<b>Recommend 1-5</b>	83.893

From **Table 6-6** it can be seen that store managers give the lowest ratings to their perception of the quality of legal processes, the value for money of their service charge and rent and the specification of their building (which includes its image and the quality of common parts such as the Malls). On the same standardised scale, many aspects achieve high performance ratings. The extent to which all of these aspects matter to occupiers in relation to the latent constructs of 'Centre Management', 'Total Satisfaction' and 'Reputation of Landlord' is shown in the Importance Tables which follow. Two versions are given for each construct:

- I. **Table 6-7:** Excluding missing values pairwise in the regression algorithm employed by SMART PLS; and
- II. **Table 6-8:** Replacing missing values with the mean for each indicator variable.

This is partly to check whether the results are robust against missing values, but also because the program sometimes 'crashed' when carrying out bootstrapping with missing values deleted pairwise if too many of the subsamples randomly selected contained cases with too many missing fields. This did not happen when missing values were replaced with mean values, but such mean replacement reduces the variability of the data and hence the validity of the results. In addition, only by using mean replacement was it possible to generate the Importance - Performance graphs for the latent constructs. The similarity of the results does give confidence in the analysis. A summary table is given following the analysis of each sector (see **Table 6-42**). The Importance - Performance Matrices show graphically the combined effects of the performance of each indicator or construct and its contribution to the target constructs of satisfaction with property management, overall satisfaction, landlord reputation and occupiers' perception of receiving value for money.



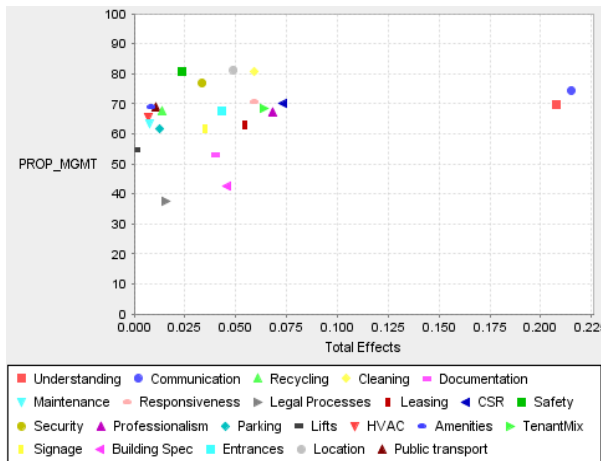
Table 6-7: Importance of Indicators for Satisfaction with Centre Management (Missing Values – cases deleted pairwise)		Table 6-8: Importance of Indicators for Satisfaction with Centre Management (Mean Replacement for Missing Values)	
Indicator	Importance for Satisfaction with Centre Management	Indicator	Importance for Satisfaction with Centre Management
Communication	0.215	Communication	0.202
Understanding	0.208	Understanding	0.197
CSR	0.073	CSR	0.104
Professionalism	0.068	Cleaning	0.083
Tenant Mix	0.064	Leasing	0.054
Cleaning	0.059	Professionalism	0.053
Responsiveness	0.059	Tenant Mix	0.051
Leasing	0.054	Responsiveness	0.051
Location	0.049	Safety	0.041
Building Spec	0.045	Location	0.041
Entrances	0.043	Security	0.038
Documentation	0.040	Documentation	0.036
Signage	0.035	Entrances	0.033
Security	0.034	Signage	0.030
Safety	0.023	Building Spec	0.029
Legal Processes	0.015	Amenities	0.019
Recycling	0.014	Recycling	0.018
Parking	0.013	Maintenance	0.013
Public transport	0.011	Legal Processes	0.012
Amenities	0.008	Public transport	0.008
Maintenance	0.007	Lifts	0.007
HVAC	0.007	HVAC	0.006
Lifts	0.001	Parking	0.005

#### Importance of Indicators and Constructs for Retailers' Satisfaction with Centre Management

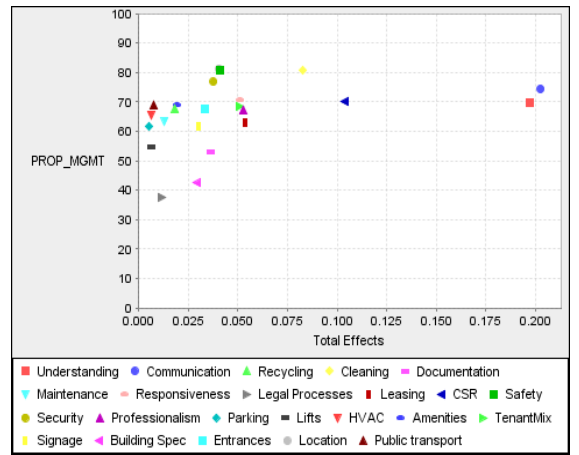
For the construct 'Centre Management', the lowest performing indicators are not of great importance to the panel of respondents, a finding which should reassure shopping centre managers. In this version of the model, the 'Value for money' construct is not considered to link with the 'Property Management' construct, so the low rating for 'Rent Value' does not appear in **Table 6-7** and **Table 6-8**. The most important indicators for the construct 'Centre Management' are Communication, Understanding of Retailers' Needs, Cleaning, Corporate Social Responsibility, Responsiveness, the Leasing Process, the Professionalism of centre managers, and the Tenant Mix at the shopping centre. These are the top eight factors for both methods of treating missing values, although there is a slight difference in the ordering of factors. The relationships are displayed graphically in the Importance – Performance Matrices **Figure 6-4** and **Figure 6-5**.

The latent constructs of most importance to retailers' satisfaction with centre management are 'Empathy' and 'Assurance' (see Figure 6-6).

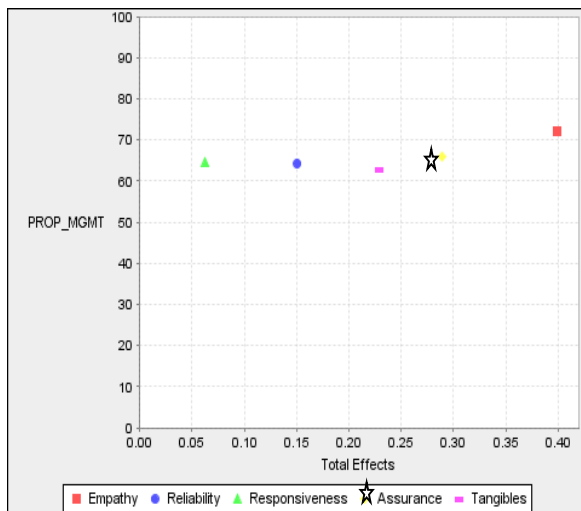
**Figure 6-4: Importance - Performance Matrix: Centre Management (Missing Values – cases deleted pairwise)**



**Figure 6-5: Importance - Performance Matrix: Centre Management (Mean Replacement)**



**Figure 6-6: Importance Performance Matrix for the effect of the Latent Constructs on Retailers' Satisfaction with Centre Management**



**Commentary: Satisfaction with Centre Management**

- Retailers' satisfaction with the management of their Shopping Centre is largely determined by the 'Empathy' exhibited by the property management team, manifested by communicating effectively with retailers and understanding their business needs.
- The 'Assurance' construct is also important, highlighting the need for property managers to reassure occupiers about their professionalism, competence and social responsibility.

### Importance of Indicators and Constructs for Retailers' Total Satisfaction

For the construct 'Total Satisfaction', **Table 6-9** and **Table 6-10** show that matters of most importance to Retailers for their total satisfaction are the 'Centre Management' construct, Communication, the Understanding of retailers' business needs, the Trading Performance of the store<sup>56</sup>, Tenant Mix at the Centre, the Marketing of the Centre, its location and the specification / quality / image of the Centre.

<b>Table 6-9: Importance of Indicators for Total Occupier Satisfaction (pairwise deletion)</b>		<b>Table 6-10: Importance of Indicators for Occupiers' Total Satisfaction (Mean Replacement)</b>	
<b>Indicator</b>	<b>Importance of Indicator for Total Satisfaction</b>	<b>Indicator</b>	<b>Importance of Indicator for Total Satisfaction</b>
Centre Management	0.142	Centre Management	0.145
Communication	0.116	Communication	0.106
Tenant Mix	0.114	Understanding Needs	0.103
Understanding Needs	0.112	Tenant Mix	0.093
Marketing	0.089	Marketing	0.091
Location	0.087	Location	0.073
Building Spec	0.081	CSR	0.061
Entrances	0.077	Entrances	0.060
Signage	0.062	Signage	0.055
Rent Val	0.038	Building Spec	0.053
CSR	0.035	Service Charge Val	0.049
Service Charge Val	0.035	Trading Performance	0.044
Professionalism	0.033	Cleaning	0.040
Leasing	0.026	Amenities	0.035
Parking	0.023	Rent Val	0.034
Trading Performance	0.022	Leasing	0.032
Cleaning	0.020	Professionalism	0.031
Public transport	0.019	Safety	0.024
Security	0.016	Security	0.022
Amenities	0.015	Documentation	0.018
Documentation	0.013	Public transport	0.014
HVAC	0.012	Lifts	0.012
Safety	0.011	HVAC	0.011
Recycling	0.005	Parking	0.009
Maintenance	0.002	Recycling	0.009
Lifts	0.001	Maintenance	0.006
Legal Processes	-0.001	Legal Processes	-0.002
Responsiveness	-0.005	Responsiveness	-0.011

<sup>56</sup> Trading Performance features highly when missing values are deleted pairwise but appears to be of lower importance when mean replacement is used. Intuitively, however, trading performance seems certain to matter in a store manager's overall satisfaction. In the analysis, it appears to link more closely to the 'Reputation' construct than to 'Total Satisfaction'

These aspects of highest priority can be considered as:

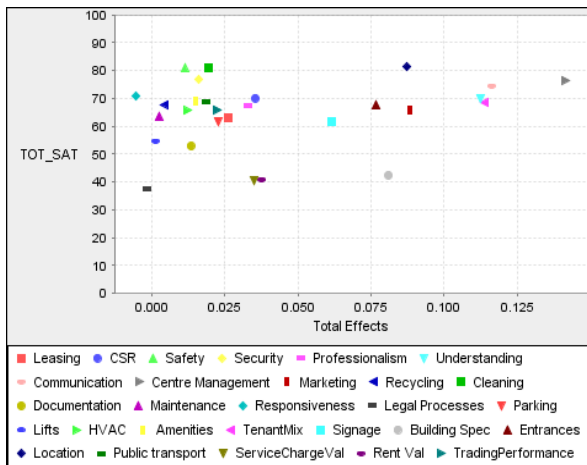
1. The relationship with centre managers
2. The retailing success of the store
3. The shopping centre itself

The fact that Responsiveness appears to be of no consequence is probably an issue of multi-collinearity with Communication and Understanding Needs, since Responsiveness does show a high cross-loading onto the constructs of 'Assurance', 'Empathy', and 'Property Management'. It may also appear low, since it is of high importance in the 'Property Management' construct, which may incorporate all of the variance, leaving no additional relationship with 'Overall Satisfaction'. The relationship appears to be wholly through the mediator 'Property Management'.

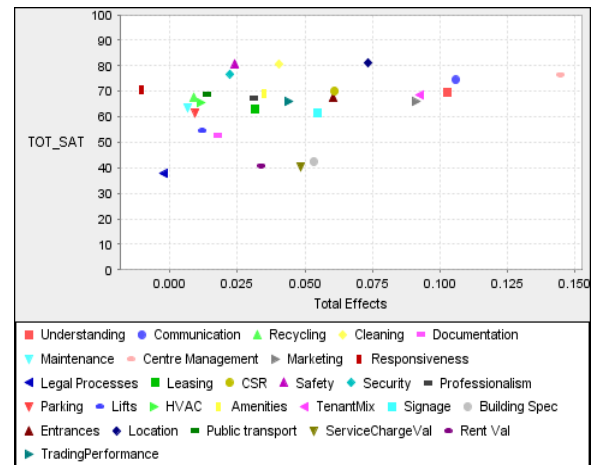
From **Figure 6-7** and **Figure 6-8**, it can be seen that the two issues where there appears to be greatest scope for gain are the building itself, and the perception of value for money for rent. In the former case, that would involve trying to get a consensus amongst occupiers about aspects that they feel are in need of improvement, and devising a realistic plan for implementing those changes which are feasible practically and economically. In the case of 'Rent Value', the issue might be respondents' unwillingness to rate more highly the value they obtain from the rent, for fear of encouraging the landlord to increase it. The landlord might be able to be more transparent about rates of return to help occupiers appreciate why a rent is set at a particular level. Also, in shopping centres, it might be possible to make more use of turnover rents, as discussed in Chapter 3.

Considering the latent constructs, **Figure 6-9** shows that the most important construct for retailers' overall satisfaction is 'Tangibles', followed by 'Property Management', 'Empathy', and 'Assurance'. This implies that even though the individual variables which comprise the 'Tangibles' construct do not feature at the top of the list of important indicators (**Table 6-10**), as an entire construct they are crucial.

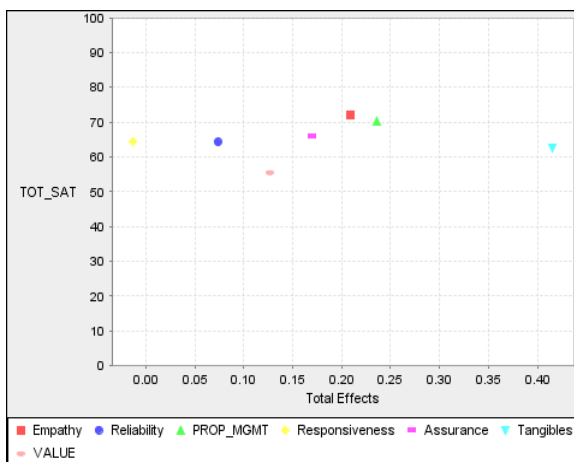
**Figure 6-7: Importance - Performance Matrix:  
Total Satisfaction (pairwise deletion)**



**Figure 6-8: Importance - Performance Matrix:  
Total Satisfaction (Mean Replacement)**



**Figure 6-9: Importance Performance Matrix for  
the effect of the Latent Constructs on Retailers'  
Total Satisfaction (Mean Replacement)**



**Commentary: Retailers' Overall**

**Satisfaction**

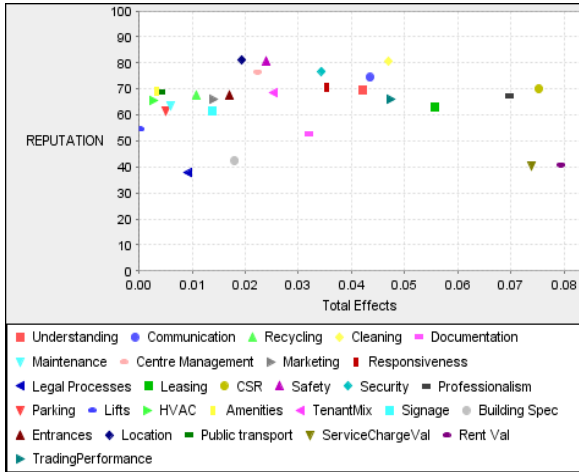
- 'Empathy', 'Satisfaction with Property Management', and 'Tangibles' are the key determinants of retailers' overall satisfaction. The 'Tangibles' of most importance comprise the appearance of the Shopping Centre, its location, signage to and within the Centre, and the tenant mix.
- Retailers are particularly affected by factors that increase customer footfall: the tenant mix, customer parking, the marketing of the Shopping Centre and its attractiveness to shoppers, including its cleanliness.

Importance of Indicators and Constructs for Landlord Reputation amongst Retailers

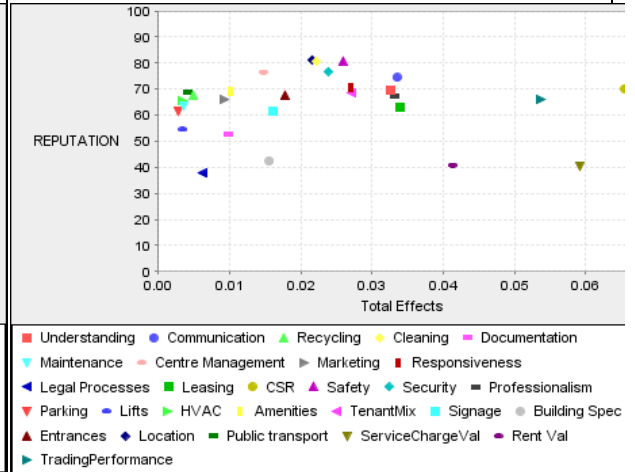
For the construct ‘Reputation’, the most important indicators are Value for money for Rent and for Service Charge, Corporate Social Responsibility, the Trading Performance of the store, the Professionalism of the Centre managers, the initial Leasing Process, Communication with Centre managers and their Understanding of Retailers’ Needs (**Table 6-11** and **Table 6-12**). From a ‘Reputation’ perspective, the least important indicators are Amenities, Legal Processes, Parking, Heating, Ventilation and Air-Conditioning, Public transport, Lifts and Escalators, Documentation, Maintenance, Recycling, and Cleaning. From **Figure 6-10** and **Figure 6-11**, no indicators are clearly in the key bottom right-hand quadrant, but those closest to it include Rent Value, the Building itself, the Leasing Process, the Professionalism of the Centre Managers and the Trading Performance of the store. The first and last of these demonstrate how assessment of ‘Reputation’ is influenced by the financial situation of the assessor.

<b>Table 6-11: Importance of Indicators for Reputation of Landlord or Property Manager (Pairwise Deletion for Missing Values)</b>		<b>Table 6-12: Importance of Indicators for Reputation (mean replacement)</b>	
<b>Indicator</b>	<b>Importance for Reputation</b>	<b>Indicator</b>	<b>Importance for Reputation</b>
Rent Val	0.079	CSR	0.065
CSR	0.075	Service Charge Val	0.059
Service Charge Val	0.074	Trading Performance	0.054
Professionalism	0.070	Rent Val	0.041
Leasing	0.056	Leasing	0.034
Trading Performance	0.047	Communication	0.034
Cleaning	0.047	Professionalism	0.033
Communication	0.043	Understanding	0.033
Understanding	0.042	Tenant Mix	0.027
Responsiveness	0.035	Responsiveness	0.027
Security	0.034	Safety	0.026
Documentation	0.032	Security	0.024
Tenant Mix	0.025	Cleaning	0.022
Safety	0.024	Location	0.022
Centre Management	0.022	Entrances	0.018
Location	0.019	Signage	0.016
Building Spec	0.018	Building Spec	0.016
Entrances	0.017	Centre Management	0.015
Marketing	0.014	Amenities	0.010
Signage	0.014	Documentation	0.010
Recycling	0.011	Marketing	0.009
Legal Processes	0.009	Legal Processes	0.006
Maintenance	0.006	Recycling	0.005
Parking	0.005	Public transport	0.004
Public transport	0.004	Maintenance	0.004
Amenities	0.003	Lifts	0.003
HVAC	0.003	HVAC	0.003
Lifts	0.000	Parking	0.003

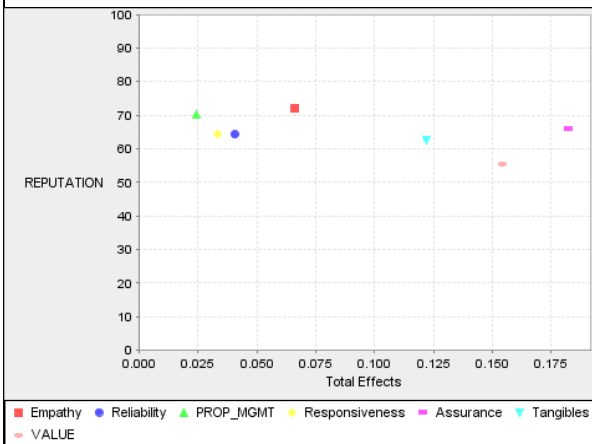
**Figure 6-10: Importance - Performance Matrix: Reputation (pairwise deletion)**



**Figure 6-11: Importance - Performance Matrix: Landlord Reputation (Mean Replacement)**



**Figure 6-12: Importance Performance Matrix for the effect of the Latent Constructs on Retailers' Perception of Landlord Reputation (mean replacement)**



**Commentary: Landlord Reputation amongst Retailers**

- 'Assurance' and 'Value for Money' are the most important determinants of Landlord Reputation amongst retailers in Shopping Centres, with 'Empathy' being of some importance.
- Within these constructs, the main indicators are retailers' perception of the Corporate Social Responsibility of their landlord, including commitment to sustainability, and the professionalism of the property manager; the trading performance of the store and perception of receiving value for money; the initial leasing process; communication with their property manager and the extent to which the manager understands their business needs.

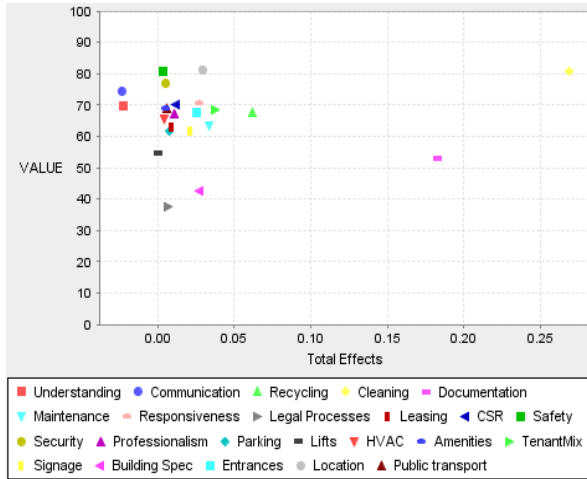
Importance of Indicators and Constructs for Perception of Value amongst Retailers

The two ways of treating missing values – pairwise deletion and mean replacement – give somewhat different results in this case, although cleaning and documentation are the most influential factors with both methods, and recycling and maintenance are also common factors (Table 6-13 and Table 6-14). The Importance – Performance Matrices for the ‘Value’ Construct (Figure 6-13 and Figure 6-14) show that Legal Processes and the functionality and appearance of their store or shopping centre are the indicators which seem to have most scope for improving retailers’ satisfaction with value for money value for money. The constructs of most importance are ‘Reliability’ and ‘Tangibles’ (see Figure 6-15). Note that for the analysis, the formative indicators which are considered explicitly to “cause” the ‘Value’ construct (value for money for rent and for service charge, and trading performance) are not included in the algorithm. Rather this analysis is looking at the effect of the manifest variables for the latent constructs upon which ‘Value’ is deemed to depend.

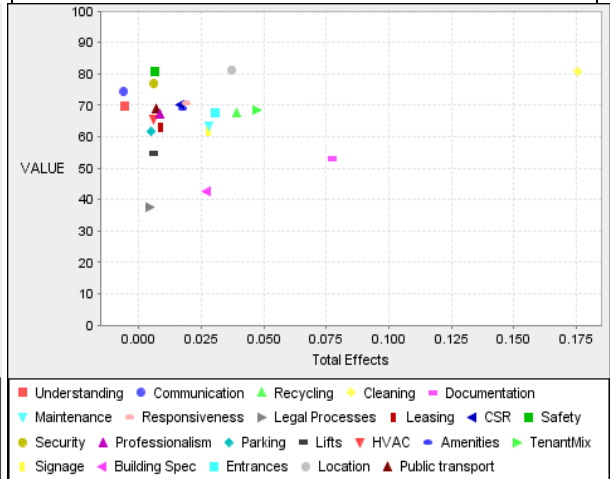
<b>Table 6-13: Importance of Indicator Variables for Retailer's Perception of Value for Money (Pairwise Deletion of Missing Values)</b>		<b>Table 6-14: Importance of Indicator Variables for Retailer's Perception of Value for Money (Mean Replacement for Missing Values)</b>	
<b>Indicator</b>	<b>Importance for Value</b>	<b>Indicator</b>	<b>Importance for Value</b>
Cleaning	0.269	Cleaning	0.176
Documentation	0.183	Documentation	0.077
Recycling	0.062	Tenant Mix	0.047
Tenant Mix	0.038	Recycling	0.039
Maintenance	0.034	Location	0.037
Location	0.029	Entrances	0.031
Responsiveness	0.027	Maintenance	0.028
Building Spec	0.027	Signage	0.028
Entrances	0.026	Building Spec	0.027
Signage	0.021	Responsiveness	0.019
CSR	0.012	Amenities	0.018
Professionalism	0.011	CSR	0.017
Leasing	0.009	Leasing	0.009
Parking	0.008	Professionalism	0.008
Legal Processes	0.007	Public transport	0.007
Public transport	0.006	Safety	0.007
Security	0.005	Security	0.006
Amenities	0.005	Lifts	0.006
HVAC	0.004	HVAC	0.006
Safety	0.004	Parking	0.005
Lifts	0.000	Legal Processes	0.004
Understanding	-0.023	Understanding	-0.006
Communication	-0.024	Communication	-0.006



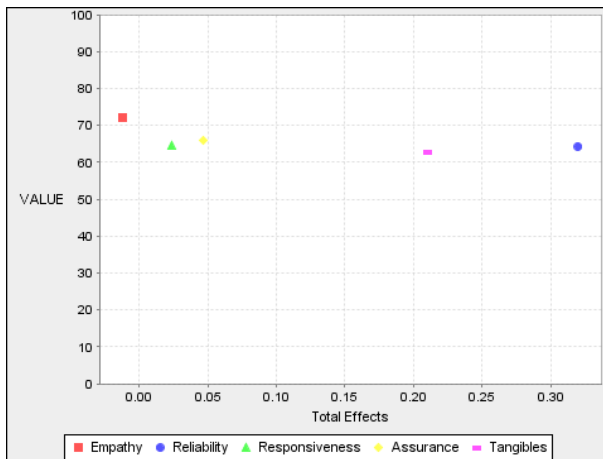
**Figure 6-13: Importance - Performance Matrix for Retailers' Satisfaction with Value for Money (Manifest Variables – Pairwise deletion for Missing Values)**



**Figure 6-14: Importance - Performance Matrix for Retailers' Satisfaction with Value for Money (Manifest Variables – Mean Replacement for Missing Values)**



**Figure 6-15: Importance - Performance Matrix for Retailers' Satisfaction with Value for Money (Latent Constructs)**



**Commentary: Retailers' Satisfaction with Receiving Value for Money**

- 'Reliability' is the most important determinant of retailers' satisfaction with Value for Money; in particular the reliability and quality of cleaning, and the clarity and accuracy of documentation such as service charge budgets, reconciliations and invoices.
- The aspects which offer most scope for improving perception of value for money, according to the Importance – Performance Analysis, are improvements to legal processes, such as making it easier to apply for a license to make alterations or to hang a promotional banner, for example, and improvements to the Shopping Centre itself.

## 6.2.2 Analysis of Data from Store Managers of Retail Warehouses on Retail Parks

The preceding analysis used data from the 1689 interviews with store managers in shopping centres. A similar analysis was performed using the much smaller sample of data from the 166 interviews with store managers on retail parks. The number of cases is slightly fewer than 10 times the number of formative indicators, the ratio suggested as the minimum required for reliable results (Hair et al, 2014, p. 20). Also, many cases have missing values, because different landlords wanted different questions asked of their occupiers, as explained in Chapter 5. These limitations mean that the results of this analysis are unlikely to be statistically reliable. Only the most clear-cut of relationships are likely to translate to the wider population.

Table 6-15 shows the path weights for the model for Retail Parks.

**Table 6-15: Path Weights showing relative importance of Formative Indicators**

	Assurance	Empathy	PROP_MGMT	Reliability	Responsiveness	Tangibles	VALUE
Amenities & Services						0.048	
Approvals & Legal Processes					0.086		
Building Specification						0.189	
CSR	0.586						
Centre Management			0.988				
Cleaning				0.875			
Communication		0.669					
Documentation				-0.064			
Entrances / Reception						0.304	
Estate Satisfaction						0.021	
Location						0.667	
Maintenance				0.569			
Marketing			0.163				
Parking						0.351	
Professionalism	0.604						
Public transport						0.075	
RentVal							0.286
Responsiveness					0.995		
Security	0.905						
ServChargeVal							0.504
Signage						0.732	
Tenant mix						0.725	
Trading performance							0.895
Understanding Needs		0.976					
Waste_Recycling				0.722			

Apart from the fact that interviewees on retail parks were not asked about some of the aspects of occupancy that applied to retailers in shopping centres, such as ‘lifts’ and ‘health and safety’, the main differences between this and the equivalent table (**Table 6-1**) for retailers in shopping centres are:

1. For the ‘Reliability’ construct, cleaning, maintenance and recycling are much more important to managers of retail warehouses than to store managers in shopping centres, whilst billing and documentation appears much less important, perhaps because it is not dealt with by the retail warehouse managers themselves but instead by their head office staff.
2. Similarly, legal processes do not appear to have much impact on the ‘Responsiveness’ construct, possibly for the same reason.
3. For the ‘Tangibles’ construct, location, parking and signage appear to be more important on retail parks than in shopping centres.

**Table 6-16** shows the paths in the structural model for retailers on retail parks. A comparison with the equivalent Table for retailers in shopping centres (**Table 6-2**), shows similar relationships, with the largest path coefficient being that between the ‘Empathy’ and ‘Property Management’ constructs. The ‘Value’ construct appears less influential for the ‘Reputation’ construct and more influential in the ‘Total Satisfaction’ construct than for retailers in shopping centres. The main difference is that ‘Tangibles’ appear more important in the ‘Value’ construct, and ‘Reliability’ appears less important, than for retailers in shopping centres. However, as can be seen from the coefficients of determination for the target constructs in the structural model, which are shown below,  $R^2$  for the regression in which ‘Value’ is the dependent variable is very low, so these differences may be an artifact of the small sample size and missing data.

**Table 6-16: Paths in the Structural Model**

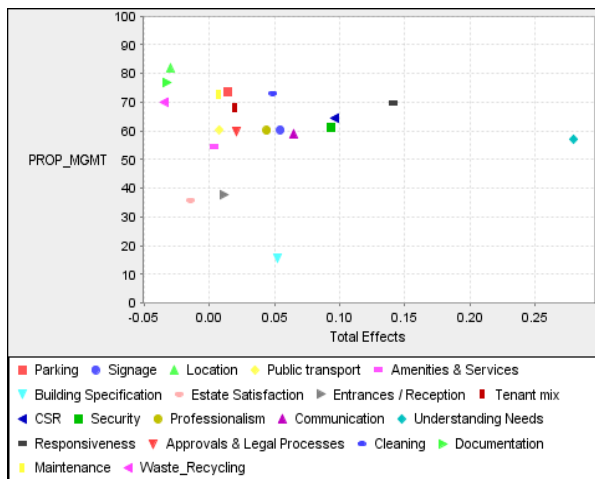
Total Effects	PROP_MGMT	REPUTATION	TOT_SAT	VALUE
<b>Assurance</b>	0.172	0.175	0.244	0.146
<b>Empathy</b>	0.447	0.279	0.008	-0.012
<b>PROP_MGMT</b>		0.282	0.240	
<b>Reliability</b>	0.149	0.232	0.172	-0.140
<b>Responsiveness</b>	0.128	0.093	0.137	0.053
<b>Tangibles</b>	0.082	0.148	0.367	0.256
<b>VALUE</b>		0.068	0.207	

	R Square
<b>PROP_MGMT</b>	0.628
<b>REPUTATION</b>	0.538
<b>TOT_SAT</b>	0.532
<b>VALUE</b>	0.097

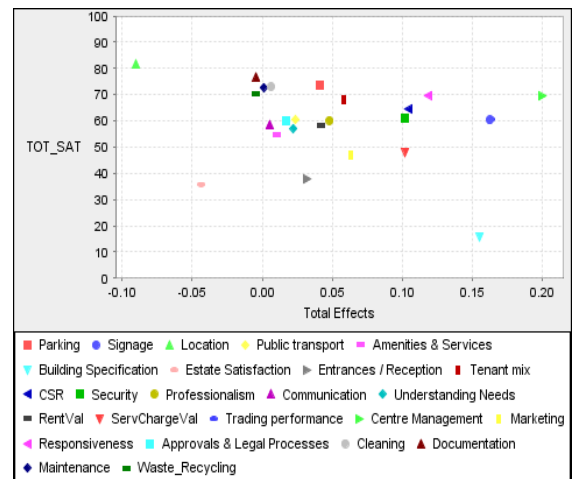
The following graphs give the Importance – Performance Matrices for the four target constructs.

**Figure 6-16 - Figure 6-19** show the Importance and Performance of the manifest variables, and are derived with missing values treated by pairwise deletion, whilst **Figure 6-20 - Figure 6-23** use mean replacement to show the importance and performance of the latent constructs.

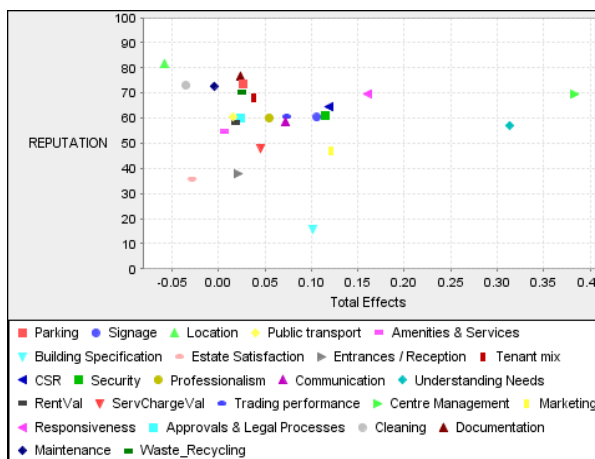
**Figure 6-16: Importance - Performance Matrix for Retailers' Satisfaction with Park Management**



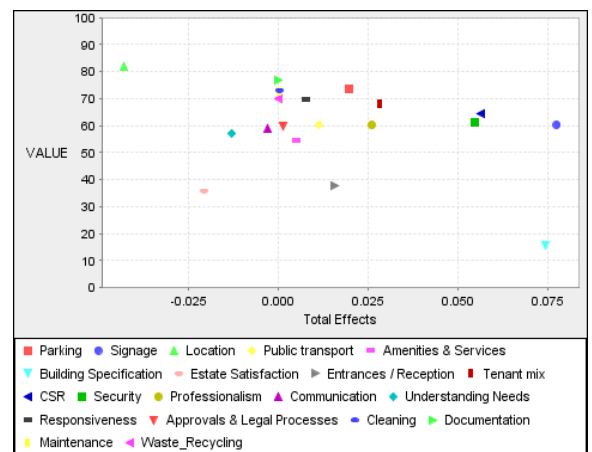
**Figure 6-17: Importance - Performance Matrix for Retail Warehouse Managers' Overall Satisfaction**



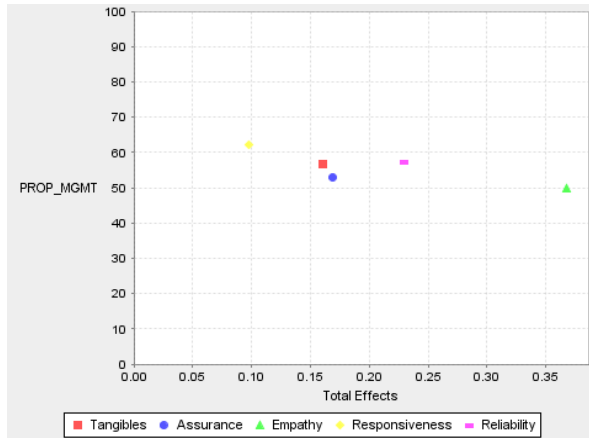
**Figure 6-18: Importance - Performance Matrix for Landlord Reputation amongst Retailers on Retail Parks**



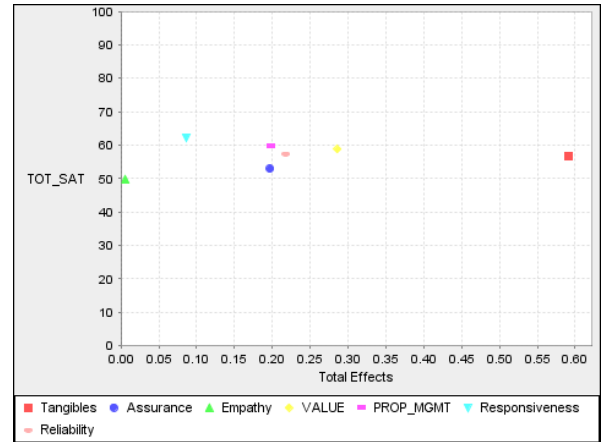
**Figure 6-19: Importance - Performance Matrix for Retailers' Satisfaction with Value for Money**



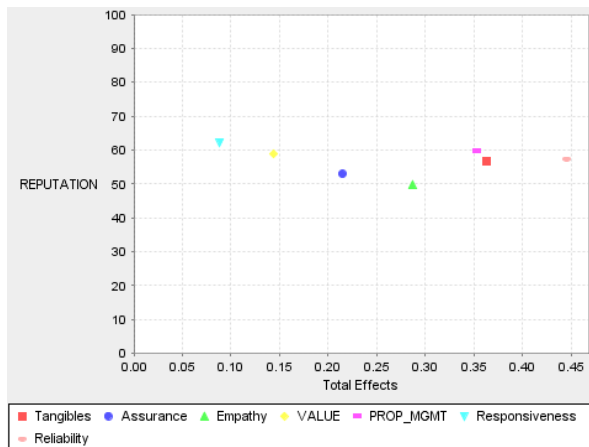
**Figure 6-20: Importance - Performance Matrix for Retailers' Satisfaction with Park Management (Latent Constructs)**



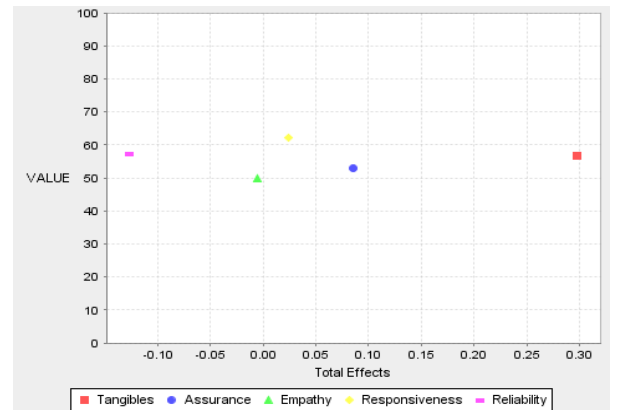
**Figure 6-21: Importance - Performance Matrix for Retailers' Overall Satisfaction (Latent Constructs)**



**Figure 6-22: Importance - Performance Matrix for Landlord Reputation amongst Retailers on Retail Parks (Latent Constructs)**



**Figure 6-23: Importance - Performance Matrix for Retailers' Satisfaction with Value for Money (Latent Constructs)**



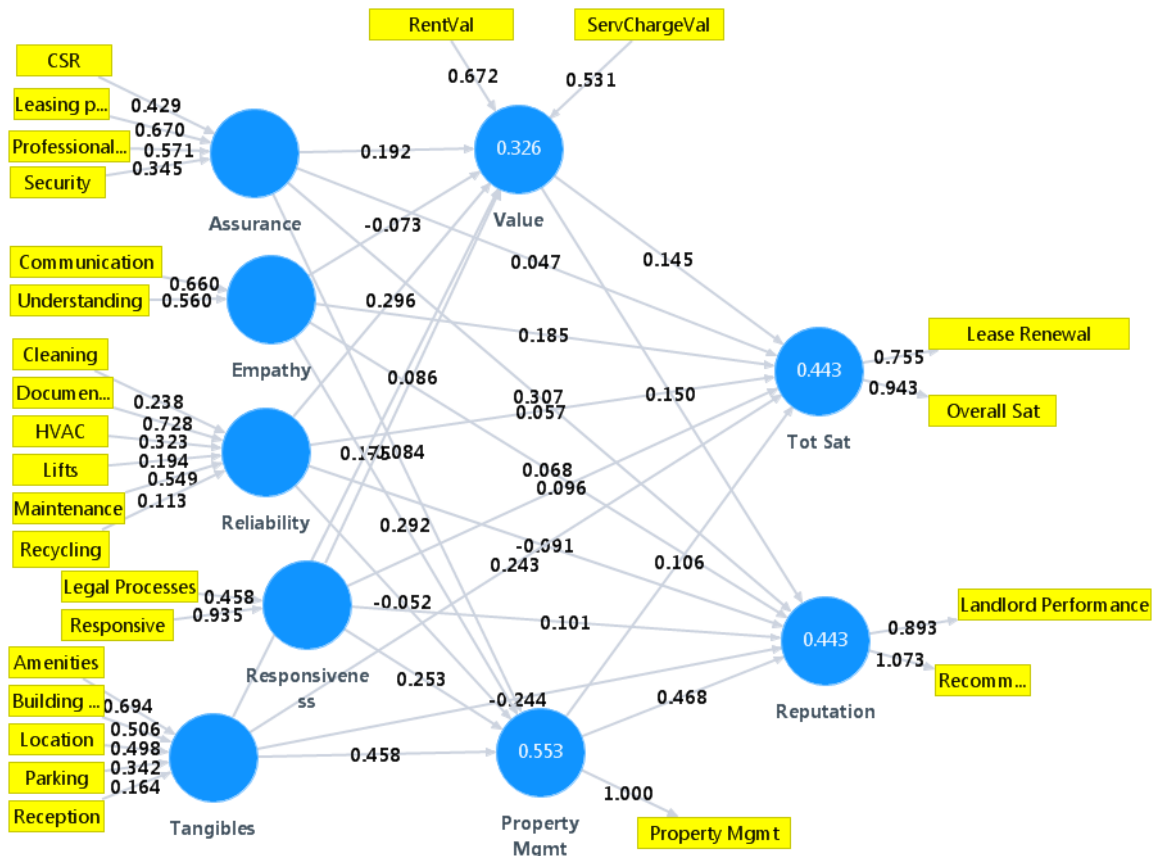
**Commentary: The Perceptions of Managers of Retail Warehouses**

- Retailers' satisfaction with the management of their Retail Park is largely determined by the 'Empathy' exhibited by the property management team, in particular a belief that their business needs are understood, and by the 'Reliability' of the service they receive. 'Responsiveness' as a construct does not appear to be important for any of the target constructs when using mean replacement, and this may be a manifestation of the unreliability of the results because of the small sample size.
- 'Tangibles' are important for Overall Satisfaction and for perception of receiving Value for Money, particularly the specification of their individual retail warehouse.

### 6.3 Analysis of Office Occupier Satisfaction using SMART PLS

The model showing proposed relationships between manifest and latent variables for the satisfaction of office occupiers is shown in **Figure 6-24** below. The respondents to the study were office managers or other representatives of the companies renting the multi-tenanted offices. The indicators are similar to those for retailer satisfaction in the previous section, but questions about aspects such as Trading Performance and Tenant Mix were not included in the satisfaction studies. Also, Heating, Ventilation and Air-Conditioning is considered a formative indicator for the Reliability construct for Offices, because office occupiers frequently comment on aspects of the internal climate, and the reliable functioning of heating and air-conditioning matters greatly.

**Figure 6-24: Path Diagram for Office Occupiers**



**Assessment of Outer Model**

Table 6-17 contains the Outer Weights of the indicator variables, giving the relative importance of the Formative Indicators in explaining the latent constructs with which they are associated.

**Table 6-17: Path Weights and statistical significance for the Model for Office Occupiers**

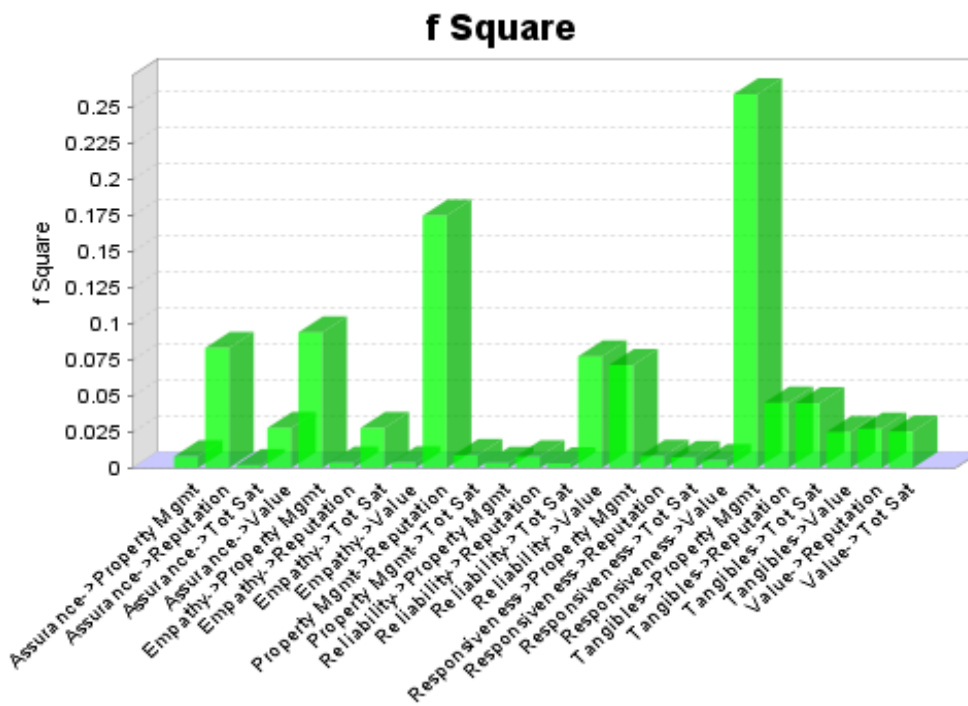
	Outer Weights Original Sample	Sample Mean	Standard Error	T Stat	P Values	Confidence Interval Lower	Confidence Interval Upper
<b>Amenities -&gt; Tangibles</b>	<b>0.694</b>	<b>0.688</b>	<b>0.121</b>	<b>5.740</b>	<b>0.000</b>	<b>0.484</b>	<b>0.897</b>
<b>Building Spec -&gt; Tangibles</b>	<b>0.506</b>	<b>0.496</b>	<b>0.113</b>	<b>4.463</b>	<b>0.000</b>	<b>0.266</b>	<b>0.695</b>
<b>CSR -&gt; Assurance</b>	<b>0.429</b>	<b>0.420</b>	<b>0.141</b>	<b>3.055</b>	<b>0.003</b>	<b>0.140</b>	<b>0.665</b>
Cleaning -> Reliability	0.238	0.247	0.360	0.661	0.510	-0.616	0.825
<b>Communication -&gt; Empathy</b>	<b>0.660</b>	<b>0.660</b>	<b>0.053</b>	<b>12.393</b>	<b>0.000</b>	<b>0.544</b>	<b>0.757</b>
<b>Documentation -&gt; Reliability</b>	<b>0.728</b>	<b>0.640</b>	<b>0.219</b>	<b>3.331</b>	<b>0.001</b>	<b>0.431</b>	<b>0.962</b>
HVAC -> Reliability	0.323	0.301	0.300	1.076	0.285	-0.380	0.844
<b>Landlord Performance &lt;- Reputation</b>	<b>0.766</b>	<b>0.740</b>	<b>0.154</b>	<b>4.974</b>	<b>0.000</b>	<b>0.528</b>	<b>0.934</b>
<b>Lease Renewal &lt;- Tot Sat</b>	<b>0.590</b>	<b>0.600</b>	<b>0.157</b>	<b>3.767</b>	<b>0.000</b>	<b>0.299</b>	<b>0.852</b>
<b>Leasing process -&gt; Assurance</b>	<b>0.670</b>	<b>0.670</b>	<b>0.143</b>	<b>4.701</b>	<b>0.000</b>	<b>0.423</b>	<b>0.993</b>
<b>Legal Processes -&gt; Responsiveness</b>	<b>0.458</b>	<b>0.461</b>	<b>0.089</b>	<b>5.160</b>	<b>0.000</b>	<b>0.288</b>	<b>0.627</b>
Lifts -> Reliability	0.194	0.161	0.159	1.217	0.227	-0.104	0.478
<b>Location -&gt; Tangibles</b>	<b>0.498</b>	<b>0.482</b>	<b>0.115</b>	<b>4.319</b>	<b>0.000</b>	<b>0.254</b>	<b>0.718</b>
<b>Maintenance -&gt; Reliability</b>	<b>0.549</b>	<b>0.477</b>	<b>0.169</b>	<b>3.256</b>	<b>0.002</b>	<b>0.346</b>	<b>0.703</b>
<b>Overall Sat &lt;- Tot Sat</b>	<b>0.908</b>	<b>0.902</b>	<b>0.048</b>	<b>18.999</b>	<b>0.000</b>	<b>0.787</b>	<b>0.957</b>
<b>Parking -&gt; Tangibles</b>	<b>0.342</b>	<b>0.358</b>	<b>0.127</b>	<b>2.699</b>	<b>0.008</b>	<b>-0.011</b>	<b>0.531</b>
<b>Professionalism -&gt; Assurance</b>	<b>0.571</b>	<b>0.571</b>	<b>0.102</b>	<b>5.622</b>	<b>0.000</b>	<b>0.361</b>	<b>0.786</b>
Reception -> Tangibles	0.164	0.141	0.177	0.928	0.356	-0.136	0.504
<b>Recommend 1-5 &lt;- Reputation</b>	<b>0.944</b>	<b>0.950</b>	<b>0.114</b>	<b>8.295</b>	<b>0.000</b>	<b>0.707</b>	<b>1.146</b>
Recycling -> Reliability	0.113	0.096	0.522	0.215	0.830	-1.056	1.149
<b>RentVal -&gt; Value</b>	<b>0.672</b>	<b>0.695</b>	<b>0.153</b>	<b>4.397</b>	<b>0.000</b>	<b>0.177</b>	<b>0.947</b>
<b>Responsive -&gt; Responsiveness</b>	<b>0.935</b>	<b>0.930</b>	<b>0.028</b>	<b>33.901</b>	<b>0.000</b>	<b>0.884</b>	<b>0.975</b>
<b>Security -&gt; Assurance</b>	<b>0.345</b>	<b>0.335</b>	<b>0.082</b>	<b>4.230</b>	<b>0.000</b>	<b>0.213</b>	<b>0.542</b>
<b>ServChargeVal -&gt; Value</b>	<b>0.531</b>	<b>0.497</b>	<b>0.156</b>	<b>3.410</b>	<b>0.001</b>	<b>0.220</b>	<b>0.764</b>
<b>Understanding -&gt; Empathy</b>	<b>0.560</b>	<b>0.559</b>	<b>0.063</b>	<b>8.877</b>	<b>0.000</b>	<b>0.442</b>	<b>0.675</b>

### Assessment of the Structural Model

As can be seen from the values in **Figure 6-24**, the coefficients of determination for the ‘Property Management’, ‘Total Satisfaction’ and ‘Reputation’ constructs in the structural model are all ‘Moderate’, while that for ‘Value’ is ‘Weak’.

Removing the link between the SERVQUAL constructs and ‘Value’ has no effect on the significant relationships, although the absolute magnitude of the path weights changes a little (See **Table 6-18**). The size of these effects is shown in **Figure 6-25**, from which it can be seen that the only ‘moderate’ to ‘large’ effects are between ‘Tangibles’ and ‘Property Management’, and between ‘Property Management’ and ‘Reputation’. Several other paths do exhibit a ‘weak’ to ‘moderate’ effect, using Cohen’s (1988) criteria<sup>57</sup>. The relationship between ‘Tangibles’ and ‘Reputation’, via ‘Property Management’ is actually quite surprising, as logistic regressions using occupiers’ willingness to recommend their landlord as dependent variable (See Chapter 7) find ‘Empathy’ and ‘Assurance’ to be better predictors of occupiers’ willingness to recommend than ‘Tangibles’. However ‘Willingness to Recommend’ does not fully encompass ‘Reputation’ in this PLS model, which may account for the disparity.

**Figure 6-25: Effect Size for Relationships in the Structural Model**



<sup>57</sup> To remind the reader, Cohen’s criteria for  $f^2$ , discussed earlier, are that values of 0.02, 0.15 and 0.35 represent small, medium and large effects respectively



F <sup>2</sup>	Property Mgmt	Reputation	Tot Sat	Value
Assurance	0.010	0.090	0.003	0.027
Empathy	0.103	0.002	0.029	0.005
Property Mgmt		0.174	0.007	
Reliability	0.010	0.005	0.003	0.075
Responsiveness	0.069	0.006	0.007	0.005
Tangibles	0.258	0.045	0.043	0.031
Value		0.034	0.023	

### **Robustness checks using Variants of the Model**

From **Table 6-18**, it can be seen that the ‘Assurance’ construct is much more strongly related to ‘Reputation’ than to ‘Total Satisfaction’ whichever model is used.

‘Empathy’ is strongly associated with ‘Property Management’ and additionally with the other two constructs. When ‘Property Management’ is omitted as a construct, and measured instead reflectively as one of the measures of ‘Total Satisfaction’ the strength of the relationship between ‘Empathy’ and ‘Total Satisfaction’ increases.

Where ‘Property Management’ is included as a separate construct, it can be seen to have a particularly strong relationship with ‘Reputation’.

Interestingly, the ‘Reliability’ construct appears to have little or no impact on ‘Total Satisfaction’ or ‘Reputation’, but does have a notable impact on occupiers’ perception of ‘Value for Money’. The implication is that without reliable facility and service provision, office occupiers perceive they are getting poor value for money.

The ‘Responsiveness’ construct loads strongly onto the constructs of ‘Property Management’ and ‘Reputation’. The overlap between ‘Total Satisfaction’ and ‘Property Management’ is apparent from the fact that the relationship between ‘Responsiveness’ and ‘Total Satisfaction’ increases when ‘Property Management’ is omitted as a construct from the model.

As noted earlier, the strong relationship between ‘Tangibles’ and ‘Property Management’ for Office occupiers is surprising, particularly since the formative indicators with the greatest weights include Building Specification / Image and Location, both of which are not really within the remit of the property manager. The Amenities indicator also has a high path weight, and the amenities, facilities and services provided at an office building may be more under the control of the property manager. When the ‘Property Management’ construct is removed from the model, the relationship between ‘Tangibles’ and ‘Total Satisfaction’ becomes more apparent.

Finally, the 'Value' construct does affect both 'Reputation' and 'Total Satisfaction' but only the latter path is statistically significant (as shown in Appendix E).

**Table 6-18: Effect on Structural Model Coefficients of modifying the Model for Office Occupiers**

Constructs	Original Model: Value endogenous with SERVQUAL constructs				Model Variant: Value not mediated by SERVQUAL constructs			Satisfaction with Property Management as a Reflective Variable associated with Tot Sat	
	Property Mgmt	Reputation	Tot Sat	Value	Property Mgmt	Reputation	Tot Sat	Reputation	Tot Sat
Assurance	-0.084	0.296	0.066	0.192	-0.054	0.309	0.044	0.336	0.017
Empathy	0.292	0.194	0.206	-0.073	0.283	0.060	0.175	0.122	0.272
Property Mgmt		0.468	0.106			0.456	0.107		
Reliability	-0.052	-0.071	0.095	0.296	-0.072	-0.074	0.076	-0.126	0.065
Responsive-ness	0.253	0.233	0.135	0.086	0.248	0.103	0.098	0.217	0.191
Tangibles	0.458	-0.003	0.317	0.175	0.465	-0.236	0.238	0.042	0.281
Value		0.150	0.145					0.126	0.061

### 6.3.1 Importance – Performance Analysis for Office Occupiers

**Table 6-19** shows the standardised performance for the indicators and constructs in the various forms of the model for Office Occupiers. Low performance is perceived for Heating, Ventilation and Air-Conditioning and for Legal Processes such as response to requests for licenses to make alterations and rent-reviews. Communication, Understanding Business Needs, the Building and its Location all achieve relatively high performance ratings.

**Table 6-19: Indicators and Constructs sorted from lowest to highest performance for Office Occupiers**

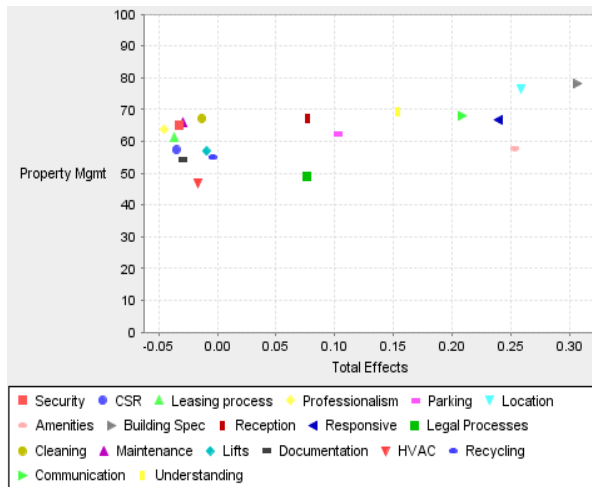
Indicator	MV Performances (using pair-wise deletion for IPMA)
HVAC	47.020
Legal Processes	48.993
Rent Val	51.040
Documentation	54.376
Recycling	55.117
Service Charge Val	55.808
Lifts	56.892
CSR	57.331
Amenities	57.842
Lease Renewal	59.145
Leasing process	61.232
Parking	62.125
Professionalism	63.662
Security	65.270
Maintenance	65.952
Property Management	66.120
Responsive	66.660
Landlord Performance	66.832
Reception	67.166
Cleaning	67.229
Communication	68.011
Understanding	69.438
Overall Sat	71.733
Location	76.437
Building Spec	78.008
Recommend 1-5	78.147

IPMA for Office Occupiers' Satisfaction with Property Management

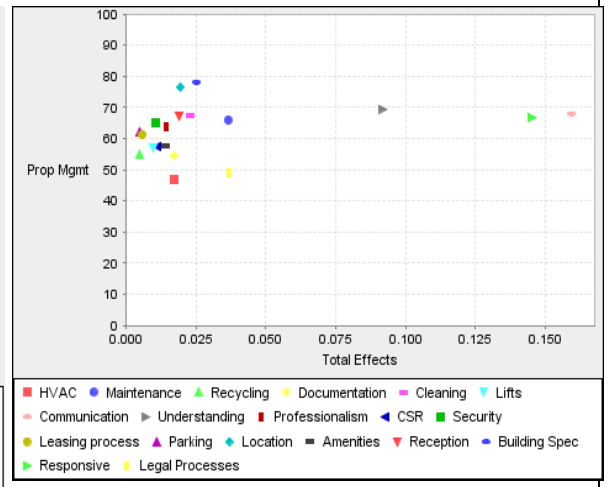
From **Table 6-20** it can be seen that the variables of most importance for office occupiers' satisfaction with property management are the office building itself, its location and amenities, and aspects which relate to the relationship with the landlord or property manager, responsiveness, communication and understanding of retailers' business needs. The order of importance of indicators is a little different when 'mean replacement' is used for missing data (**Table 6-21**), the three 'relationship' aspects being of most importance in this method of analysis, and the effect size of satisfaction with the building itself being much smaller. The two variables closest to the bottom-right hand quadrant of the Importance-Performance Matrices (**Figure 6-26** and **Figure 6-27**) are Legal Processes and Amenities. Thus investment in streamlining processes, making them more focussed on the needs of occupiers should pay dividends in increasing satisfaction. Similarly, property managers should discuss with office occupiers which amenities they most value, and assess whether additional amenities could be provided.

<b>Table 6-20: Total Effects of indicators on Satisfaction with Property Management, sorted from most to least important for Office Occupier (Pairwise Deletion)</b>		<b>Table 6-21: Total Effects of indicators on Satisfaction with Property Management, sorted from most to least important for Office Occupiers (Mean Replacement)</b>	
<b>Indicator</b>	<b>Importance for Property Mgmt</b>	<b>Indicator</b>	<b>Importance for Property Mgmt</b>
Building Spec	0.306	Communication	0.160
Location	0.258	Responsive	0.145
Amenities	0.253	Understanding	0.092
Responsive	0.239	Legal Processes	0.037
Communication	0.208	Maintenance	0.036
Understanding	0.153	Building Spec	0.025
Parking	0.103	Cleaning	0.023
Reception	0.077	Location	0.019
Legal Processes	0.076	Reception	0.019
Recycling	-0.004	Documentation	0.017
Lifts	-0.010	HVAC	0.017
Cleaning	-0.013	Professionalism	0.014
HVAC	-0.017	Amenities	0.014
Maintenance	-0.029	CSR	0.011
Documentation	-0.030	Security	0.011
Security	-0.032	Lifts	0.010
CSR	-0.035	Leasing process	0.006
Leasing process	-0.036	Parking	0.005
Professionalism	-0.045	Recycling	0.005

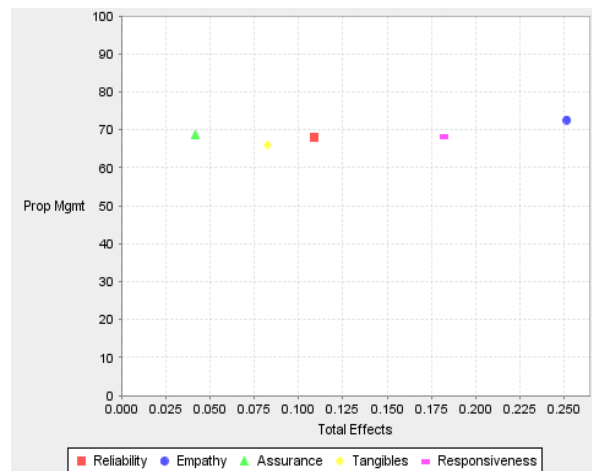
**Figure 6-26: Importance - Performance Matrix for Office Occupiers' Satisfaction with Property Management (Pairwise Deletion)**



**Figure 6-27: Importance - Performance Matrix for Office Occupiers' Satisfaction with Property Management (Mean Replacement)**



**Figure 6-28: Importance Performance Matrix for the effect of the Latent Constructs on Office Occupiers' Satisfaction with Property Management (IPMA with Mean Replacement)**



**Commentary: Office Occupiers' Satisfaction with Property Management**

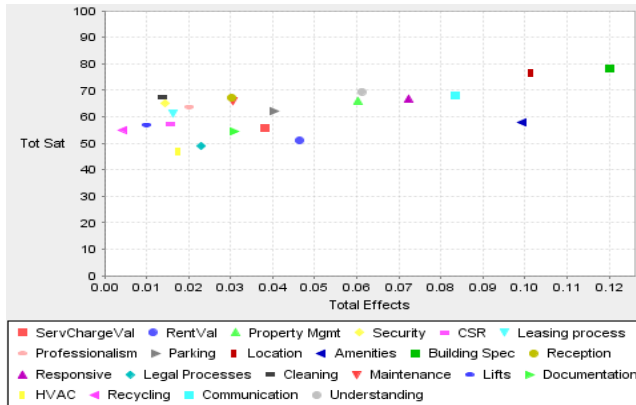
- Using pairwise deletion, office occupiers' satisfaction with property management depends mainly on 'Tangible' aspects of their tenancy: the office building, its location and the amenities provided.
- Both methods of treatment of missing data show that satisfaction is also determined by the property managers' responsiveness to requests, and by their communication and understanding of occupiers' business needs.
- The Importance – Performance Analysis indicates that for this sample of 1334 respondents, the greatest returns, in terms of occupier satisfaction with office management, would accrue from focus on improving legal processes and office amenities.

## IPMA Total Satisfaction of Office Occupiers

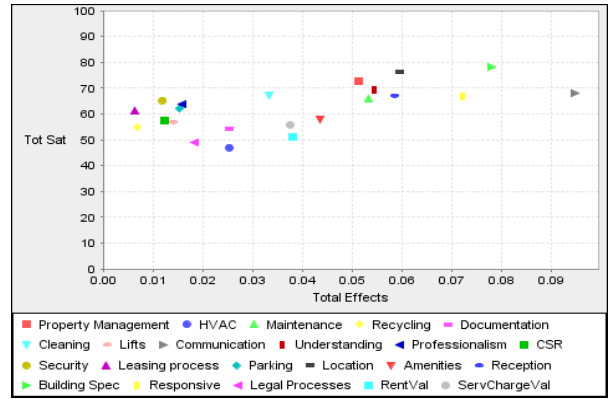
The Importance of Indicators for Total Satisfaction amongst Office Occupiers is given in **Table 6-22** and **Table 6-23**. These are very similar to the aspects which most affect satisfaction with ‘Property Management’, as discussed in the previous section. For office occupiers’ ‘Total Satisfaction’, the most important indicators are the office building itself, its location and amenities. The next four aspects relate to the relationship with the landlord or property manager, Communication, Responsiveness, Understanding of Business Needs, and Property Management overall. None of these indicators is overtly in need of attention amongst the respondents to the studies used in this research, but Amenities and Value for money for Rent are the closest to the bottom-right quadrant (**Figure 6-29**). These findings apply, too, when the analysis is conducted using ‘Mean Replacement’ (**Figure 6-30**). In terms of the constructs with greatest impact on office occupiers’ overall satisfaction, the most important is ‘Tangibles’, followed by ‘Reliability’ and ‘Empathy’ (**Figure 6-31**).

<b>Table 6-22: Total Effects of indicators on Total Satisfaction from most to least important for Office Occupiers (Pairwise Deletion)</b>		<b>Table 6-23: Total Effects of indicators on Total Satisfaction from most to least important for Office Occupiers (Mean Replacement)</b>	
<b>Indicator</b>	<b>Importance for Total Satisfaction</b>	<b>Indicator</b>	<b>Importance for Total Satisfaction</b>
Building Spec	0.120	Communication	0.095
Location	0.101	Building Spec	0.078
Amenities	0.099	Responsiveness	0.072
Communication	0.083	Location	0.059
Responsiveness	0.072	Reception	0.058
Understanding	0.061	Understanding	0.054
Property Management	0.060	Maintenance	0.053
Rent Val	0.046	Property Management	0.051
Parking	0.040	Amenities	0.043
Service Charge Val	0.038	Rent Val	0.038
Documentation	0.031	Service Charge Val	0.038
Maintenance	0.030	Cleaning	0.033
Reception	0.030	Documentation	0.025
Legal Processes	0.023	HVAC	0.025
Professionalism	0.020	Legal Processes	0.018
HVAC	0.017	Professionalism	0.016
Leasing process	0.016	Parking	0.015
CSR	0.016	Lifts	0.014
Security	0.014	CSR	0.012
Cleaning	0.014	Security	0.012
Lifts	0.010	Recycling	0.007
Recycling	0.004	Leasing process	0.006

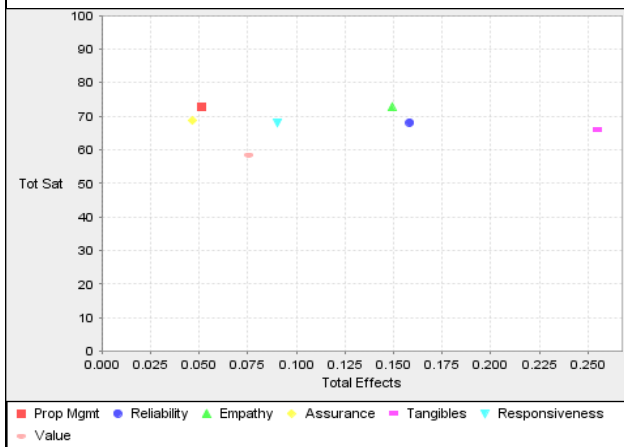
**Figure 6-29: Importance - Performance Matrix for Total Satisfaction of Office Occupiers (using pairwise deletion for missing values)**



**Figure 6-30: Importance - Performance Matrix for Total Satisfaction of Office Occupiers (IPMA with Mean Replacement)**



**Figure 6-31: Importance Performance Matrix for the effect of the Latent Constructs on Office Occupiers' Overall Satisfaction (Mean Replacement)**



**Commentary: Office Occupiers' Overall Satisfaction**

- The key determinants of office occupiers' overall satisfaction are the same as the determinants of their satisfaction with property management.
- The aspects which offer most scope for improving the overall satisfaction of this sample of occupiers are amenities and perception of the value for money which the rent provides.

**IPMA Reputation amongst Office Occupiers**

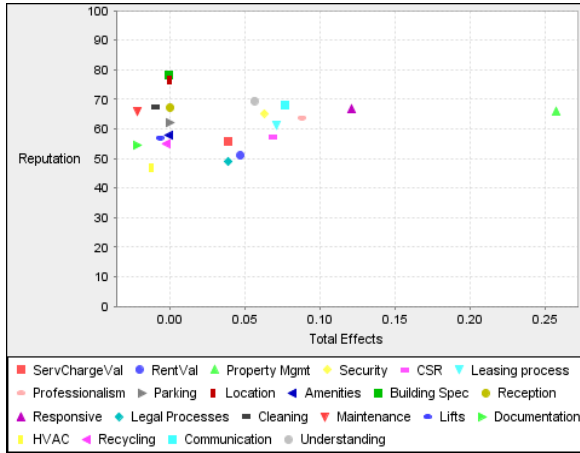
The Importance of Indicators for Landlord Reputation amongst Office Occupiers is given in **Table 6-24**. From this, it is apparent that the construct ‘Property Management’ and the formative indicator Responsiveness are of most importance, together with the Professionalism of the office managers or landlord, communication, the initial leasing process and occupiers’ perception of the Corporate Social Responsibility of the landlord’s organisation. The variant using ‘Mean Replacement’ (**Table 6-25**) gives very similar results, but places less emphasis on the leasing process.

The matrices in **Figure 6-32** and **Figure 6-33** show the effect of combining ‘Performance’ and ‘Importance’; the aspects which would achieve the greatest return in improving ‘Reputation’ are those closest to the bottom-right hand quadrant, including legal processes, perception of value for money for rent, and responsiveness.

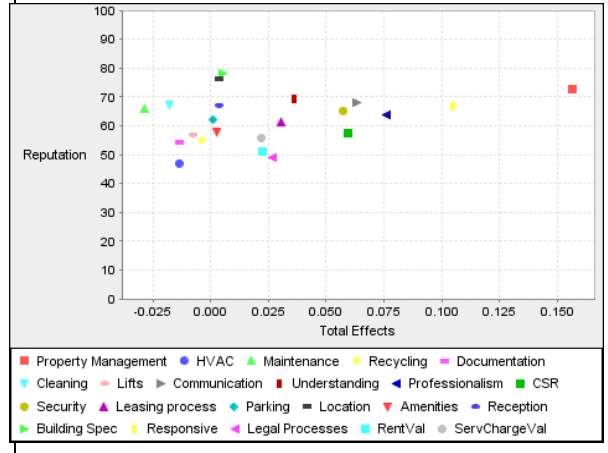
<b>Table 6-24: Total Effects of indicators on Reputation sorted from most to least important for Office Occupiers</b>		<b>Table 6-25: Total Effects of indicators on Reputation for Office Occupiers (Mean Replacement)</b>	
<b>Indicator</b>	<b>Importance for Reputation</b>	<b>Indicator</b>	<b>Importance for Reputation</b>
Property Management	0.257	Property Management	0.156
Responsiveness	0.121	Responsiveness	0.105
Professionalism	0.088	Professionalism	0.076
Communication	0.076	Communication	0.063
Leasing process	0.070	CSR	0.059
CSR	0.068	Security	0.057
Security	0.062	Understanding	0.036
Understanding	0.056	Leasing process	0.031
Rent Value	0.047	Legal Processes	0.027
Legal Processes	0.039	Rent Value	0.022
Service Charge Value	0.038	Service Charge Value	0.022
Reception	0.000	Building Spec	0.005
Parking	0.000	Location	0.004
Amenities	-0.001	Reception	0.004
Location	-0.001	Amenities	0.003
Building Spec	-0.001	Parking	0.001
Recycling	-0.003	Recycling	-0.004
Lifts	-0.007	Lifts	-0.008
Cleaning	-0.010	HVAC	-0.014
HVAC	-0.013	Documentation	-0.014
Maintenance	-0.022	Cleaning	-0.018
Documentation	-0.022	Maintenance	-0.029



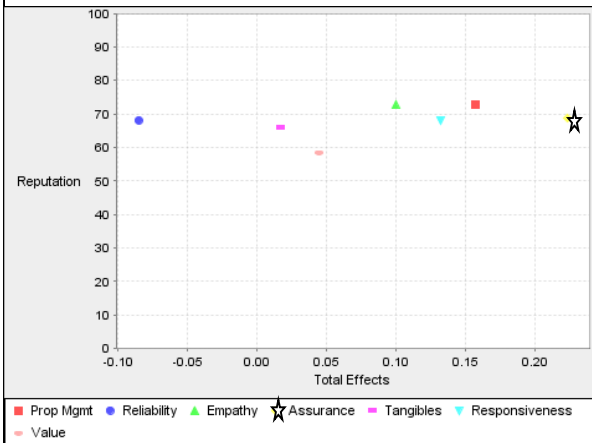
**Figure 6-32: Importance Performance Matrix for Landlord Reputation amongst Office Occupiers (Pairwise Deletion)**



**Figure 6-33: Importance Performance Matrix for Landlord Reputation amongst Office Occupiers (Mean Replacement)**



**Figure 6-34: Importance Performance Matrix for the effect of the Latent Constructs on Office Occupiers' perception of Landlord Reputation (IPMA with Mean Replacement)**



**Commentary: Landlord Reputation amongst Office Occupiers**

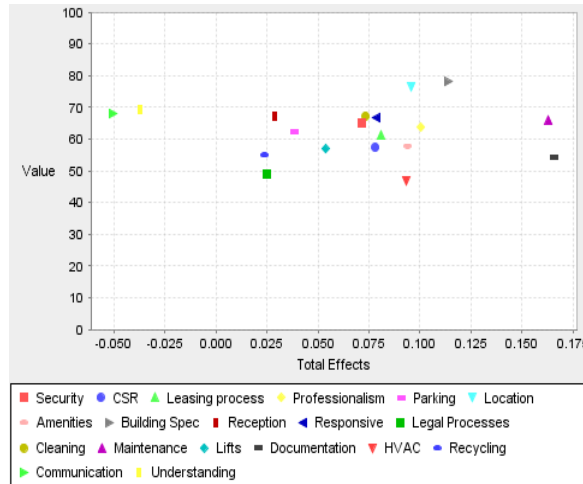
- Satisfaction with Property Management has the largest impact on office occupiers' perception of the reputation of their landlord.
- 'Assurance' (primarily Professionalism and Corporate Social Responsibility) and 'Responsiveness' are also important.
- For maximum impact on perception of reputation amongst respondents in this sample, landlords and property managers should focus on making legal processes more straightforward, giving demonstrable value for money for rent, and responsiveness to occupiers' requests

IPMA for Office Occupiers' Satisfaction with Value for Money

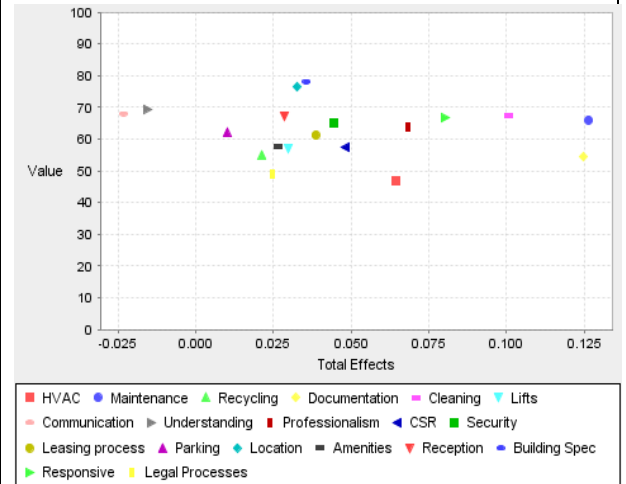
The quality of documentation, the maintenance of the office, the specification or image of the building and the professionalism of the property managers all affect greatly occupiers' satisfaction with Value for Money (Table 6-26 and Table 6-27). Using 'Mean Replacement', the cleanliness of an office is also found to be important. For these matrices (and Figure 6-36), Heating, Ventilation and Air-Conditioning falls into the quadrant for which there is most scope for improvement, and Documentation, for which performance is only a little higher, is of greater importance and also merits attention. The latent construct of most importance in office occupiers' perception of 'Value' is 'Reliability' (Figure 6-37).

<b>Table 6-26: Total Effects of indicators on Value for Money sorted from most to least important for Office Occupiers (pairwise deletion of missing values)</b>		<b>Table 6-27: Total Effects of indicators on Value for Money sorted from most to least important for Office Occupiers (IPMA using Mean Replacement)</b>	
<b>Indicator</b>	<b>Importance for Value</b>	<b>Indicator</b>	<b>Importance for Value</b>
Documentation	0.166	Maintenance	0.126
Maintenance	0.163	Documentation	0.125
Building Spec	0.114	Cleaning	0.100
Professionalism	0.100	Responsive	0.080
Location	0.096	Professionalism	0.068
Amenities	0.094	HVAC	0.065
HVAC	0.093	CSR	0.048
Leasing process	0.081	Security	0.044
Responsive	0.079	Leasing process	0.039
CSR	0.078	Building Spec	0.036
Cleaning	0.073	Location	0.032
Security	0.072	Lifts	0.030
Lifts	0.054	Reception	0.028
Parking	0.038	Amenities	0.026
Reception	0.029	Legal Processes	0.025
Legal Processes	0.025	Recycling	0.021
Recycling	0.024	Parking	0.010
Understanding	-0.037	Understanding	-0.016
Communication	-0.051	Communication	-0.023

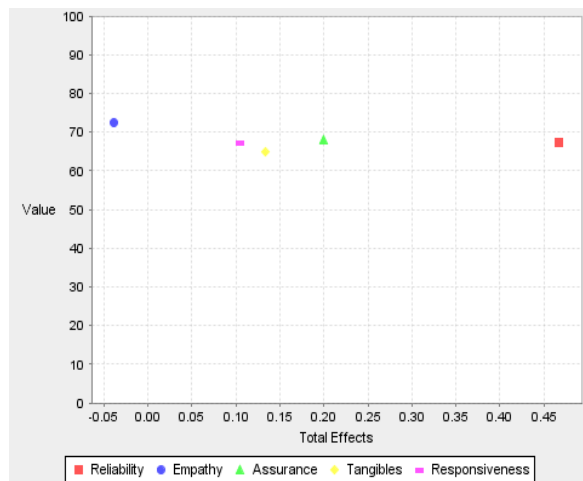
**Figure 6-35: Importance - Performance Matrix for Office Occupiers' Satisfaction with Value for Money (Pairwise Deletion)**



**Figure 6-36: Importance - Performance Matrix for Office Occupiers' Satisfaction with Value for Money (Mean Replacement)**



**Figure 6-37: Importance Performance Matrix for the effect of the Latent Constructs on Office Occupiers' Satisfaction with Value (IPMA with Mean Replacement)**



**Commentary: Office Occupiers' Satisfaction with Value for Money**

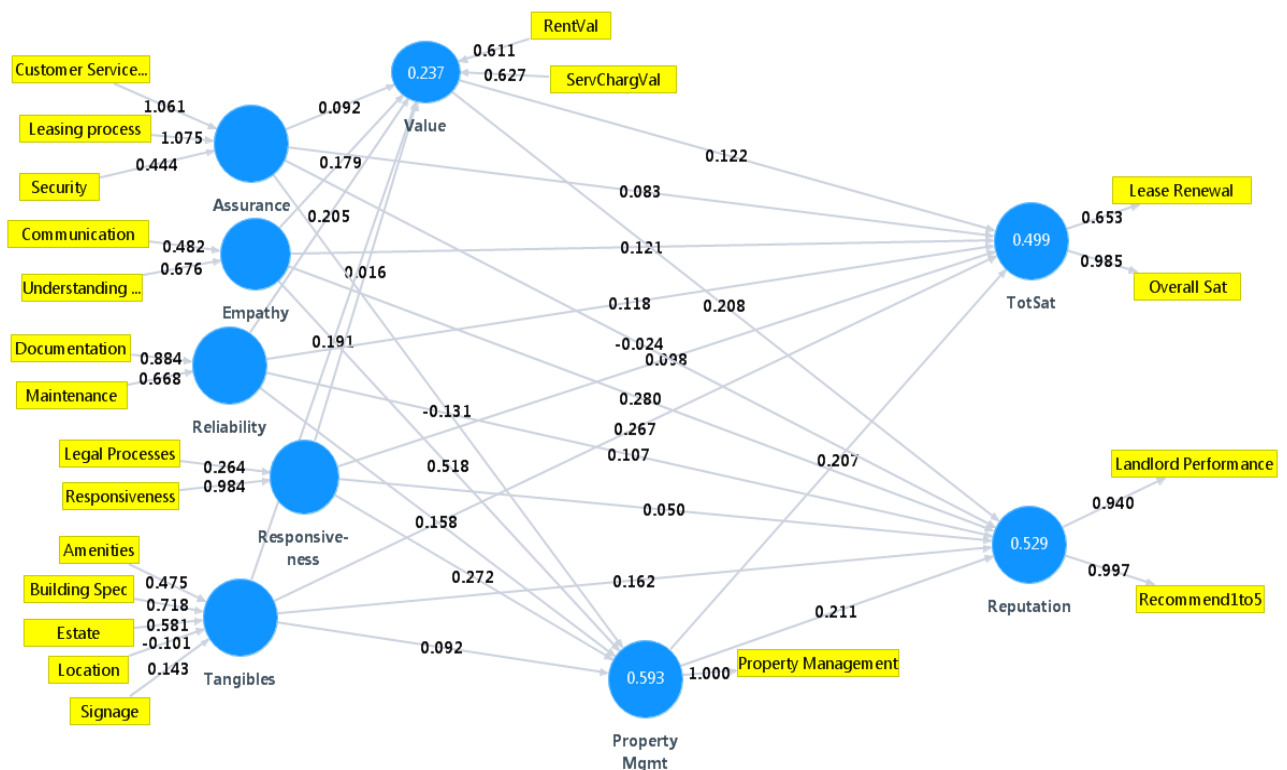
- As was the case for Retailers, the factor of most importance in determining office occupiers' satisfaction with Value for Money is the 'Reliability' of the service they receive.
- For office occupiers, the main determinants of 'Reliability' are the accuracy and clarity of documentation and the maintenance of their building.

## 6.4 Analysis of Industrial Occupier Satisfaction using SMART PLS

The model showing proposed relationships between manifest and latent variables for the satisfaction of industrial occupiers is shown in **Figure 6-38** below.

The respondents to the study were mostly the owners of businesses occupying light industrial units on industrial estates. In most cases, the units incorporated office space as well as the industrial warehouse or factory. Such units typically have fewer services provided by the landlord or managing agent, so interviewees were not asked about HVAC, cleaning and lifts / escalators, for example. Also few of the projects asked occupiers about their perception of the landlord's corporate social responsibility so this is not included in the model.

**Figure 6-38: Path Diagram for Industrial Occupiers**



### Assessment of Outer Model

**Table 6-28** shows the Outer Weights of the indicator variables, giving the relative importance of the Formative Indicators in explaining the latent constructs with which they are associated. For industrial occupiers, the leasing process and the professionalism of the landlord or managing agency staff are the most important in explaining the 'Assurance' construct. This is similar to the finding for office occupiers, whereas for retailers the model incorporated additional formative indicators which reduced the relative contribution of each. For retailers, CSR was found to be slightly more important than the leasing process or professionalism, perhaps partly accounted for by the fact that most of the store managers would not have had direct experience of the leasing process.

For 'Empathy', the two formative indicators, Communication and Understanding Business Needs are of similar importance. For 'Reliability' and 'Value' too, the two indicators in each case are of comparable weight. Legal Processes are of less importance in the 'Responsiveness' construct than occupiers' ratings of the quality of responsiveness to their general requests. For the 'Tangibles' construct, the variance is shared amongst a number of formative indicators, but the main determinants of the construct are the building (unit on the Estate), the Estate itself and the amenities and services provided.

The table also gives the statistical significance of all path weights. It can be seen that all relationships are statistically significant at the 95% confidence level<sup>58</sup> apart from Location ->'Tangibles' and Signage -> 'Tangibles'. The absence of a relationship for location seems counter-intuitive, but a possible explanation is that occupiers participating in these studies discount 'location' when discussing their satisfaction with property management and their landlord because, having made the decision to locate their business, they consider the choice of location to be their responsibility and either do not want to admit to mistakes in their decision or do not hold the landlord responsible. Another likely factor is that the mean satisfaction rating amongst industrial occupiers for location is high, at 4.14, and if it shows little variability, it will not be able to account for variance in a dependent variable – in this case 'Tangibles'. Location actually shows a small but roughly equal loading on all the constructs, as shown in Appendix F.

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<sup>58</sup> In fact almost all paths are significant at the 99% level.

**Table 6-28: Path Weights and Statistical Significance for the Model for Industrial Occupiers**

<b>Outer Weights</b>	<b>Original Sample</b>	<b>Sample Mean</b>	<b>Std Error</b>	<b>T Stats</b>	<b>P Values</b>	<b>Confidence Interval Lower</b>	<b>Confidence Interval Upper</b>
Amenities -> TANGIBLES	0.433	0.443	0.089	4.850	0.000	0.299	0.633
Building Specification -> TANGIBLES	0.759	0.745	0.072	10.483	0.000	0.569	0.855
Communication -> EMPATHY	0.482	0.477	0.041	11.811	0.000	0.381	0.546
Customer Service / Professionalism -> ASSURANCE	1.061	1.040	0.340	3.122	0.002	0.287	1.687
Documentation -> RELIABILITY	0.884	0.881	0.073	12.083	0.000	0.716	1.005
Estate Satisfaction -> TANGIBLES	0.595	0.590	0.162	3.683	0.000	0.281	0.883
Landlord Performance <- REPUTATION	0.690	0.690	0.019	36.126	0.000	0.653	0.727
Lease Renewal <- TOT_SAT	0.392	0.406	0.130	3.014	0.003	0.167	0.706
Leasing process -> ASSURANCE	1.075	1.055	0.248	4.332	0.000	0.582	1.464
Legal Processes -> RESPONSIVENESS	0.264	0.267	0.104	2.542	0.011	0.069	0.474
Location -> TANGIBLES	-0.125	-0.134	0.092	1.358	0.175	-0.322	-0.006
Maintenance -> RELIABILITY	0.668	0.665	0.096	6.981	0.000	0.486	0.858
Overall satisfaction <- TOT_SAT	0.963	0.958	0.023	41.861	0.000	0.895	0.991
Recommend1to5 <- REPUTATION	0.623	0.622	0.018	35.355	0.000	0.588	0.654
RentVal -> VALUE	0.614	0.612	0.080	7.643	0.000	0.450	0.760
Responsiveness -> RESPONSIVENESS	0.984	0.983	0.012	79.343	0.000	0.958	1.006
Security -> ASSURANCE	0.443	0.421	0.170	2.607	0.009	0.059	0.705
ServChargVal -> VALUE	0.623	0.621	0.087	7.194	0.000	0.439	0.777
Signage -> TANGIBLES	0.044	0.087	0.065	0.675	0.500	0.023	0.316
Understanding Needs -> EMPATHY	0.676	0.680	0.039	17.482	0.000	0.612	0.760

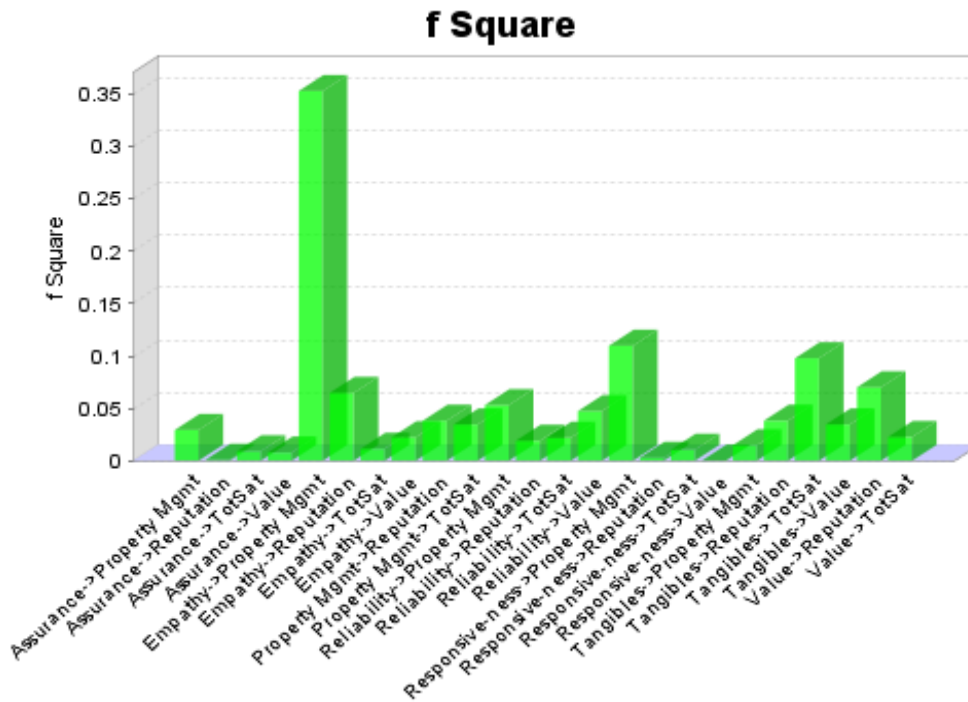
### **Assessment of the Structural Model**

The path coefficients in the structural model are given in Appendix F. 'Empathy' is found to be the most influential dimension in industrial occupiers' satisfaction with 'Property Management'. The coefficients of determination for the constructs in the structural model are shown in **Figure 6-38**;  $R^2$  for the 'Value' construct is 'Weak', whilst  $R^2$  for 'Property Management', 'Reputation' and 'Total Satisfaction' can be considered 'Moderate', at around 0.5 – 0.6. These values change by less than 0.5% in the variant of the model in which 'Value' does not depend on the SERVQUAL constructs, re-enforcing the implication that perception of 'Value for Money' is determined exogenously.

All of the paths in the structural model are statistically significant apart from those from the 'Assurance' and 'Responsiveness' constructs. This may be explained by the fact that property management of Industrial Estates is more "arm's length" than for other sectors. With less contact with property managers, the relationship will be more distant, and occupiers may know less about their landlord's organisation. As mentioned earlier, few industrial occupiers were asked about their landlord's corporate social responsibility, for example, so this isn't included in the model.

Nevertheless, as mentioned above, the only really 'large' effect is between 'Empathy' and 'Property Management', with the link between 'Responsiveness' and 'Property Management' being 'small' to 'moderate' according to Cohen's criteria. The paths: 'Empathy' -> 'Reputation', 'Value' -> 'Reputation', 'Responsiveness' -> 'Property Management' and 'Tangibles' -> 'Total Satisfaction' all have a 'small' effect (see **Figure 6-39**).

Figure 6-39: Effect size for the structural model



f Square	PROP_MGMT	REPUTATION	TOT_SAT	VALUE
<b>ASSURANCE</b>	0.029	0.001	0.009	0.008
<b>EMPATHY</b>	<b>0.353</b>	0.065	0.011	0.022
<b>PROP_MGMT</b>		0.038	0.035	
<b>RELIABILITY</b>	0.053	0.019	0.022	0.047
<b>RESPONSIVENESS</b>	0.110	0.003	0.010	0.000
<b>TANGIBLES</b>	0.015	0.038	0.098	0.035
<b>VALUE</b>		0.070	0.023	

**Robustness checks using Variants of the Model**

From the variants of the model for industrial occupiers (Table 6-29), the importance of ‘Empathy’ is readily apparent. ‘Responsiveness’ is important in occupiers’ satisfaction with Property Management, and ‘Tangibles’ are important for both Total Satisfaction of occupiers and Landlord Reputation. ‘Reliability’ has a moderate impact on all outcomes, but ‘Assurance’ (the leasing process, and the professionalism and corporate social responsibility of the landlord) would appear not to matter significantly to industrial occupiers.



**Table 6-29: Effect on Structural Model Coefficients of modifying the Model for Industrial Occupiers**

	Original Model: Value endogenous with SERVQUAL constructs				Model Variant: Value not mediated by SERVQUAL constructs			Satisfaction with Property Management as a Reflective Variable associated with Tot Sat	
Constructs	Property Mgmt	Reputation	Tot Sat	Value	Property Mgmt	Reputation	Tot Sat	Reputation	Tot Sat
Assurance	-0.131	-0.024	0.083	0.092	-0.118	-0.031	0.068	-0.055	-0.071
Empathy	0.518	0.280	0.121	0.179	0.518	0.279	0.125	0.386	0.405
Property Mgmt		0.211	0.207			0.211	0.202		
Reliability	0.158	0.107	0.118	0.205	0.155	0.106	0.121	0.139	0.165
Responsiveness	0.272	0.050	0.098	0.016	0.266	0.050	0.100	0.108	0.229
Tangibles	0.092	0.162	0.267	0.191	0.091	0.160	0.264	0.182	0.248
Value		0.208	0.122			0.214	0.129	0.217	0.088

#### 6.4.1 Importance – Performance Analysis for Industrial Occupiers

**Table 6-30** shows the standardised performance for the indicators and constructs in the various forms of the model for Industrial Occupiers. Low performance is perceived for Security, Signage and Value for Money for both Rent and Service Charge. Of the manifest variables (as opposed to the latent constructs) occupiers rate more highly the leasing process, the specification of their Unit (building), responsiveness to requests, the professionalism of the estate managers, and communication.

**Table 6-30: Indicators and Constructs sorted from lowest to highest performance for Industrial Occupiers**

<b>Indicator</b>	<b>MV Performances</b>
<b>Security</b>	45.569
<b>Signage</b>	56.345
<b>Service Charge Val</b>	57.274
<b>Rent Val</b>	58.486
<b>Location</b>	62.346
<b>Understanding Needs</b>	64.481
<b>Amenities</b>	64.643
<b>Legal Processes</b>	67.335
<b>Documentation</b>	67.732
<b>Lease Renewal</b>	70.415
<b>Estate</b>	70.750
<b>Maintenance</b>	70.833
<b>Building Spec</b>	71.076
<b>Overall Sat</b>	71.327
<b>Responsiveness</b>	71.569
<b>Landlord Performance</b>	71.657
<b>Property Management</b>	72.019
<b>Customer Service / Professionalism</b>	72.508
<b>Communication</b>	73.775
<b>Recommend1to5</b>	75.003
<b>Leasing process</b>	76.061

**IPMA for Industrial Occupiers' Satisfaction with Property Management**

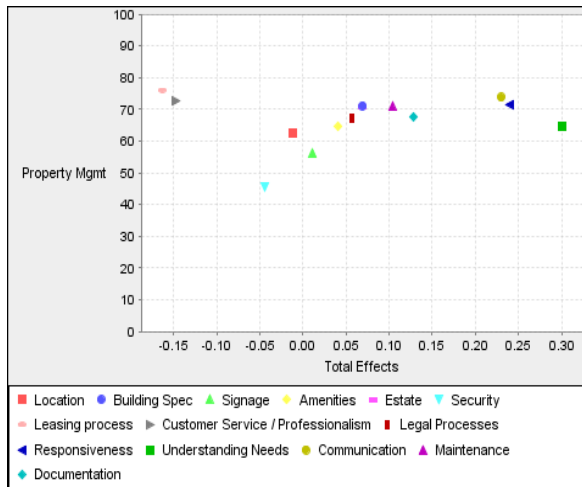
From **Table 6-31** and **Table 6-32** it can be seen that the variables of most importance for Industrial Occupiers' satisfaction with 'Property Management' are understanding needs, communication, responsiveness, the specification of their building, maintenance, and the clarity of documentation. The apparent low importance of customer service / professionalism seems counter-intuitive, and may be a result of multi-collinearity with the three most important indicators – understanding needs, communication and responsiveness. It may also be an artifice of the grouping of questions for the analysis. However, it may also be because of the more distant contact industrial occupiers typically have with their property manager than in other sectors, as discussed in the assessment of the structural model.

Although none of the data points is in the bottom-right hand quadrant of the Importance-Performance Matrices (**Figure 6-40** and **Figure 6-41**) the three variables closest to it are security, signage and Estate Managers' understanding of Industrial Occupiers' business needs.

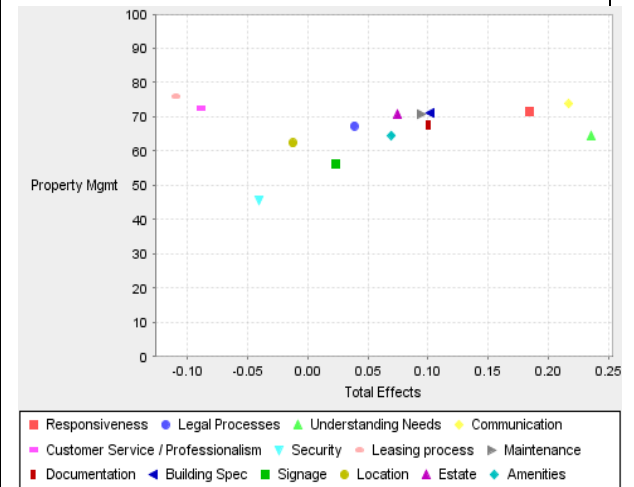
The construct with by far the most impact on occupiers' satisfaction with 'Property Management' is 'Empathy', with 'Tangibles', 'Responsiveness' and 'Reliability' all being of some importance – see **Figure 6-42**.

<b>Table 6-31: Total Effects of indicators on Satisfaction with Property Management, sorted from most to least important for Industrial Occupiers (pairwise deletion)</b>		<b>Table 6-32: Total Effects of indicators on Satisfaction with Property Management, sorted from most to least important for Industrial Occupiers (Mean Replacement)</b>	
<b>Indicator</b>	<b>Importance for Property Mgmt</b>	<b>Indicator</b>	<b>Importance for Property Mgmt</b>
Understanding Needs	0.301	Understanding Needs	0.236
Responsiveness	0.239	Communication	0.217
Communication	0.230	Responsiveness	0.185
Documentation	0.128	Building Spec	0.101
Maintenance	0.104	Documentation	0.100
Building Spec	0.069	Maintenance	0.094
Estate	0.069	Estate	0.075
Legal Processes	0.056	Amenities	0.070
Amenities	0.041	Legal Processes	0.039
Signage	0.011	Signage	0.023
Location	-0.011	Location	-0.013
Security	-0.044	Security	-0.040
Customer Service / Professionalism	-0.147	Customer Service / Professionalism	-0.088
Leasing process	-0.163	Leasing process	-0.110

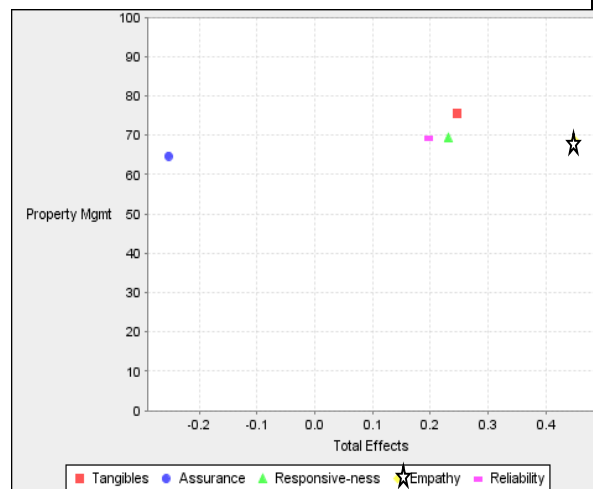
**Figure 6-40: Importance - Performance Matrix for Industrial Occupiers' Satisfaction with Property Management (pairwise deletion)**



**Figure 6-41: Importance - Performance Matrix for Industrial Occupiers' Satisfaction with Property Management (Mean Replacement)**



**Figure 6-42: Importance - Performance Matrix showing Impact of Constructs on Industrial Occupiers' Satisfaction with Property Management**



**Commentary: Industrial Occupiers' Satisfaction with Property Management**

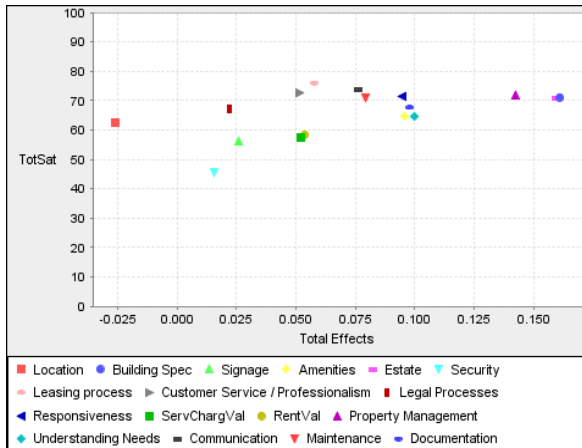
- Industrial occupiers' satisfaction with the management of their Estate and their Unit depends primarily on the 'Empathy' exhibited by the estate management team.
- The Importance – Performance Analysis indicates that for this sample of 1293 occupiers of Industrial Property, the relatively low perceived quality of Security and Signage on their estates means that investment in these aspects would maximise improvement in satisfaction with Estate Management.
- The other aspect that would result in greater satisfaction is an improvement in Estate Managers' understanding of occupiers' business needs.

**IPMA Total Satisfaction of Industrial Occupiers**

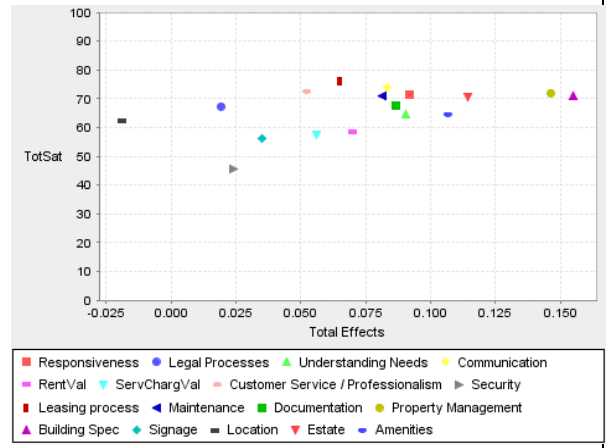
The Importance of Indicators for ‘Total Satisfaction’ amongst Industrial Occupiers is given in **Table 6-33** and **Table 6-34**. The most important of the ‘Tangible’ aspects are the specification of the occupier’s industrial unit, the Industrial Estate itself, amenities on the Estate and the clarity and timeliness of documentation. The other priorities relate to the relationship with the landlord or property manager: the ‘Property Management’ construct and responsiveness, understanding of Business Needs, and communication. From **Figure 6-43** and **Figure 6-44**, it can be seen that none of these indicators is overtly in need of attention amongst the respondents to the studies used in this research, although security, signage and Value for money for Rent and Service Charge are perhaps the closest to the bottom-right quadrant. Looking at the importance of the Latent Constructs (**Figure 6-45**), the most important for industrial occupiers’ overall satisfaction is ‘Tangibles’, followed by ‘Empathy’ and ‘Reliability’.

<b>Table 6-33: Total Effects of indicators on Overall Satisfaction sorted from most to least important for Industrial Occupiers (Pairwise Deletion)</b>		<b>Table 6-34: Total Effects of indicators on Overall Satisfaction sorted from most to least important for Industrial Occupiers (Mean Replacement)</b>	
<b>Indicator</b>	<b>Importance for Overall Satisfaction</b>	<b>Indicator</b>	<b>Importance for Overall Satisfaction</b>
Building Spec	0.161	Building Spec	0.155
Estate	0.160	Property Management	0.146
Property Management	0.142	Estate	0.114
Understanding Needs	0.100	Amenities	0.106
Documentation	0.098	Responsiveness	0.092
Amenities	0.096	Understanding Needs	0.090
Responsiveness	0.095	Documentation	0.086
Maintenance	0.079	Communication	0.083
Communication	0.076	Maintenance	0.081
Leasing process	0.057	Rent Val	0.070
RentVal	0.054	Leasing process	0.065
Service Charge Val	0.052	Service Charge Val	0.056
Customer Service / Professionalism	0.052	Customer Service / Professionalism	0.052
Signage	0.026	Signage	0.035
Legal Processes	0.022	Security	0.024
Security	0.016	Legal Processes	0.019
Location	-0.026	Location	-0.019

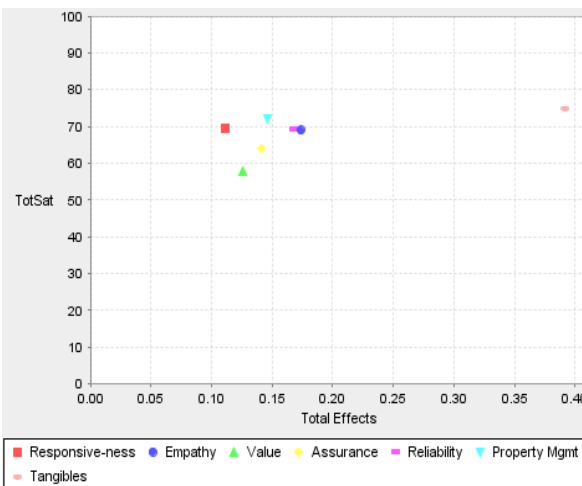
**Figure 6-43: Importance - Performance Matrix for Total Satisfaction of Industrial Occupiers (IPMA with Pairwise Deletion of Missing Values)**



**Figure 6-44: Importance - Performance Matrix for Total Satisfaction of Industrial Occupiers (IPMA with Mean Replacement for Missing Values)**



**Figure 6-45: Importance - Performance Matrix showing that effect of the Latent Constructs on the Overall Satisfaction of Industrial Occupiers (IPMA with Mean Replacement for Missing Values)**



**Commentary: Industrial Occupiers' Overall Satisfaction**

- For Industrial Occupiers, the most important determinants of overall satisfaction are satisfaction with their Unit and their Estate, combined with satisfaction with Estate Management.
- To improve overall satisfaction, the IPMA suggests that efforts should focus on Estate Security and Signage, and on perception of giving Value for Money.

**IPMA Reputation amongst Industrial Occupiers**

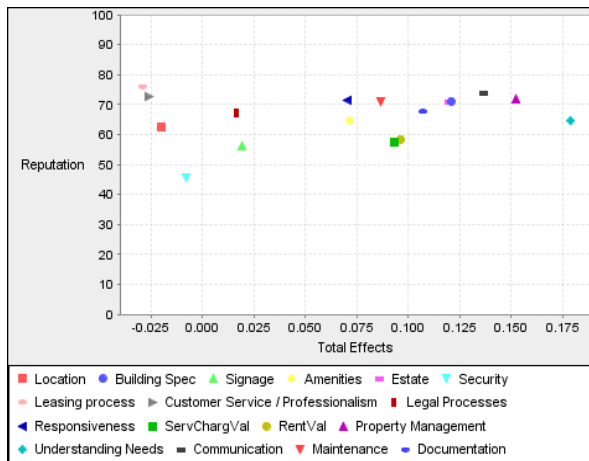
The Importance of Indicators for Landlord Reputation amongst Industrial Occupiers is given in **Table 6-35** and **Table 6-36**. From these, it is apparent that the construct ‘Property Management’ and the formative indicators understanding needs and communication are of most importance.

Combining ‘Performance’ and ‘Importance’, the matrices in **Figure 6-46** and **Figure 6-47** show that the aspects which would achieve the greatest return in improving ‘Reputation’ are those closest to the bottom-right hand quadrant; in particular occupiers’ perception of value for money for rent and service charge.

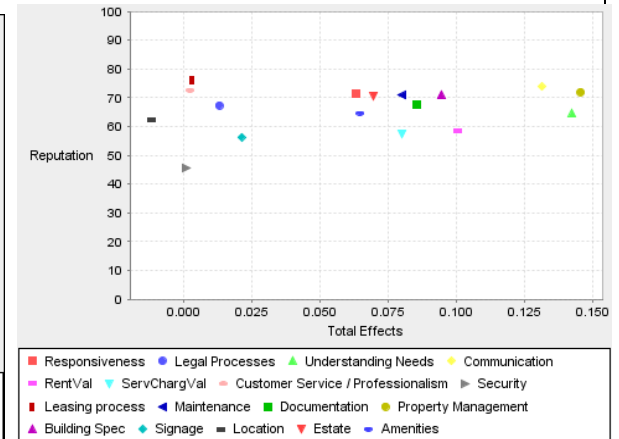
The constructs of most importance are ‘Empathy’, ‘Tangibles’, ‘Value’ and ‘Reliability’ – see **Figure 6-48**.

<b>Table 6-35: Total Effects of indicators on Reputation sorted from most to least important for Industrial Occupiers (Pairwise Deletion)</b>		<b>Table 6-36: Total Effects of indicators on Reputation sorted from most to least important for Industrial Occupiers (Mean Replacement)</b>	
<b>Indicator</b>	<b>Importance for Reputation</b>	<b>Indicator</b>	<b>Importance for Reputation</b>
Understanding Needs	0.179	Property Management	0.145
Property Management	0.153	Understanding Needs	0.142
Communication	0.137	Communication	0.131
Building Spec	0.121	Rent Val	0.100
Estate	0.120	Building Spec	0.094
Documentation	0.107	Documentation	0.085
Rent Val	0.096	Service Charge Val	0.080
Service Charge Val	0.093	Maintenance	0.080
Maintenance	0.087	Estate	0.070
Amenities	0.072	Amenities	0.065
Responsiveness	0.071	Responsiveness	0.063
Signage	0.019	Signage	0.021
Legal Processes	0.017	Legal Processes	0.013
Security	-0.008	Leasing process	0.003
Location	-0.020	Customer Service / Professionalism	0.003
Customer Service / Professionalism	-0.026	Security	0.001
Leasing process	-0.029	Location	-0.012

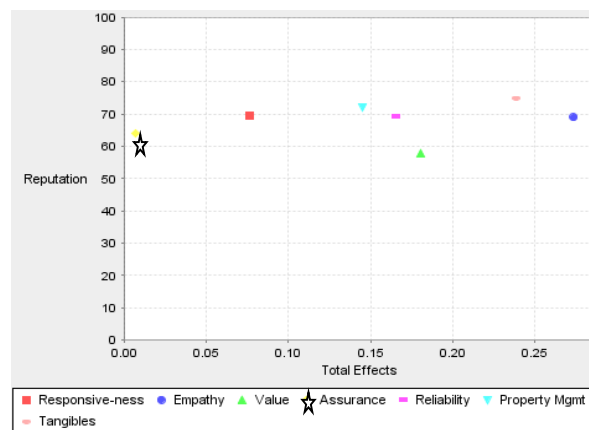
**Figure 6-46: Importance Performance Matrix for Landlord Reputation amongst Industrial Occupiers (IPMA with Pairwise Deletion of Missing Values)**



**Figure 6-47: Importance Performance Matrix for Landlord Reputation amongst Industrial Occupiers (IPMA with Mean Replacement for Missing Values)**



**Figure 6-48: Importance Performance Matrix (Latent Constructs) for Landlord Reputation amongst Industrial Occupiers (IPMA with Mean Replacement for Missing Values)**



**Commentary: Landlord Reputation amongst Industrial Occupiers**

- Unlike Retailers and Office Occupiers, for whom ‘Assurance’ is particularly important in determining perception of Landlord Reputation, for Industrial Occupiers ‘Empathy’ and ‘Estate Management’ are of the greatest importance.
- Landlords should focus on improving perception of Value for Money to have the greatest impact on improving their reputation amongst Industrial Occupiers.

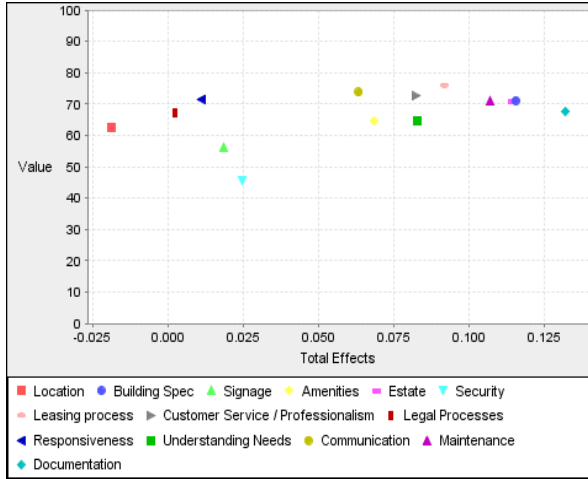


**IPMA for Perception of Value for Money for Industrial Occupiers**

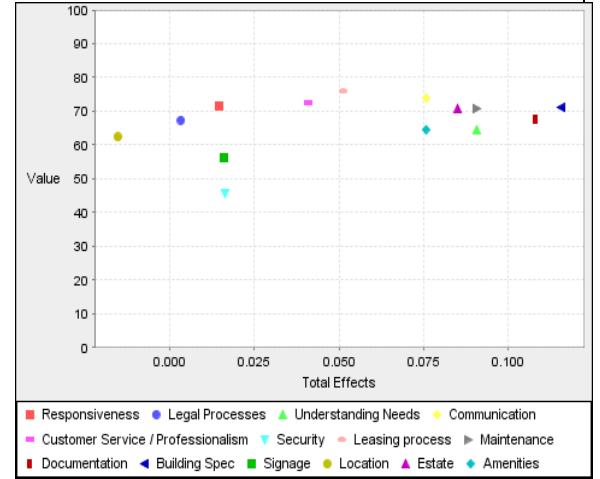
Both methods of analysing the data give similar results for the importance of the manifest variables on the ‘Value’ construct for Industrial occupiers (**Table 6-37** and **Table 6-38**). The most important are the clarity and comprehensibility of documentation, the specification / image / functionality of the occupied Industrial Unit, maintenance and the Estate itself, the estate manager’s understanding of the occupier’s needs, amenities on the estate and the professionalism of the estate manager or landlord. The ‘Pairwise deletion of missing values’ version of the analysis finds the leasing process to be important whereas it appears to be of less importance when ‘Mean Replacement’ is used. Improving Estate Security would have the greatest impact in improving Industrial occupiers’ perception of Value for Money, although it is not of particularly high importance. The constructs with most impact on Industrial occupiers’ perception of ‘Value’ are ‘Tangibles’, ‘Reliability’ and ‘Empathy’.

<b>Table 6-37: Total Effects of indicators on Perception of Value for Money, sorted from most to least important, for Industrial Occupiers (Pairwise Deletion)</b>		<b>Table 6-38: Total Effects of indicators on Perception of Value for Money, sorted from most to least important, for Industrial Occupiers (with Mean Replacement for Missing Values)</b>	
<b>Indicator</b>	<b>Importance for Value</b>	<b>Indicator</b>	<b>Importance for Value</b>
Documentation	0.132	Building Spec	0.116
Building Spec	0.115	Documentation	0.108
Estate	0.114	Maintenance	0.091
Maintenance	0.107	Understanding Needs	0.091
Leasing process	0.092	Estate	0.085
Understanding Needs	0.083	Communication	0.076
Customer Service / Professionalism	0.082	Amenities	0.076
Amenities	0.068	Leasing process	0.051
Communication	0.063	Customer Service / Professionalism	0.041
Security	0.025	Security	0.016
Signage	0.019	Signage	0.016
Responsiveness	0.011	Responsiveness	0.015
Legal Processes	0.003	Legal Processes	0.003
Location	-0.019	Location	-0.015

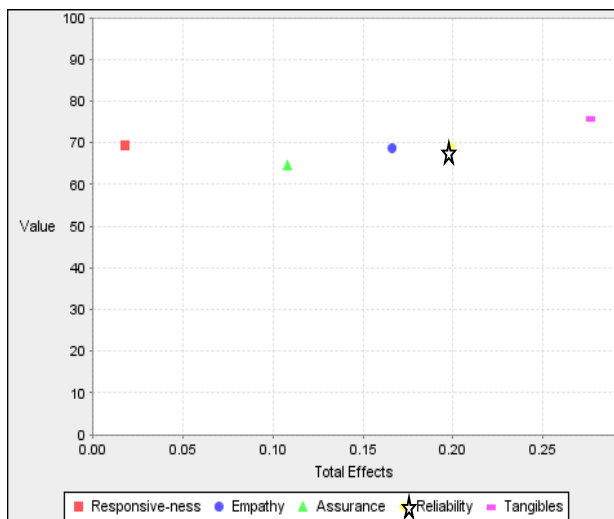
**Figure 6-49: Importance - Performance Matrix showing the effect of the Manifest Variables on Industrial Occupiers' Perception of Value for Money (Pairwise Deletion)**



**Figure 6-50: Importance - Performance Matrix showing effect of the Manifest Variables on Industrial Occupiers' Perception of Value for Money (Mean Replacement)**



**Figure 6-51: Importance - Performance Matrix showing effect of Latent Constructs on Industrial Occupiers' Perception of Value for Money (IPMA with Mean Replacement for Missing Values)**



**Commentary: Industrial Occupiers' Satisfaction with Value for Money**

- As was found for Retailers and Office Occupiers, 'Reliability' is the most important determinant of Industrial Occupiers' satisfaction with Value for Money; in particular the clarity and accuracy of documentation such as service charge budgets, reconciliations and invoices.
- The other key determinants are satisfaction with the building itself, and with the Estate, and the quality of estate maintenance.
- Improvements in Estate Security would achieve the greatest improvement in Industrial Occupiers' perception of receiving Value for Money.

## **6.5 Discussion of Results by Sector**

### **6.5.1 Satisfaction with Property Management**

Retailers' satisfaction with the management of their Shopping Centre or Retail Park is largely determined by the 'Empathy' exhibited by the property management team, manifested by communicating effectively with retailers and understanding their business needs. Effective communication should take account of retailers' preferred means and frequency of communication, and is likely to include some face-to-face meetings, e-mails, and telephone calls as well as memos, newsletters and other written communications. Meetings, whether one-to-one or at tenant association gatherings, provide a good opportunity for property managers to elicit and discuss retailers' business needs, and demonstrate the empathy that this research shows to be crucial in occupiers' satisfaction.

#### **Retailers' Overall Satisfaction**

'Empathy', 'Satisfaction with Property Management', and 'Tangibles' are the key determinants of retailers' overall satisfaction. The 'Tangibles' of most importance comprise the quality of the Shopping Centre or Retail Park, its location, signage to and within the Centre or Park, and the tenant mix. The Importance – Performance Analysis indicates that for this sample of nearly 2000 retailers the aspects that would have the most impact on occupiers' overall satisfaction would be improvements to the appearance of the shops themselves (which may or may not be within the remit of a Centre or Park Manager), and, for retailers in shopping centres, improvements in their perception of receiving value for money. This might be achieved by investment in environmental initiatives that reduce energy consumption, for example. Another possible approach is to collaborate with retailers to use buying power to achieve savings in the cost of services, and hence reductions in service charges.

Retailers are particularly affected by factors that increase customer footfall: the tenant mix, customer parking, the marketing of the Shopping Centre or Retail Park and its attractiveness to shoppers, including its cleanliness. This supports the research of Hui, Zhang, & Zheng, (2013) who found that the aspects which matter most to retailers are well-managed communal facilities (HVAC, lifts, washrooms etc.), communication, courtesy, responsiveness, cleaning and marketing / promotion.

### **Retailers' Perception of the Reputation of their Landlord**

'Assurance' and 'Value for Money' are the most important determinants of Landlord Reputation amongst retailers in Shopping Centres, with 'Empathy' being of some importance. Within these constructs, the main indicators are retailers' perception of the Corporate Social Responsibility of their landlord, including commitment to sustainability, and the professionalism of the property manager; the trading performance of the store and perception of receiving value for money; the initial leasing process; communication with their property manager and the extent to which the manager understands their business needs. With no indicators overtly in need of improvement in the IPMA, these aspects of 'Assurance', 'Value' and 'Empathy' are the things that landlords should focus on to enhance their reputation.

For Managers of Retail Warehouses, their perception of their landlord is largely influenced by the 'Reliability' of the service they receive, and the extent to which they feel their landlord understands their business needs.

### **Satisfaction with Value for Money**

This analysis has shown that for retailers in shopping centres, 'Reliability' is the most important determinant of their satisfaction with Value for Money; in particular the reliability and quality of cleaning, and the clarity and accuracy of documentation such as service charge budgets, reconciliations and invoices. Since perception of receiving value for money is one of the key determinants of retailers' overall satisfaction, it is particularly important to ensure that rent and service charge documentation is transparent and easy to understand, to give occupiers a better appreciation of how their money is spent.

The aspects which offer most scope for improving perception of value for money, according to the Importance – Performance Analysis, are improvements to legal processes and improvements to the Shopping Centre or Retail Park itself. Improvements to legal processes might involve initial effort on the part of landlords or property managers to streamline processes such as making applications for alterations to a store or to hang promotional banners, for example, and to give timely response to such requests. This investment should pay off by reducing the effort required by retailers, as proposed by Dixon, Toman, & DeLisi (2013), but also by reducing the effort required by legal advisors and property managers once the processes have been optimised. Investment in improving the shopping centre or retail park should involve consulting store managers so that any changes that are made are with the approval of the majority of occupiers, and any expenditure is appreciated.

For managers of Retail Warehouses, the key issues are signage on the Park, to make it as easy as possible for shoppers to know what stores are on the Park and to navigate within the Park, and the specification, form and function of their individual store, although this may largely be the responsibility of their head office.

## **6.5.2 Key Findings and Implications for Owners and Managers of Offices**

### **Satisfaction with Property Management**

Office occupiers' satisfaction with property management depends mainly on 'Tangible' aspects of their tenancy which might not be considered 'property management' at all: the office building, its location and the amenities provided. Satisfaction is also determined by the property managers' responsiveness to requests, and by their communication and understanding of occupiers' business needs. Importance – Performance Analysis indicates that for this sample of 1334 respondents, the greatest returns, in terms of occupier satisfaction with office management, would accrue from focus on improving legal processes and office amenities.

### **Office Occupiers' Overall Satisfaction**

The key determinants of office occupiers' overall satisfaction are the same as the determinants of their satisfaction with property management. The aspects which offer most scope for improving the overall satisfaction of this sample of occupiers are amenities and perception of the value for money which the rent provides. The importance of amenities concurs in part with the findings of Baharum, Nawawi, & Saat (2009) who, using their PROPERTYQUAL scale, found that the occupiers of offices in their sample believed cleanliness, security and building services to be the most important property-specific aspects of property management. From a service perspective, reliability and responsiveness were found to be of most importance to occupiers in that study.

### **Office Occupiers' Perception of the Reputation of their Landlord**

Satisfaction with Property Management has the largest impact on office occupiers' perception of the reputation of their landlord, 'Assurance' (primarily Professionalism and Corporate Social Responsibility) and 'Responsiveness' are also important. For maximum impact on perception of reputation amongst respondents in this sample, landlords and property managers should focus on simplifying and improving the efficiency of legal processes, perception of value for money for rent and responsiveness to occupiers' requests.

### **Satisfaction with Value for Money**

As was found for Retailers, the factor of most importance in determining office occupiers' satisfaction with Value for Money is the 'Reliability' of the service they receive. For office occupiers, the main determinants of 'Reliability' are the accuracy and clarity of documentation and the maintenance of their building.

### **6.5.3 Key Findings and Implications for Owners and Managers of Industrial Property**

#### **Satisfaction with Property Management**

Industrial occupiers' satisfaction with the management of their Estate and their Unit depends primarily on the 'Empathy' exhibited by the estate management team. The Importance – Performance Analysis indicates that for this sample of 1293 occupiers of Industrial Property, the relatively low perceived quality of Security and Signage on their estates means that investment in these aspects would maximise improvement in satisfaction with Estate Management. The other aspect that would result in greater satisfaction is an improvement in Estate Managers' understanding of occupiers' business needs.

#### **Industrial Occupiers' Overall Satisfaction**

For Industrial Occupiers, the most important determinants of overall satisfaction are satisfaction with their Unit and their Estate, combined with satisfaction with Estate Management. To improve overall satisfaction, the IPMA suggests that efforts should focus on Estate Security and Signage (as mentioned above) and on perception of Value for Money. This might involve discussions with occupiers about cost-effective ways to improve the Estate, including the introduction of sustainability measures that would reduce occupiers' costs, such as solar panels, wind turbines or other renewable energy solutions where the proceeds or benefits could be shared between landlord and occupiers.

#### **Industrial Occupiers' Perception of the Reputation of their Landlord**

Unlike Retailers and Office Occupiers, for whom 'Assurance' is particularly important in determining perception of Landlord Reputation, for Industrial Occupiers 'Empathy' and 'Estate Management' are of the greatest importance. Landlords should focus on improving perception of Value for Money for greatest impact on improving their reputation amongst Industrial Occupiers.

## **Satisfaction with Value for Money**

Like Retailers and Office Occupiers, Industrial Occupiers' satisfaction with Value for Money is largely determined by the 'Reliability' of the service they receive. The key aspects of 'Reliability' are the clarity and accuracy of documentation such as service charge budgets, reconciliations and invoices. The other key determinants are satisfaction with the building itself, and with the Estate, and the quality of estate maintenance. Improvements in Estate Security would achieve the greatest improvement in Industrial Occupiers' perception of receiving Value for Money.

### **6.6 Comparison of Results across Sectors**

The preceding analysis explored the various relationships between aspects of service performance and occupier satisfaction, and showed that most aspects matter to some occupiers some of the time! Because the sample sizes used for the research are so large, most of the paths are statistically significant. What is more useful in practice, though, is to understand the magnitude of the effects. The other key aspect of practical relevance is to understand which aspects of service delivery – manifest variables rather than the dimensions or constructs – have most impact on occupiers' perceptions and satisfaction. These two aspects – effect size of relationships and impact of variables and constructs - are summarised in the following tables. It is important to note that the impact of constructs encompasses total effects, combining effects from direct and indirect paths.

**Table 6-39 - Table 6-41** give the effect size for all paths in the structural model for the three sectors and is calculated using PLS - SEM. Results are shown for both methods of treating missing data (pairwise deletion of cases and mean replacement). The latter is liable to reduce effect size because it will "smooth" the data and average out the variability. Nevertheless there is much commonality in the results using both methods.

From these Tables, it can be seen that the aspects of tenancy that have most impact on the perceptions of occupiers in all sectors of commercial property are the 'Empathy' of their property manager, the physical characteristics ('Tangibles') of the property and whether the property and service offer good value for money. This research supports previous studies ((BOMA & Kingsley Associates, 2013a; KingsleyLipseyMorgan & IPD Occupiers, 2007; Property Industry Alliance & Corenet Global, 2010; RealService Ltd & IPD, 2009) in finding satisfaction with property management to be the most important determinant of an occupier's overall satisfaction, and the Tables show that 'Empathy' is fundamental to Satisfaction with Property Management. Thus it is crucial for property managers in all sectors to communicate effectively with their occupiers, taking account of their

preferred methods of communication, and to endeavour to understand how occupiers use their building as a factor of production, to help them maximise the value they obtain from it.

Retailers' assessment of Value for Money appears to be influenced by their satisfaction with the Tenant Mix and Marketing of a Shopping Centre or Retail Park, and the Trading performance of their store. For all occupiers, perception of receiving Value for Money appears to be driven primarily by the 'Reliability' dimension of service. The main determinant is the accuracy, clarity and transparency of service charge documentation, so occupiers can see where their money is being spent. For retailers in shopping centres, the other key determinant of reliability is the effectiveness of the cleaning service in a shopping centre, whilst for office occupiers, it is the maintenance of their building. For Industrial Occupiers on Estates, and for Retailers on Retail Parks, perception of receiving value for money is also affected by satisfaction with occupiers' individual unit and by Estate or Park maintenance, signage and security.

In addition to 'Empathy' and 'Value', the third key determinant of overall satisfaction is occupiers' satisfaction with their property itself - tangible aspects of their tenancy. The key 'Tangibles' that affect occupiers' overall satisfaction are the property (shopping centre, Retail Park, office building, or industrial estate), its location and its amenities. For retailers in shopping centres and on Retail Parks, the Tenant Mix, Entrances and Signage are also very important, factors which attract shoppers and help them navigate.

**Table 6-42** summarises the most influential variables and constructs for the satisfaction and perceptions of Retailers, Office Occupiers and Industrial Occupiers using the Importance – Performance analysis methodology. Results for manifest variables are given for both methods of treating missing data (pairwise deletion of cases and mean replacement) whilst the results for constructs are based upon mean replacement<sup>59</sup>. The key determinants of satisfaction with property management, overall occupier satisfaction, aspects affecting landlord reputation, and occupiers' perception of value for money, are shown.

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<sup>59</sup> Using pairwise deletion, the IPMA algorithms failed to converge



**Table 6-39: Effect Size of Constructs showing both Pairwise Deletion and Mean Replacement for Missing Data - Retailers<sup>60</sup>**

F-Sq <u>Retailers</u>	Property Mgmt		TotSat		Reputation		Value	
	Pairwise Deletion	Mean Replacement	Pairwise Deletion	Mean Replacement	Pairwise Deletion	Mean Replacement	Pairwise Deletion	Mean Replacement
Assurance	0.040+	0.051+	0.008	0.008	0.001	0.020+	0.007	0.002
Empathy	0.284++	0.253++	0.040+	0.026+	0.044+	0.006	0.017+	0.001
Property Mgmt			0.040+	0.087+	0.000	0.001		0.000
Reliability	0.008	0.012	0.007	0.000	0.000	0.000	0.029+	0.141+
Responsiveness	0.023+	0.009	0.003	0.003	0.004	0.002	0.002	0.001
Tangibles	0.088+	0.012	0.080+	0.039+	0.000	0.003	0.026+	0.002
Value			0.001	0.012	0.004	0.036+		

**Table 6-40: Effect Size of Constructs showing Pairwise Deletion and Mean Replacement for Missing Data – Office Occupiers**

F-Sq <u>Offices</u>	Property Mgmt		TotSat		Reputation		Value	
	Pairwise Deletion	Mean Replacement	Pairwise Deletion	Mean Replacement	Pairwise Deletion	Mean Replacement	Pairwise Deletion	Mean Replacement
Assurance	0.010	0.000	0.003	0.002	0.090+	0.049+	0.027+	0.014
Empathy	0.103+	0.048+	0.029+	0.033+	0.002	0.007	0.005	0.001
Property Mgmt			0.007	0.006	0.174++	0.062+		
Reliability	0.010	0.004	0.003	0.015	0.005	0.010	0.075+	0.071+
Responsiveness	0.069+	0.028+	0.007	0.011	0.006	0.020+	0.005	0.007
Tangibles	0.258++	0.002	0.043+	0.034+	0.045+	0.000	0.031+	0.003
Value			0.023+	0.015	0.034+	0.006		

**Table 6-41: Effect Size of Constructs showing Pairwise Deletion and Mean Replacement for Missing Data – Industrial Occupiers**

F-Sq <u>Industrial</u>	Property Mgmt		TotSat		Reputation		Value	
	Pairwise Deletion	Mean Replacement	Pairwise Deletion	Mean Replacement	Pairwise Deletion	Mean Replacement	Pairwise Deletion	Mean Replacement
Assurance	0.029+	0.009	0.009	0.026+	0.001	0.002	0.008	0.002
Empathy	0.353+++	0.211++	0.011	0.050+	0.065+	0.184++	0.022+	0.031+
Property Mgmt			0.035+	0.110+	0.038+	0.106+		
Reliability	0.053+	0.026+	0.022+	0.060+	0.019	0.060+	0.047+	0.028+
Responsiveness	0.110+	0.052+	0.010	0.030+	0.003	0.009	0.000	0.000
Tangibles	0.015	0.029+	0.098+	0.279++	0.038+	0.088+	0.035+	0.039+
Value			0.023+	0.073+	0.070+	0.149++		

+++ Effect Size – Large

++ Effect Size – Medium

+ Effect Size - Small

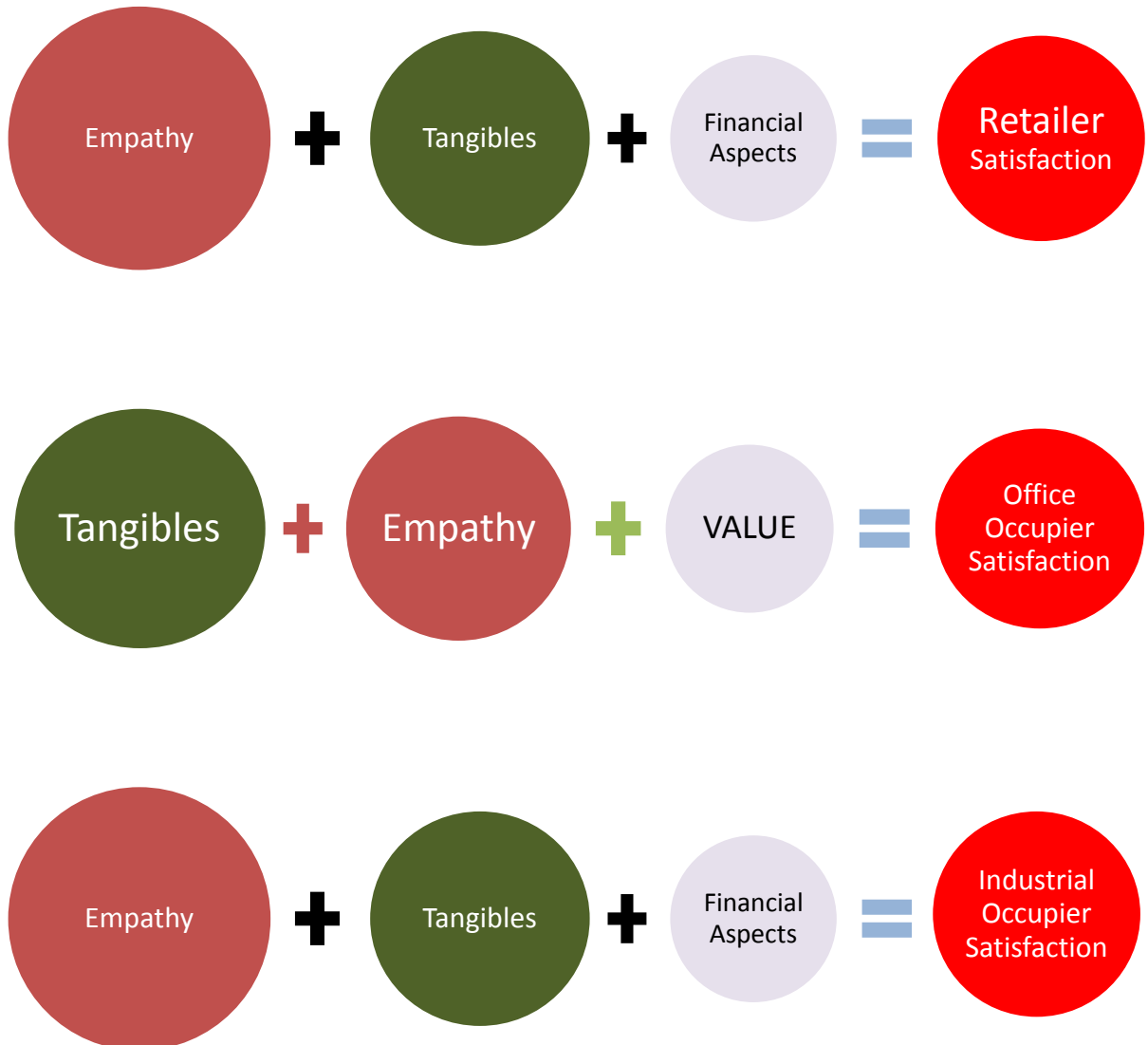
<sup>60</sup> These values differ slightly (by less than 1%) from values calculated previously as they were obtained using a new release of SMART-PLS which used marginally different settings for the calculations. The practical implications of the results are unaffected

**Table 6-42: Summary of Most Important Indicators and Constructs for the three sectors**

	Retail			Office			Industrial				
	Treatment of Missing Values	Replace with Mean	Latent Constructs	Treatment of Missing Values	Delete Pairwise	Replace with Mean	Latent Constructs	Treatment of Missing Values	Delete Pairwise	Replace with Mean	Latent Constructs
Property Management	Communication	Communication	EMPATHY	Building Specification	Communication	Communication	EMPATHY	Understanding Need	Understanding Need	Understanding Needs	EMPATHY
	Understanding Needs	Understanding Needs	ASSURANCE	Location	Responsiveness	Responsiveness	RESPONSIVENESS	Responsiveness	Responsiveness	Communication	TANGIBLES
	Cleaning	CSR	TANGIBLES	Amenities	Understanding Needs	Understanding Needs	RELIABILITY	Communication	Communication	Responsiveness	RESPONSIVENESS
	CSR	Cleaning	RELIABILITY	Responsiveness	Legal Processes	Legal Processes	TANGIBLES	Documentation	Documentation	Building Specification	RELIABILITY
	Responsiveness	Leasing Process		Communication	Maintenance	Maintenance		Maintenance	Maintenance	Documentation	
	Professionalism	Professionalism		Understanding Needs	Building Specification	Building Specification		Building Spec	Building Spec	Maintenance	
	Tenant Mix	Tenant Mix		Parking				Estate Satisfaction	Estate Satisfaction	Estate Satisfaction	
	Leasing Process	Responsiveness									
Total Satisfaction	Centre Management	Centre Management	TANGIBLES	Building Specification	Communication	Communication	TANGIBLES	Building Spec	Building Specification	Building Specification	TANGIBLES
	Communication	Communication	PROPERTY MANAGEMENT	Location	Building Specification	Building Specification	RELIABILITY	Estate	Property Management	Property Management	EMPATHY
	Understanding Needs	Understanding Needs	EMPATHY	Amenities	Amenities	Responsiveness	EMPATHY	Property Management	Estate Satisfaction	Estate Satisfaction	RELIABILITY
	Trading Performance	Tenant Mix	ASSURANCE	Communication	Communication	Location	RESPONSIVENESS	Understanding Need	Amenities	Amenities	PROPERTY MANAGEMENT
	Tenant Mix	Marketing		Responsiveness	Responsiveness	Reception		Documentation	Documentation	Responsiveness	
	Marketing	Location		Understanding Needs	Understanding Needs	Understanding Needs		Amenities	Amenities	Understanding Needs	
	Location	CSR		Property Management	Maintenance	Maintenance		Responsiveness	Documentation	Documentation	
	Building Specification	Entrances			Property Management	Property Management		Maintenance	Communication	Communication	
	Entrances	Signage						Communication	Maintenance	Maintenance	
		Building Specification									
Reputation	CSR	CSR	ASSURANCE	Property Management	Property Management	Property Management	ASSURANCE	Understanding Need	Understanding Need	Property Management	EMPATHY
	Trading Performance	Service Charge Value	VALUE	Responsiveness	Responsiveness	Responsiveness	PROPERTY MANAGEMENT	Property Management	Understanding Needs	Understanding Needs	TANGIBLES
	Professionalism	Trading Performance	TANGIBLES	Professionalism	Professionalism	Professionalism	RESPONSIVENESS	Communication	Communication	Communication	VALUE
	Leasing Process	Rent Value	EMPATHY	Communication	Communication	Communication	EMPATHY	Building Spec	Rent Value	Rent Value	RELIABILITY
	Communication	Leasing Process		Leasing Process	CSR	CSR		Estate	Building Specification	Building Specification	
	Understanding Needs	Communication		CSR	Security	Security		Documentation	Documentation	Documentation	
	Responsiveness	Professionalism		Security	Understanding Needs	Understanding Needs		Rent Val	Service Charge Value	Service Charge Value	
	Security	Understanding Needs		Legal Processes	Leasing Process	Leasing Process		Service Charge Val	Maintenance	Maintenance	
	Safety	Tenant Mix						Maintenance	Estate Satisfaction	Estate Satisfaction	
	Centre Mgmt	Responsiveness						Amenities	Amenities	Amenities	
Rent Val							Responsiveness	Responsiveness	Responsiveness		
Value for Money	Cleaning	Cleaning	RELIABILITY	Documentation	Maintenance	Maintenance	RELIABILITY	Documentation	Building Specification	Building Specification	TANGIBLES
	Documentation	Documentation	TANGIBLES	Maintenance	Documentation	Documentation	ASSURANCE	Building Spec	Documentation	Documentation	RELIABILITY
	Recycling	Tenant Mix		Building Specification	Cleaning	Cleaning	TANGIBLES	Estate Satisfaction	Maintenance	Maintenance	EMPATHY
	Maintenance	Recycling		Professionalism	Professionalism	Professionalism	RESPONSIVENESS	Maintenance	Understanding Needs	Understanding Needs	ASSURANCE
	Responsiveness	Location		Location	Professionalism	Professionalism		Leasing process	Estate Satisfaction	Estate Satisfaction	
	CSR	Entrances		Amenities	HVAC	HVAC		Understanding Need	Communication	Communication	
	Professionalism	Maintenance		HVAC	CSR	CSR		Customer Service / Amenities	Amenities	Amenities	
	Leasing	Signage		Leasing Process	Security	Security		Amenities	Communication	Communication	
	Security			Responsiveness	Leasing Process	Leasing Process		Communication			
				CSR	Building Specification	Building Specification					
			Cleaning	Location	Location						
			Security	Security	Security						
			Lifts	Lifts	Lifts						

The commonality and similarity of the determinants of Overall Occupier Satisfaction for the three sectors is depicted in **Figure 6-52**, to help property managers appreciate the key relationships and to answer the Question 2: *What are the determinants of occupier satisfaction?*

**Figure 6-52: Determinants of Occupier Satisfaction**



This chapter has focused on occupiers' perceptions in order to understand determinants of satisfaction. The following chapter uses the data set to address occupiers' behavioural intentions of likelihood of lease renewal and willingness to recommend their landlord.

## **Chapter 7 Behavioural Intentions: Occupiers' Loyalty and Advocacy**

### **Introduction**

The previous chapter analysed determinants of occupier satisfaction and opinions about landlord reputation, eliciting information about occupiers' perceptions. In order to accomplish this, ratings given by occupiers to various aspects of service quality were used. In addition, stated likelihood of lease renewal was employed as a reflective indicator to complement the overall satisfaction rating given by interviewees to assess the latent construct 'Occupier Satisfaction'. Similarly, occupiers' ratings of their willingness to recommend their landlord or property manager were employed to complement the 'landlord performance' reflective indicator, to assess the latent construct 'Landlord Reputation'. In this chapter, the behavioural intentions of lease renewal and landlord recommendation are examined, since the research framework discussed in Part 1 of this Thesis posits that profitability arises from customer loyalty and advocacy. Behavioural intentions have been shown to be a good proxy for actions (Keiningham et al., 2007), although it would, of course, be preferable to use actual lease renewal rates and actual number of recommendations; such data was not, however, available.

## 7.1 Descriptive Statistics and Correlations

**Table 7-1** and **Table 7-2** give the descriptive statistics for the analysis of behavioural intentions, including the data for Overall Satisfaction for comparison.

**Table 7-1: Perception and Behavioural Intentions: Descriptive Statistics**

Descriptive Statistics for Full Sample					
	N	Minimum	Maximum	Mean	Std. Deviation
Overall satisfaction	3965	1	5	<b>3.86</b>	.704
Lease Renewal	1031	1	5	<b>3.82</b>	1.087
Recommend 1-5	1932	1	5	<b>4.10</b>	.860
Valid N (listwise)	245				

**Table 7-2: Perception and Behavioural Intentions: Descriptive Statistics for the Individual Sectors**

Sector		Overall satisfaction	Lease Renewal	Recommend 1 - 5
Shopping Centre	Valid	1540	340	636
	Missing	149	1349	1053
	Mean	<b>3.865</b>	<b>4.176</b>	<b>4.205</b>
Retail Park	Valid	160	124	0
	Missing	6	42	166
	Mean	<b>3.670</b>	<b>4.012</b>	
Office	Valid	997	309	501
	Missing	337	1025	833
	Mean	<b>3.878</b>	<b>3.347</b>	<b>4.128</b>
Industrial	Valid	1268	258	795
	Missing	25	1035	498
	Mean	<b>3.854</b>	<b>3.816</b>	<b>4.000</b>

### Lease Renewal Data

The lease renewal figures relate to responses to the question, “If a decision had to be made today, how likely would you be to renew your lease, on a scale of ‘1’ to ‘5’, where ‘1’ is ‘very unlikely’ and ‘5’ is ‘very likely’”. Data is “Missing” mainly because the question was not asked of the interviewee, rather than a refusal to answer, as discussed in Chapter 5. The lease renewal question was asked in only about one-third of interviews (as is evident by comparison with the numbers responding to the question about Overall Satisfaction), mostly during the period 2003 - 2006. 85% of the data in this analysis dates from that period, the remainder from 2007 – 2009. The question was not included in later interviews. The mean ratings for the question are highest for retailers and lowest for office

occupiers, indicating that the office occupiers in this sample are least likely to renew their lease. This supports the findings of (Frodsham, 2010) and the data from MSCI, as shown in Chapter 3, **Figures 3.1 and 3.2**. Retailers rate their likelihood of lease renewal higher than their overall satisfaction, whereas for office occupiers, the order is reversed. For occupiers of industrial property, the ratings for overall satisfaction and likelihood of lease renewal are similar.

### **Advocacy Data**

As with all the questions in the data set, the question of whether occupiers would be willing to recommend their landlord or property manager was asked in various ways in different occupier satisfaction studies. This was partly attributable to differing approaches to property management. Where a landlord had outsourced management to a third party, or used internal, on-site property managers, the question generally asked about willingness to recommend the property manager. Where there was more of a direct relationship between landlord and tenant, the question tended to ask about willingness to recommend the landlord. The other anomaly arises from the fact that in some studies the question required a “Yes / No” binary response (with the option to abstain), whereas in others it was asked as an ordinal response, Likert-style rating question ‘1’ – ‘5’. Thus the data set contained two variables relating to advocacy: 1) Willing to Recommend – Yes / No, and 2) Willingness to Recommend – rated ‘1’ – ‘5’. Each respondent was asked at most one or other of these questions, but not both. The former question, with a binary response variable, was mostly asked in the earlier interviews (2002 – 2006), and was found to be a poor discriminator when used as the dependent variable in regressions, because many occupiers had responded that they “wouldn’t ‘not recommend’” their landlord, which was recorded by the interviewer as a “yes”, resulting in no differentiation between those who are active advocates and those who passively tolerate the relationship. Unfortunately, therefore, it was not possible to make use of this variable in any of the analysis.

The dependent variable used in the advocacy analysis is thus the one in which occupiers gave a rating of ‘1’ to ‘5’. This question was mainly used in the more recent occupier satisfaction surveys (2010 – 2013 inclusive) and was not used in any of the occupier satisfaction studies conducted on Retail Parks. As can be seen from the Tables above, occupiers gave a higher rating to their willingness to recommend their landlord or property manager than to their overall satisfaction or their likelihood of lease renewal.

**Table 7-3** shows the correlations between the three variables for cases in which the same respondent was asked all three questions (i.e. listwise). When the sectors are combined, correlations are positive and statistically significant at the 99% level. However, when analysed individually, it can

be seen that the correlation between loyalty and advocacy is marginally negative, albeit non-significant, for retailers in shopping centres in this sample, and the correlations are positive but not statistically significant for this small sample of office occupiers who were asked all three questions.

**Table 7-3: Listwise Correlations**

<b>All Property</b>				
		Lease Renewal	Overall Satisfaction	Recommend 1-5
Lease Renewal	Pearson Correlation	1	.290**	.202**
	Sig. (2-tailed)		.000	.002
Overall Satisfaction	Pearson Correlation	.290**	1	.312**
	Sig. (2-tailed)	.000		.000
Recommend 1-5	Pearson Correlation	.202**	.312**	1
	Sig. (2-tailed)	.002	.000	
**. Correlation is significant at the 0.01 level (2-tailed).				
Listwise N=244				

<b>Shopping Centres</b>				
		Lease Renewal	Overall Satisfaction	Recommend 1-5
Lease Renewal	Pearson Correlation	1	.354**	-.016
	Sig. (2-tailed)		.000	.878
Overall Satisfaction	Pearson Correlation	.354**	1	.378**
	Sig. (2-tailed)	.000		.000
Recommend 1-5	Pearson Correlation	-.016	.378**	1
	Sig. (2-tailed)	.878	.000	
**. Correlation is significant at the 0.01 level (2-tailed).				
Listwise N=98				

<b>Offices</b>				
		Lease Renewal	Overall Satisfaction	Recommend 1-5
Lease Renewal	Pearson Correlation	1	.309	.232
	Sig. (2-tailed)		.075	.186
Overall Satisfaction	Pearson Correlation	.309	1	.165
	Sig. (2-tailed)	.075		.351
Recommend 1-5	Pearson Correlation	.232	.165	1
	Sig. (2-tailed)	.186	.351	
Listwise N=34				

<b>Industrial</b>				
		Lease Renewal	Overall Satisfaction	Recommend 1-5
Lease Renewal	Pearson Correlation	1	.234*	.159
	Sig. (2-tailed)		.013	.093
Overall Satisfaction	Pearson Correlation	.234*	1	.274**
	Sig. (2-tailed)	.013		.003
Recommend 1-5	Pearson Correlation	.159	.274**	1
	Sig. (2-tailed)	.093	.003	
*. Correlation is significant at the 0.05 level (2-tailed).				
**. Correlation is significant at the 0.01 level (2-tailed).				
Listwise N=112				

## 7.2 Methods of Analysis used in this Chapter

For each of the behavioural intentions, two methods of analysis are employed<sup>61</sup>. Firstly SMART PLS Structural Equation Modelling is used, with simpler models than the previous chapter, because there is just the single dependent variable 'Likelihood of Lease Renewal' or 'Willingness to Recommend Landlord'<sup>62</sup>. This is similar to performing Principal Components Analysis to obtain the SERVQUAL, 'Value' and 'Property Management' constructs, and using these as independent variables in an OLS regression. The advantage of the PLS SEM is that it copes with the missing values and non-normal distribution of the data, and gives a visual representation of the most important determinants of likelihood of lease renewal. Analysis is performed for each sector separately and the most influential determinants of lease renewal intentions are found.

Following the SMART PLS analysis, logistic regressions are performed. Only cases for which data is available for all the independent variables are included in the regressions, meaning that the sample sizes are smaller, and samples may be biased because surveys that asked all the questions may not be representative of all the occupier satisfaction studies. However, the advantages are that the logistic regressions enable the ratings given by occupiers to their lease renewal and advocacy intentions to be treated as ordinal data, rather than interval data, and by using cases with data for all variables, omitted variable bias is avoided.

For lease renewal intentions, the five SERVQUAL dimensions and Value for Money for Rent and for Service Charge are used as independent variables in multinomial logistic regressions. The dependent variable takes the five possible responses to the question of likelihood of lease renewal, the ordinal values '1' to '5'. The analysis evaluates the contribution the independent variables make towards increasing an occupier's rating of their likelihood of lease renewal.

For the advocacy analysis, binary logistic regressions are performed, with the dependent variable being analogous to 'promoter' or 'non-promoter' to use the Net Promoter Score terminology. The derivation of this variable is explained in Section 7.9. For these regressions, the independent variables are the SERVQUAL dimensions.

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<sup>61</sup> A similar approach was adopted by Lu (1999) in investigating determinants of residential satisfaction

<sup>62</sup> This encompasses the situation in which occupiers were asked about their property manager as the Landlord's representative



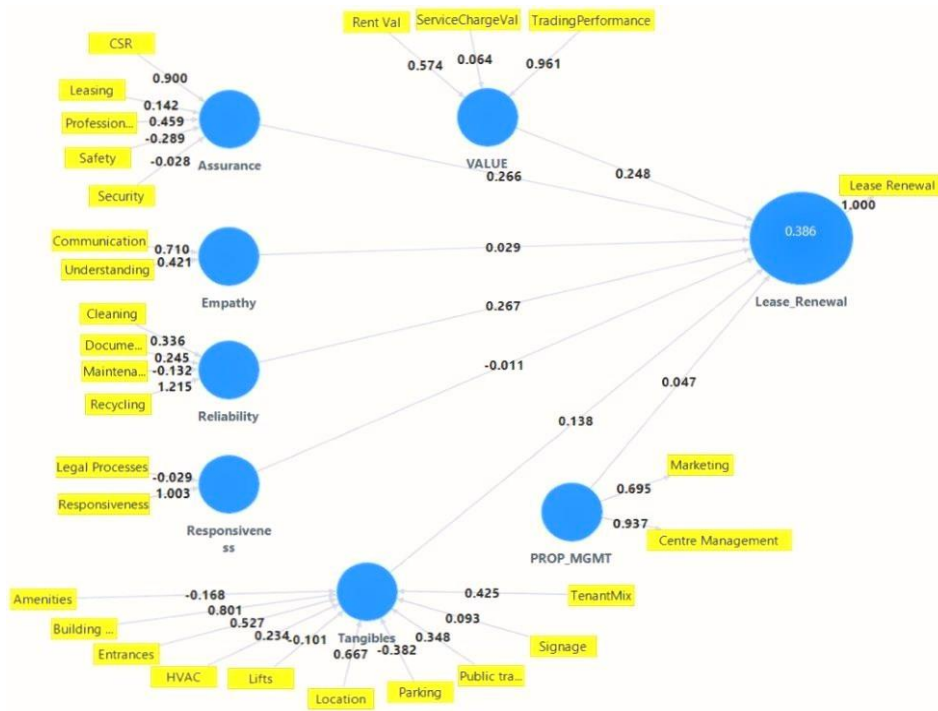
### 7.3 Lease Renewal Intentions: Analysis using SMART-PLS

As discussed in Chapter 3, Section 3.2, lease renewal rates vary widely with the economic and business cycles, and lease renewal decisions are likely to be affected by factors unrelated to occupiers' satisfaction with their present accommodation and the service they receive. In particular, expansion or contraction of a business may lead to non-renewal of a lease, regardless of the relationship an occupier has with their landlord or property manager. This is apparent from the correlation data in **Table 5-9** and **Table 5-11**. A good relationship might result in the occupier moving to other property within their landlord's portfolio, but the relationship between satisfaction and loyalty would not then be apparent at the individual property level. Nevertheless, previous studies into the relationship between occupier satisfaction and loyalty have found a positive correlation (CBRE, 2015; Kingsley Associates, 2004, 2013), which is supported by the data in **Table 7-3**. Even if the property management service is only a partial determinant of lease renewal intentions, it is of interest to evaluate which aspects matter most.

#### 7.3.1 Determinants of Lease Renewal Intentions for Store Managers in Shopping Centres

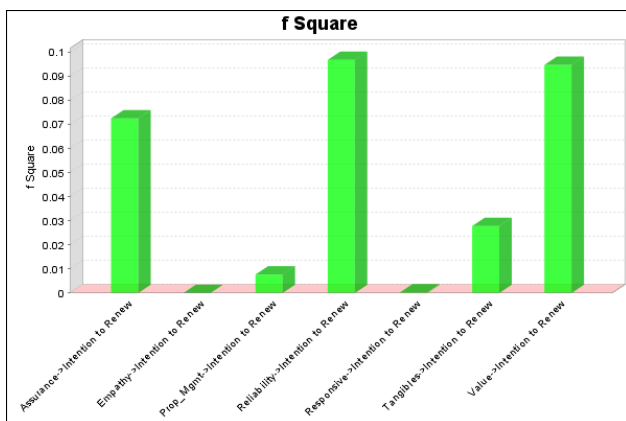
**Figure 7-1** gives the path weights of the formative indicators which make up the constructs, and the coefficients for the constructs in the OLS regression for which they act as independent variables. The dependent variable is interviewees' stated Likelihood of Lease Renewal. The path weights differ from those in the previous chapter because only a sub-set of cases are included in the analysis (those for which an answer was given to the question about lease renewal), and also because a different dependent variable results in different values when the PLS algorithm attempts to maximise the likelihood of coefficients and minimise residuals in the subordinate regressions between formative indicators and constructs. However the trends are very similar, with the most important formative indicators remaining the same for the constructs. The exceptions are that 'Trading Performance' is of much higher importance for lease renewal than it was for the occupier satisfaction models of the previous chapter (path weight 0.961 compared with 0.392), and, for the 'Reliability' construct, the relative importance of Documentation and Recycling is reversed, with Cleaning and Recycling apparently a more important determinant of lease renewal than of overall satisfaction. The importance of the way in which waste is dealt with may be a reflection of the amount of packaging retailers have to deal with when their merchandise is delivered, and being able to dispose of this with little effort will make their job easier. The coefficient of determination for the regression is 0.386, implying the SERVQUAL dimensions; the 'Value' construct; and the 'Property Management' construct together explain 38.6% of the variance in stated lease renewal intentions for these retailers in shopping centres.

**Figure 7-1: Path Diagram for Retailers in Shopping Centres**



From the path diagram, the key constructs influencing likelihood of lease renewal can be seen to be ‘Reliability’, ‘Assurance’ and ‘Value’, since these have the largest coefficients. This is apparent, too, from the effect size (**Figure 7-2**), with the values for these three constructs being ‘small’ to ‘medium’ according to Cohen's (1988) criteria. Bootstrapping with 500 samples confirms that these three paths are statistically significant ( $p=0.000$ ) and the relationship with Tangibles is also statistically significant ( $p=0.019$ ), albeit with only a ‘small’ effect size.

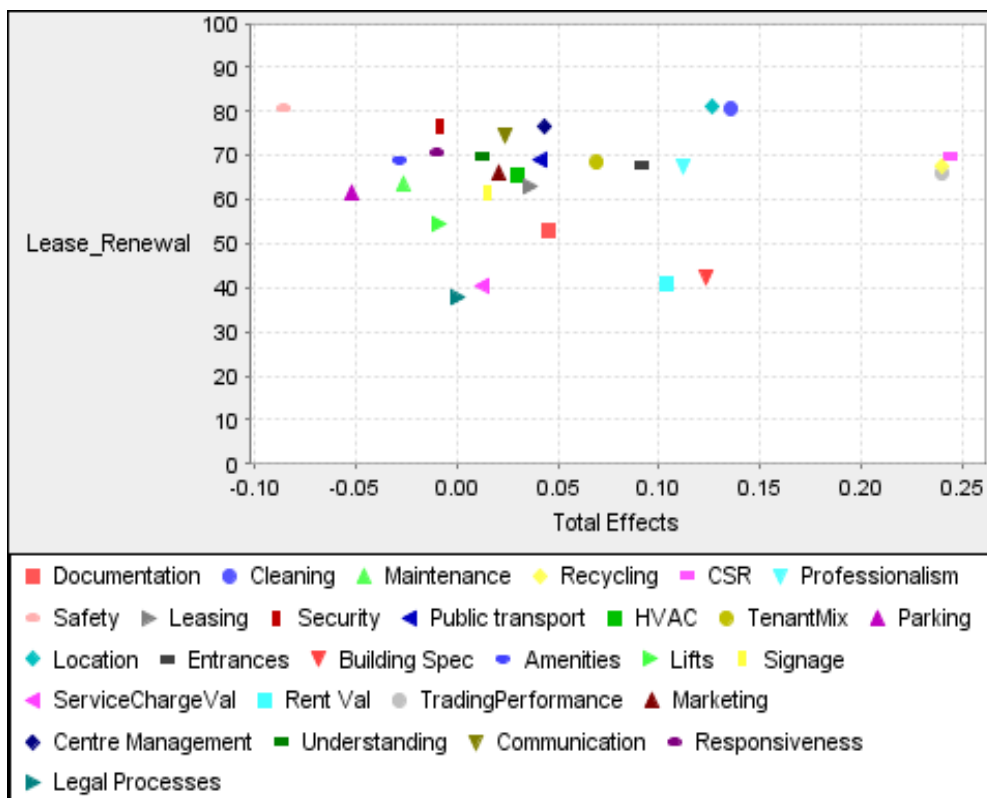
**Figure 7-2: Effect Size Retailer Loyalty**



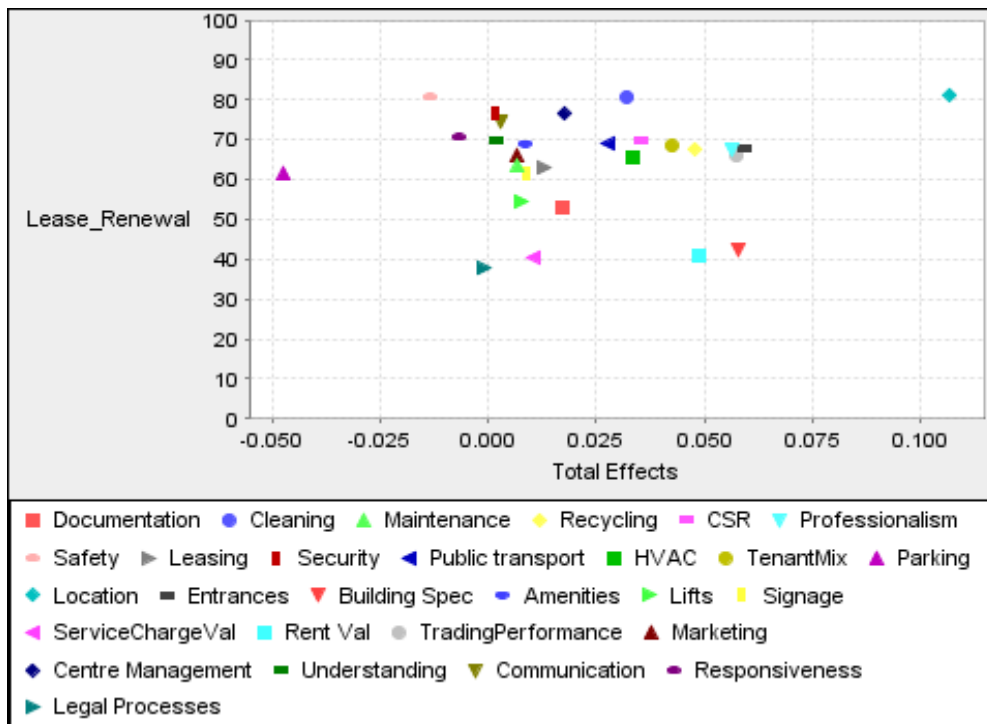
**Figure 7-3** shows the Importance – Performance Matrix for the variables which are deemed in the model to influence retailers’ stated likelihood of lease renewal for this sample of 340 store managers in shopping centres, using pairwise deletion to deal with missing data. The most important indicators can be seen to be the Corporate Social Responsibility of the Landlord, the Trading Performance of the store and satisfaction with the way in which waste is disposed of, including dealing with recyclable materials. The two aspects of high importance but fairly low performance are the shopping centre itself, for example, its image, layout or aesthetics, and value for money for rent.

When missing values are treated by mean replacement, the graph appears somewhat different, (**Figure 7-4**); Location now becomes the most important indicator of likelihood of lease renewal. Because its value is so much greater, it means the scale on the abscissa (Total Effects i.e. Importance) covers a wider range of values, meaning the other indicators appear bunched up compared with **Figure 7-3**, but are actually quite similar in order of importance and performance.

**Figure 7-3: Importance - Performance Matrix for Stated Likelihood of Lease Renewal of Retailers in Shopping Centres (missing values deleted pairwise)**



**Figure 7-4: Importance - Performance Matrix for Stated Likelihood of Lease Renewal of Retailers in Shopping Centres (Mean Replacement for missing values)**

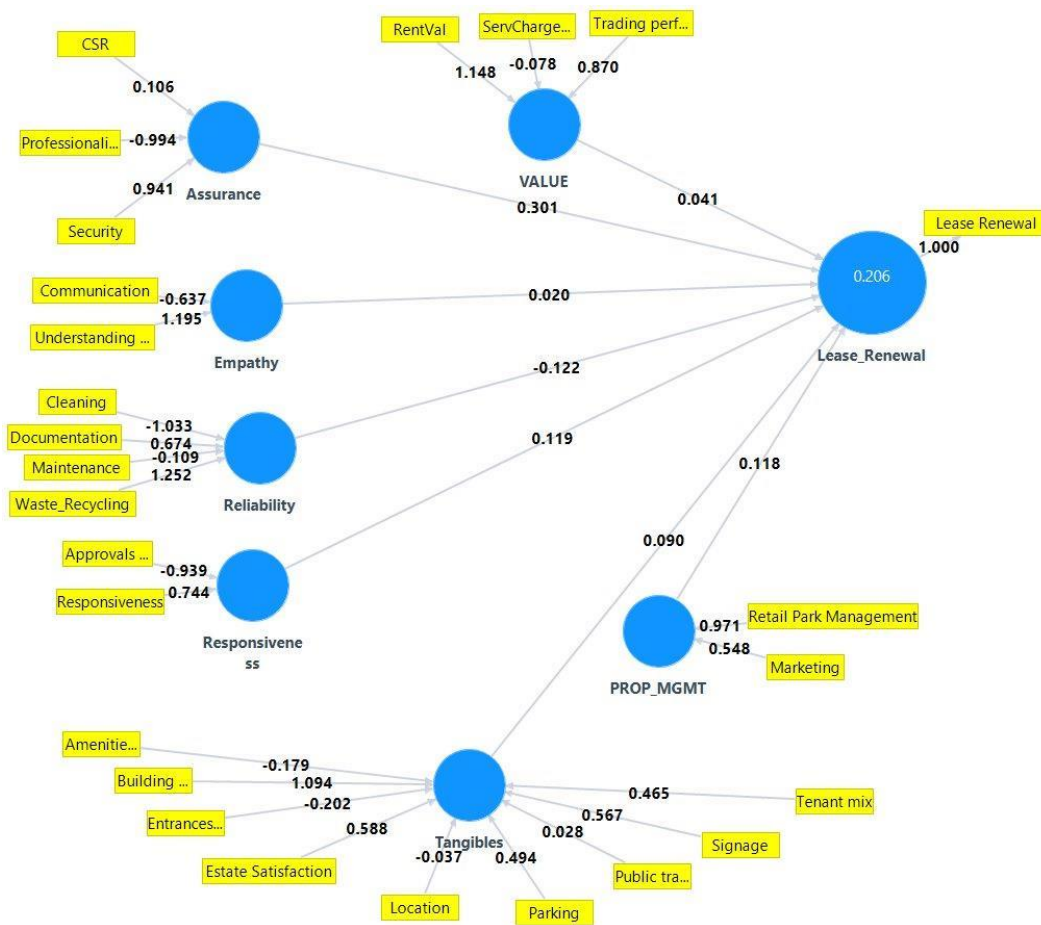


### 7.3.2 Determinants of Lease Renewal Intentions for Managers on Retail Parks

The path diagram for managers of retail warehouses is shown in **Figure 7-5**. From this, it can be seen that the constructs with the greatest impact on these retailers' stated likelihood of lease renewal are 'Assurance', 'Responsiveness' and 'Tangibles', although only 'Assurance' has an effect size which can be considered more than 'small' according to Cohen's (1988) criteria<sup>63</sup> ( $f^2 = 0.095$  for 'Assurance', 0.016 for 'Reliability' and 0.014 for 'Responsiveness'). 'Assurance' is the only construct for which the relationship with lease renewal intentions is statistically significant following bootstrapping with 500 samples ( $p=0.001$ ). The coefficient of determination in this regression is smaller than for retailers in shopping centres (0.206 compared with 0.386), implying the constructs in the model explain only one-fifth of the variance in the dependent variable.

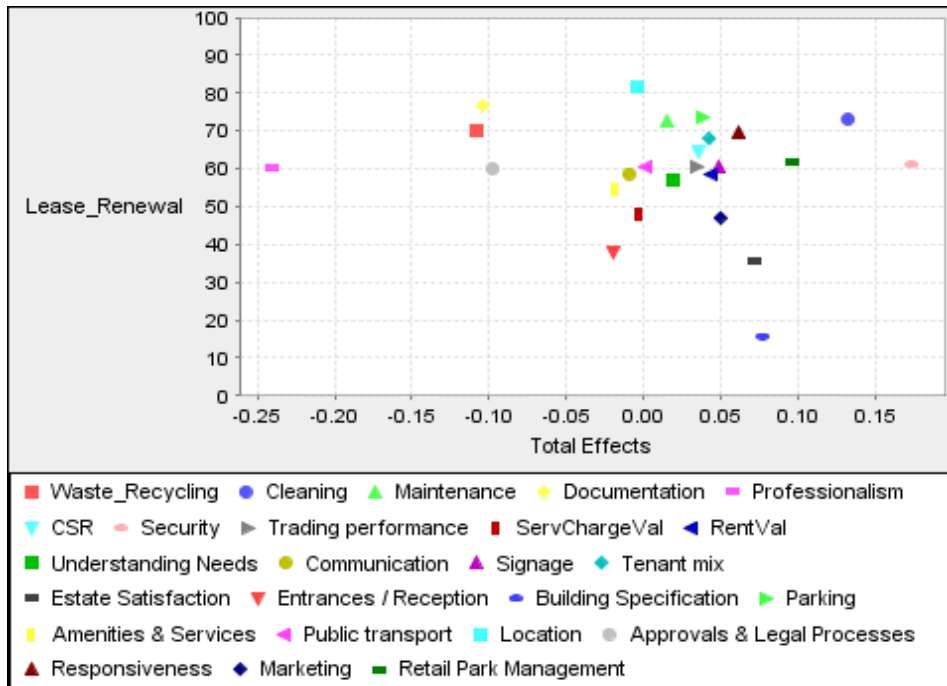
<sup>63</sup> To remind the reader, Cohen's criteria for  $f^2$  are 0.35 = large effect, 0.15 = moderate effect and 0.02 = small effect.

**Figure 7-5: Path Diagram for Retailers on Retail Parks**

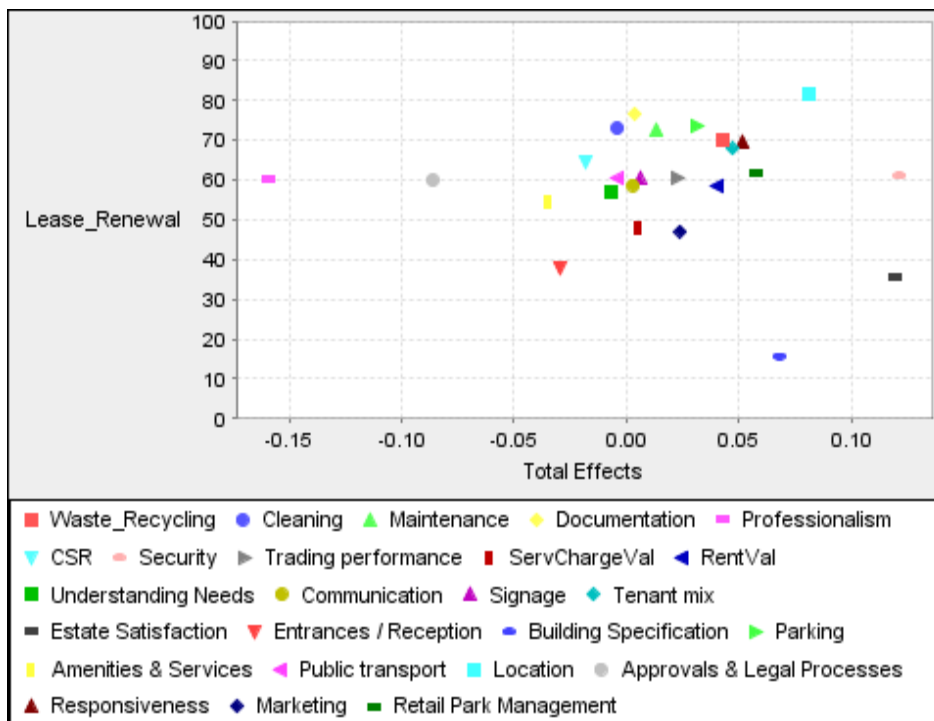


For Retailers on Retail Parks the aspects of most importance in determining stated likelihood of lease renewal are Security, Cleaning and Park Management, Estate Satisfaction and satisfaction with the retail warehouse itself (see **Figure 7-6** and **Figure 7-7**). The last two of these are also the aspects for which satisfaction is relatively low, implying that Park owners and Managers should liaise closely with occupiers to discuss what improvements they would like to see to their Retail Park, and whether anything within the remit of owner or manager can be some to improve the retail warehouses themselves.

**Figure 7-6: Importance - Performance Matrix for Stated Likelihood of Lease Renewal of Retail Warehouse Managers (missing values deleted pairwise)**



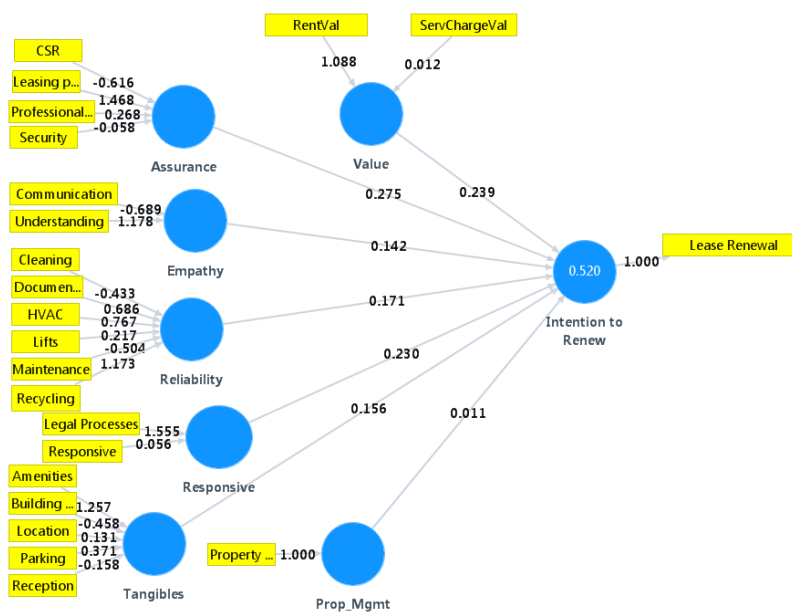
**Figure 7-7: Importance - Performance Matrix for Stated Likelihood of Lease Renewal of Managers of Retail Warehouses (Mean Replacement for missing values)**



### 7.3.3 Loyalty of Office Occupiers

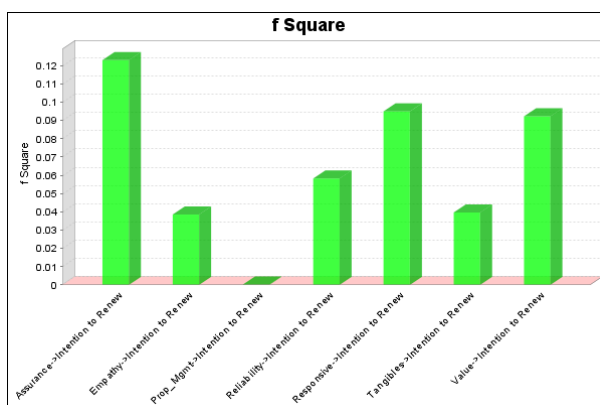
Figure 7-8 gives the results of the model for office occupiers. The coefficient of determination,  $R^2$ , is higher than for the other sectors, implying the model explains 52% of the variance in lease renewal intentions for these office occupiers. The key formative indicators in the decision to renew would appear to be value for money for rent, the leasing process, legal processes, and office amenities. The building itself appears to be of low importance, supporting previous indications that lease renewal rates are lower for offices than for other sectors – if there is less attachment to the actual building, there may be fewer barriers to “defecting”.

Figure 7-8: Path Diagram for Office Occupiers



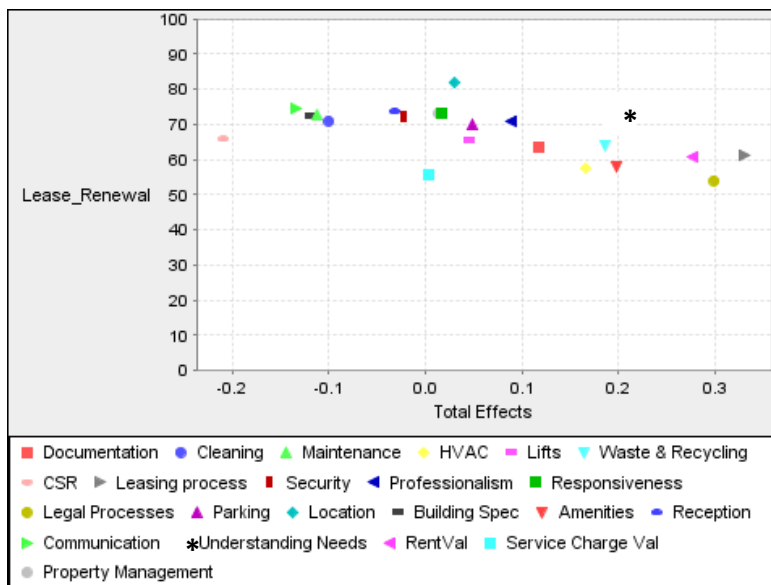
The path diagram shows that most of the constructs influence office occupiers’ loyalty, apart from ‘Property Management’ as a separate construct. From Figure 7-9 it can be seen that ‘Assurance’ has the largest effect size, with ‘Responsiveness’ and ‘Value’ also playing a role in the decision-making process. The paths which are statistically significant following Bootstrapping are ‘Assurance’ ( $p=0.001$ ), ‘Empathy’ ( $p=0.043$ ), ‘Responsiveness’ ( $p=0.008$ ), and ‘Value’ ( $p=0.001$ ).

Figure 7-9: Effect Size for Office Occupier Loyalty

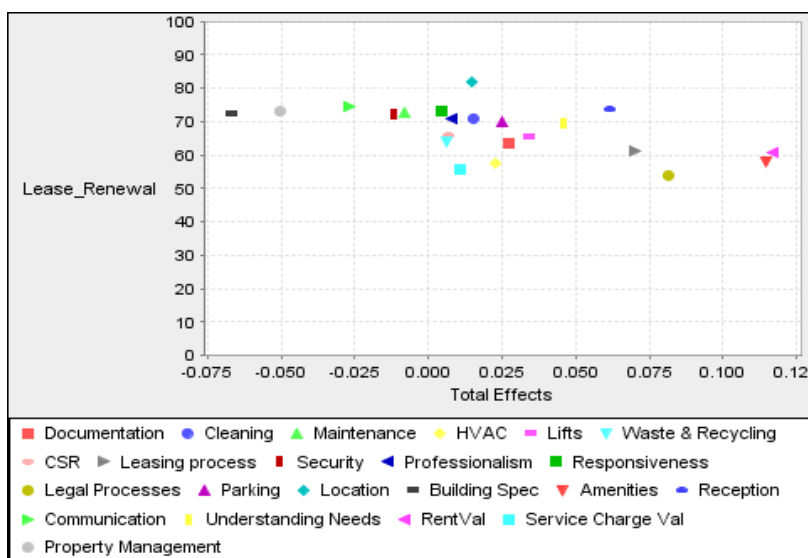


From the Importance – Performance Matrices (**Figure 7-10** and **Figure 7-11**) it can be seen that there is a negative correlation between the performance of the indicators for likelihood of lease renewal and their importance. Aspects where performance is perceived to be high are actually those of less importance in determining lease renewal. The key formative indicators listed above are those which offer the greatest scope for increasing occupiers’ stated likelihood of lease renewal for both methods of treatment of missing data: value for money for rent, the leasing process, legal processes and office amenities.

**Figure 7-10: Importance - Performance Matrix for Stated Likelihood of Lease Renewal of Office Occupiers (missing values deleted pairwise)**



**Figure 7-11: Importance - Performance Matrix for Stated Likelihood of Lease Renewal of Managers of Office Occupiers (Mean Replacement for missing values)**

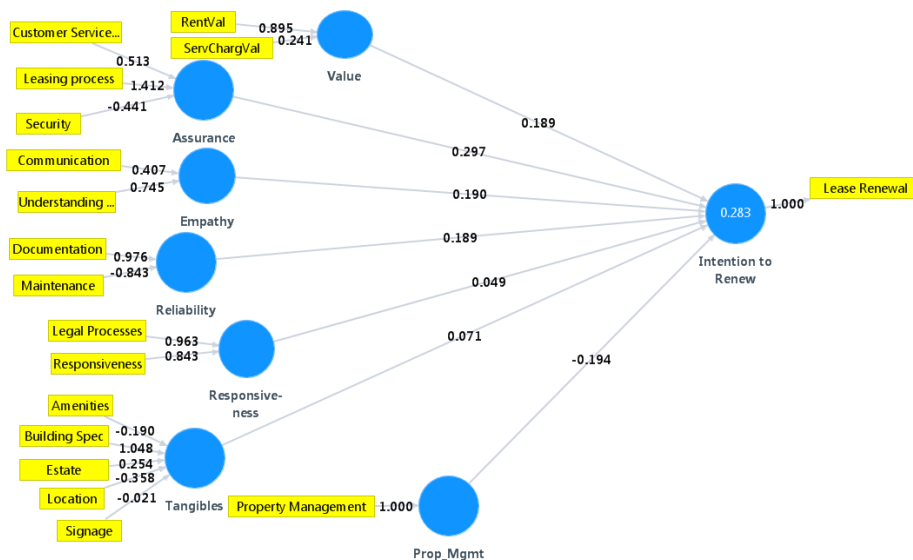




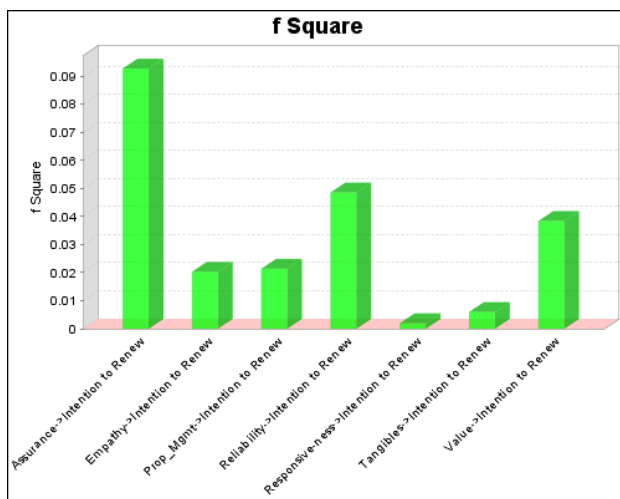
### 7.3.4 Loyalty of Industrial Occupiers

From **Figure 7-12** it is apparent that 'Assurance', 'Empathy', Reliability' and 'Value' are the constructs that have greatest influence in industrial occupiers' decision to renew their lease, with 'Assurance' having the largest effect size (**Figure 7-13**). The paths which are statistically significant are 'Assurance' ( $p=0.012$ ), 'Reliability' ( $p=0.013$ ), and 'Value' ( $p=0.016$ ).  $R^2$  is 0.283, implying there are factors other than these constructs that affect lease renewal intentions. As discussed earlier, these are likely to relate to the space requirements and commercial success of the companies occupying the properties. The aspects of service of most importance are the leasing process, the building itself, documentation, and value for money for rent, as well as the professionalism of the estate manager and their understanding of occupiers' business needs (**Figure 7-14** and **Figure 7-15**).

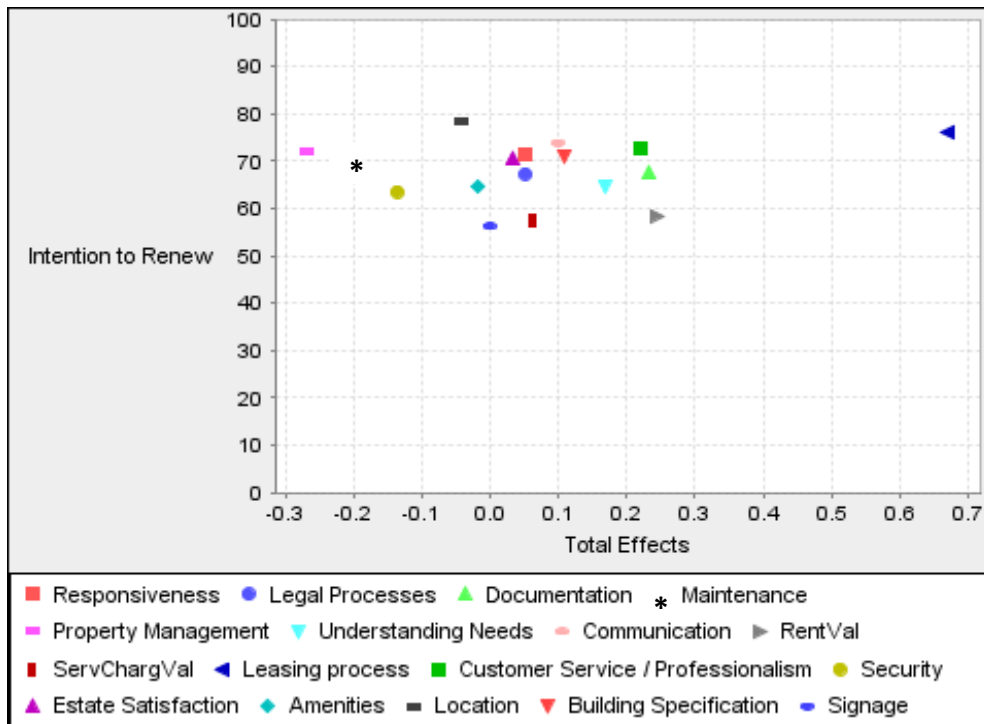
**Figure 7-12: Path Diagram for Industrial Occupiers**



**Figure 7-13: Effect Size Industrial Occupier Loyalty**



**Figure 7-14: Importance - Performance Matrix for Stated Likelihood of Lease Renewal of Industrial Occupiers (missing values deleted pairwise)**

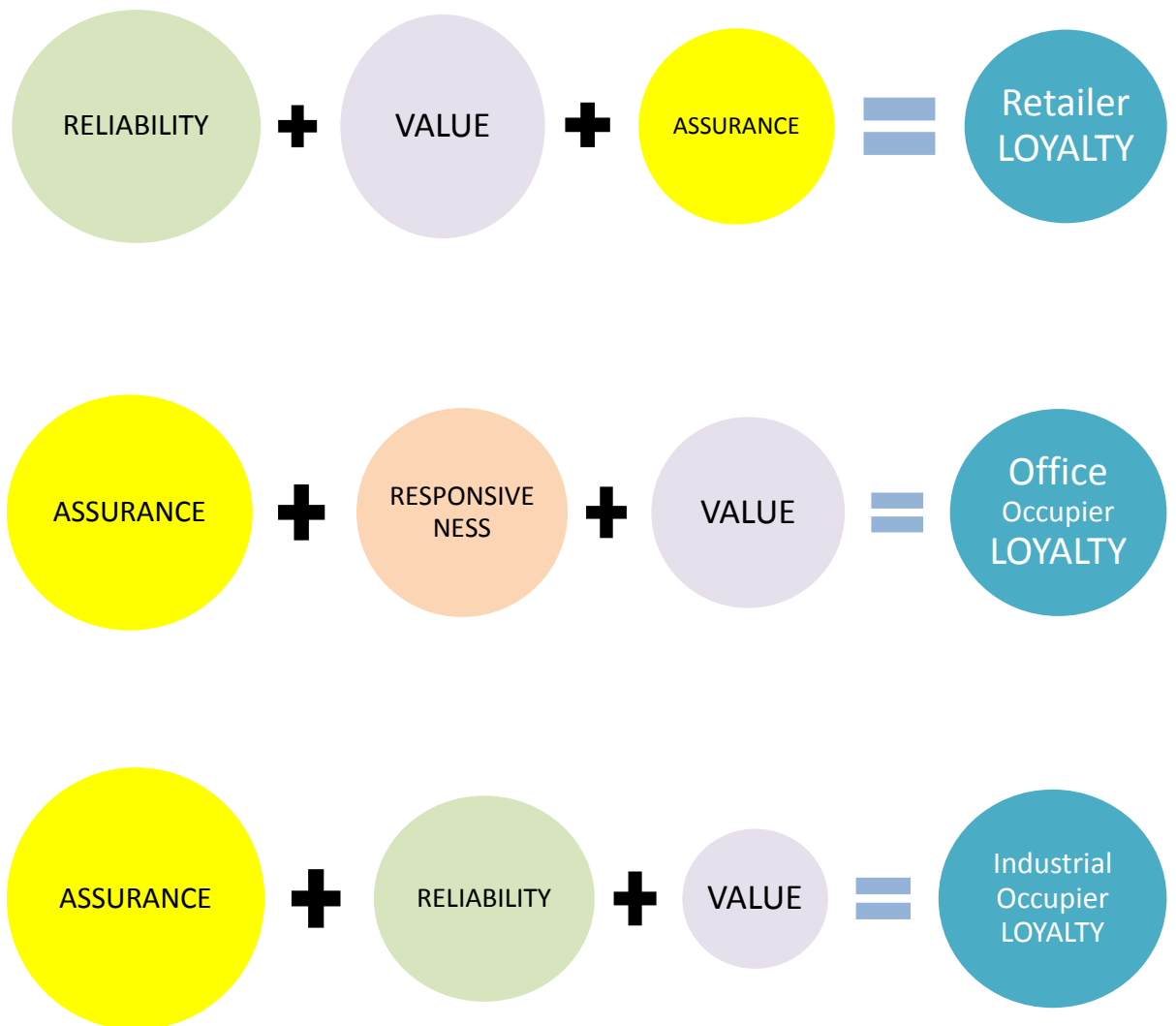


**Figure 7-15: Importance - Performance Matrix for Stated Likelihood of Lease Renewal of Managers of Industrial Occupiers (Mean Replacement for missing values)**



The key relationships from this analysis are summarised visually in **Figure 7-16**. The results are discussed in Section 7.8.

**Figure 7-16: Occupier Loyalty by Sector**



## 7.4 Supplementary Analysis of Occupier Loyalty using Logistic Regression and SERVQUAL Dimensions

For this supplementary analysis, the dependent variable is occupiers' rating of likelihood of lease renewal and the independent variables are the SERVQUAL dimensions and occupiers' ratings of satisfaction with value for money for rent and service charge. The SERVQUAL variables were formed by taking the mean ratings for the individual data items shown in **Table 5-39** and **Table 5-40**. The likelihood of lease renewal in this analysis is treated not as interval data but as ordinal data with values 1, 2, 3, 4, and 5, with no assumptions being made about the equality of interval between each value. **Table 7-4** shows the correlations, giving results using both parametric and non-parametric coefficients. From this it can be seen that the strength of correlation with likelihood of lease renewal retains almost exactly the same ordering whichever coefficient is used. Value for Money for Rent and Value for Money for Service Charge show the highest correlation, followed by 'Assurance', 'Empathy' and 'Tangibles'. The results for 'Value' and 'Assurance' confirm the SMART-PLS results of the previous section. The results for the additional dimensions may arise from multi-collinearity between dimensions (as shown in **Table 5-42**).

**Table 7-4: Correlations between Lease Renewal Intentions and the Independent Variables used for this analysis**

	Pearson Correlation	Kendall's tau	Spearman's rho
SQ_Tangibles	.175**	.130**	.178**
SQ_Reliability	.133**	.112**	.148**
SQ_Responsiveness	.122**	.089**	.116**
SQ_Assurance	.150**	.141**	.194**
SQ_Empathy	.158**	.125**	.163**
Rent Value for Money	.276**	.208**	.256**
Service Charge Value for Money	.187**	.166**	.208**

Using multinomial logistic regression for the sample as a whole, it can be seen from **Table 7-5** that most of the observations included in the analysis were from respondents who rated their likelihood of lease renewal '3' – '5', i.e. the sample is skewed towards those who were more inclined to renew. This analysis uses list-wise data in the regression, so cases are only included if data is available for all the independent variables, which, in logistic regression, are often referred to as "predictors".

**Table 7-5: Summary of Cases included in the Model**

Case Processing Summary			
		N	Marginal Percentage
IntLeaseRenew	1.00	29	5.2%
	2.00	52	9.3%
	3.00	103	18.4%
	4.00	202	36.1%
	5.00	174	31.1%
Valid		560	100.0%
Missing		3922	
Total		4482	

Performing the logistic regression for the sample as a whole, the likelihood ratio tests are statistically significant, meaning that the predictors (independent variables) do contribute something towards the model, but the pseudo R<sup>2</sup> statistics<sup>64</sup> are very small:

Pseudo R-Square	
Cox and Snell	.150
Nagelkerke	.160
McFadden	.057

**Table 7-6** shows that, apart from the intercept which represents the situation in which all predictors contribute nothing to the model, the only statistically significant predictor of likelihood of lease renewal is Value for Money for Rent.

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<sup>64</sup> Various goodness of fit measures have been derived for logistic regression, analogous to R<sup>2</sup> in linear regression. Cox & Snell's R<sup>2</sup> is based on a log-likelihood for the model compared with a baseline model with no predictors, but the maximum value is always less than 1. Nagelkerke's R<sup>2</sup> is an adjusted version of Cox & Snell's R<sup>2</sup> which can attain 1 (Pallant, 2010; Tabachnick & Fidell, 2013). McFadden's R<sup>2</sup> calculates a "proportional reduction in error variance" (<http://statisticalhorizons.com/r2logistic>).

**Table 7-6: Contribution of each Predictor**

Likelihood Ratio Tests				
Effect	Model Fitting Criteria	Likelihood Ratio Tests		
	-2 Log Likelihood of Reduced Model	Chi-Square	df	Sig.
Intercept	1531.088	35.819	4	.000
SQ_Assurance	1497.634	2.366	4	.669
SQ_Empathy	1498.110	2.842	4	.585
SQ_Reliability	1502.443	7.174	4	.127
SQ_Responsiveness	1500.707	5.439	4	.245
SQ_Tangibles	1499.967	4.699	4	.320
Rent Value for Money	1515.889	20.620	4	<b>.000</b>
Service Charge Value for Money	1501.194	5.925	4	.205

The chi-square statistic is the difference in -2 log-likelihoods between the final model and a reduced model. The reduced model is formed by omitting an effect from the final model. The null hypothesis is that all parameters of that effect are 0.

**Table 7-7** gives the parameter estimates for the predictors in the model. The reference category is '1' so the parameters show the contribution the predictors make towards increasing an occupier's rating of their likelihood of lease renewal. The incongruity of the results is apparent from negative parameter estimates. For logistic regression the easiest way to interpret results is to look at the Exp (B) column. This gives the change in the odds ratio for the dependent variable caused by a 1-unit increase in the predictor, all other predictors remaining constant. Thus, for example, as 'Assurance' increases by 1 unit (say, from '3' to '4') the odds of a respondent rating their likelihood to renew their lease '2' as opposed to the reference rating of '1' decrease to two-thirds (Exp (B) = 0.677). So an increase in satisfaction with 'Assurance' appears to decrease likelihood of lease renewal. However, the parameters are mostly non-significant, and so the predictors are not actually contributing to the model.

The only parameter that is statistically significant and reflects a positive relationship with increasing likelihood of lease renewal is Rent Value for Money for predicting likelihood of lease renewal '4' (Likely) or '5' (Very likely). For each unit increase in satisfaction with Value for Money for Rent, an occupier is 1.8 times as likely to rate their lease renewal intentions '4' compared with '1', and they are (according to the model) 2.13 times as likely to give a rating of '5' as opposed to '1'. Counter-intuitively, 'Reliability' shows statistical significance at the 90% confidence level, but a negative relationship with lease renewal. This highlights the fact that lease renewal depends upon factors other than these independent variables, as discussed in the previous section to explain the low coefficients of determination for the SMART-PLS regressions.

**Table 7-7: Parameter Estimates for Full Sample (N = 560)**

IntLeaseRenew		B	Std. Error	Wald <sup>65</sup>	Sig.	Exp(B)
2.00	Intercept	4.875	2.157	5.110	.024	
	SQ_Assurance	-.390	.423	.851	.356	.677
	SQ_Empathy	-.038	.449	.007	.932	.962
	SQ_Reliability	-1.026	.531	3.735	<b>.053</b>	.358
	SQ_Responsiveness	.242	.361	.450	.502	1.274
	SQ_Tangibles	.034	.550	.004	.950	1.035
	Rent Value for Money	-.014	.302	.002	.963	.986
	Service Charge Value for Money	.037	.342	.012	.913	1.038
3.00	Intercept	4.644	2.003	5.377	.020	
	SQ_Assurance	-.500	.396	1.592	.207	.607
	SQ_Empathy	-.060	.417	.021	.885	.942
	SQ_Reliability	-1.207	.491	6.033	<b>.014</b>	.299
	SQ_Responsiveness	.635	.338	3.536	.060	1.888
	SQ_Tangibles	.299	.512	.342	.558	1.349
	Rent Value for Money	.233	.280	.690	.406	1.262
	Service Charge Value for Money	-.292	.311	.881	.348	.747
4.00	Intercept	.719	1.924	.140	.708	
	SQ_Assurance	-.255	.382	.446	.504	.775
	SQ_Empathy	.186	.398	.219	.640	1.204
	SQ_Reliability	-.771	.469	2.697	<b>.101</b>	.463
	SQ_Responsiveness	.233	.311	.560	.454	1.262
	SQ_Tangibles	.669	.494	1.835	.176	1.952
	Rent Value for Money	<b>.587</b>	.268	4.812	<b>.028</b>	<b>1.799</b>
	Service Charge Value for Money	-.156	.294	.283	.595	.855
5.00	Intercept	-1.486	1.968	.570	.450	
	SQ_Assurance	-.243	.392	.383	.536	.785
	SQ_Empathy	.340	.410	.685	.408	1.404
	SQ_Reliability	-.868	.479	3.282	<b>.070</b>	.420
	SQ_Responsiveness	.378	.322	1.376	.241	1.459
	SQ_Tangibles	.599	.504	1.412	.235	1.821
	Rent Value for Money	<b>.759</b>	.276	7.578	<b>.006</b>	<b>2.135</b>
	Service Charge Value for Money	.134	.303	.196	.658	1.143

<sup>65</sup> The Wald test statistic is  $B^2 / (\text{Std. Error})^2$ . Sig represents the probability that a particular predictor's regression coefficient is non-zero given that the rest of the predictors are in the model.

Separate analyses were performed for each sector, and the results are given in Appendix G, **Tables G-1 – G-3**. For retailers in shopping centres, none of the parameter estimates is statistically significant. For Retail Parks, too, (not shown), the estimates were insignificant, mainly because the sample size was too small – only 30 cases had data for all predictors as well as the dependent variable.

For office occupiers, Value for Money for Rent is again the only statistically significant predictor which correlates positively with likelihood of lease renewal. For each unit increase in satisfaction with Value for Money for Rent, an office occupier is 4.14 times as likely to rate their lease renewal intentions '4' compared with '1', and they are (according to the model) 13.65 times as likely to give a rating of '5' as opposed to '1'. These are evidently large odds ratios, and highlight how important it is that landlords provide value for money (and demonstrate that they are doing so). For industrial occupiers, too, value for money for rent can be seen to be fundamental to occupiers' lease renewal intentions, with odds ratios of 5.0, 4.4 and 9.0 for increasing the stated likelihood of lease renewal from '1' to '2', '4' and '5' respectively.

For industrial occupiers, 'Empathy' also has a positive and statistically significant effect on occupiers giving a rating of '4' rather than '1' to their likelihood of lease renewal. The apparent negative relationship between 'Reliability' and lease renewal intentions observed for the full sample can be seen to be attributable to Industrial Occupiers. It seems unlikely that there is a genuine negative relationship, but perhaps 'Reliability' is unimportant to those Industrial occupiers who are responsible for procuring their own services and are more self-sufficient?

To assess whether the strength of the relationship between lease renewal intentions and Value for Money for Rent is obscuring the relationship with the SERVQUAL aspects of property management, the regressions were repeated using only the SERVQUAL predictors (**Tables G-4 – G-7**). This allows more cases to be included in the analysis i.e. responses from occupiers who were not asked about Value for Money. The results of this analysis imply that the only statistically significant variable that is positively correlated with increasing the likelihood of lease renewal is 'Empathy', for Retailers in Shopping Centres (see **Table G-4**) and for Industrial occupiers (**Table G-7**).



These logistic regressions complement the SMART-PLS analysis, and have confirmed the importance of Value for Money in lease renewal decisions, but also produced contradictory results in finding 'Empathy' to be important but 'Assurance' unimportant to occupiers' lease renewal decisions, and 'Reliability' having a negative relationship for Industrial Occupiers. The differences are likely to be due to the respective samples. The sample size for the SMART-PLS analysis was larger, as cases could be included with incomplete data, as the algorithm used pairwise deletion for missing variables, but potentially introducing missing variable bias. Conversely, for the multinomial logistic regression, cases were only included if data was available for all variables i.e. listwise, which might have introduced sample bias. The correlations, **Table 7-4**, given at the start of this Section certainly imply that the relationship between the independent variables and stated likelihood of lease renewal should be positive, but when they are all included in a regression, multi-collinearity amongst the independent variables can bias the apparent importance of each.

## 7.5 Occupiers' Willingness to Recommend their Landlord or Property

### Manager: Analysis using SMART-PLS

As mentioned in Section 7.2, in many of the occupier satisfaction surveys, occupiers were asked about their willingness to recommend their landlord or property manager (depending upon whom they had more contact with). In the structural equation modelling of this section, the variable with an ordinal response format '1' to '5' is used as the dependent variable. This analysis is similar to that of Section 7.4 in which 'likelihood of lease renewal' was used as the dependent variable with SMART PLS. Importance-Performance Analysis is not included here, however, because it is similar to that carried out in Chapter 6 in the assessment of determinants of Landlord Reputation, and because the logistic regression in the subsequent section examines the individual variables of most importance in determining occupiers' willingness to recommend their landlord.

**Table 7-8** shows the correlations between occupiers' ratings of their willingness to recommend their Landlord and the Independent Variables used for this analysis, giving results using both parametric and non-parametric coefficients. From this it can be seen that the strength of correlation with occupiers' willingness to recommend their landlord retain almost exactly the same ordering whichever coefficient is used. 'Empathy', 'Assurance', 'Responsiveness, Value for Money for Rent, and Value for Money for Service Charge show the highest correlations, and all correlations are statistically highly significant.

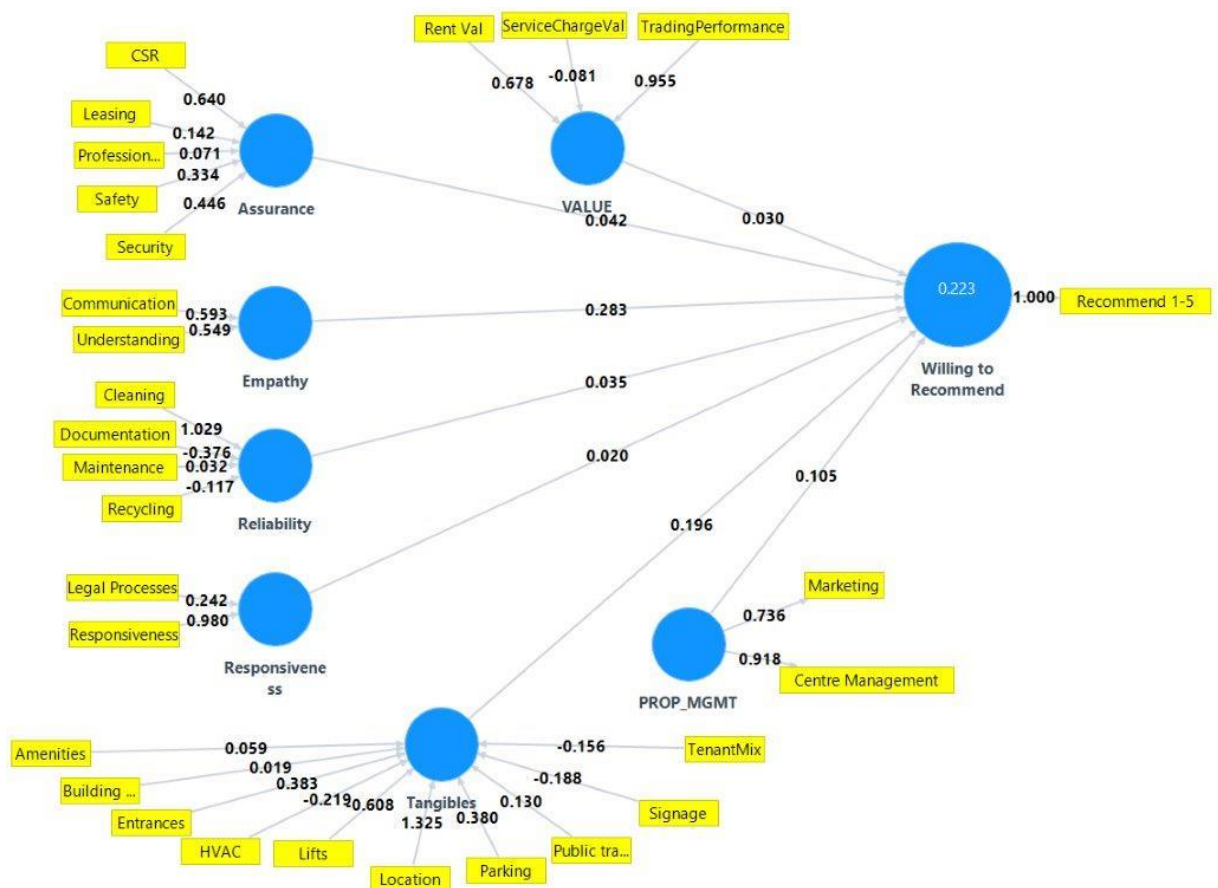
**Table 7-8: Correlations between Willingness to Recommend Landlord and the Independent Variables used for this analysis**

		Pearson Correlation	Kendall's tau	Spearman's rho
SQ_Assurance	Pearson Correlation	.447**	.322**	.408**
	N	1455	1455	1455
SQ_Empathy	Pearson Correlation	.561**	.423**	.521**
	N	1811	1811	1811
SQ_Reliability	Pearson Correlation	.317**	.247**	.309**
	N	1674	1674	1674
SQ_Responsiveness	Pearson Correlation	.459**	.340**	.411**
	N	1770	1770	1770
SQ_Tangibles	Pearson Correlation	.293**	.221**	.280**
	N	1647	1647	1647
Rent Value for Money	Pearson Correlation	.391**	.308**	.361**
	N	1002	1002	1002
Service Charge Value for Money	Pearson Correlation	.331**	.244**	.293**
	N	1061	1061	1061

### 7.5.1 Retailers' Willingness to Recommend their Landlord or Property Manager

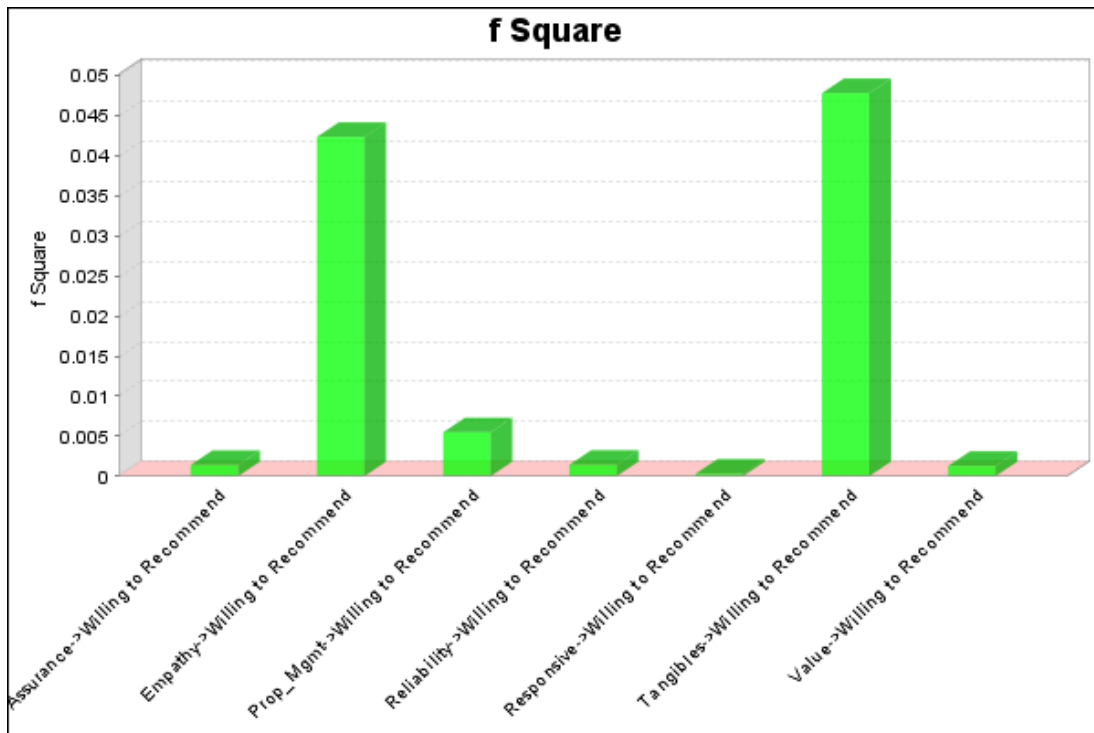
From **Figure 7-17** and **Figure 7-18** it can be seen that the main determinants of retailers' willingness to recommend their landlord or Property Manager are the 'Empathy' and 'Tangibles' constructs. These paths are statistically highly significant ( $p=0.000$  and  $p=0.017$ )<sup>66</sup>. The key indicators for these are communication, understanding retailers' needs, the location and entrances of the Shopping Centre or Retail Park, and parking facilities. Although some of the other formative indicators have high path weights, the constructs themselves have small coefficients, so are not influential in determining retailers' willingness to recommend. The coefficient of determination for the regression is 0.223, so the independent variables explain only 22% of the variance in advocacy amongst retailers in shopping centres.

**Figure 7-17: Path Diagram for Retailers**



<sup>66</sup> The statistical significance was found using the same method as in Chapter 6 and for the Lease Renewal Intentions analysis in Section 7.4 i.e. by bootstrapping using 500 samples from the data.

Figure 7-18: Effect Size Retailer Advocacy



### 7.5.2 Office Occupiers' Willingness to Recommend their Landlord or Property Manager

The main determinants of office occupiers' willingness to recommend their landlord of building manager are 'Empathy' and 'Property Management' (Figure 7-19 and Figure 7-20). Both paths are statistically significant ( $p= 0.000$  and  $p= 0.003$  respectively). The latter appeared to be unimportant in lease renewal decisions (although the individual SERVQUAL dimensions were all important), but for landlord advocacy 'Property Management' does seem to be influential as a separate construct. The regression explains 40% of the variance in advocacy amongst office occupiers ( $R^2 = 0.399$ ).

Figure 7-19: Path Diagram for Office Occupiers

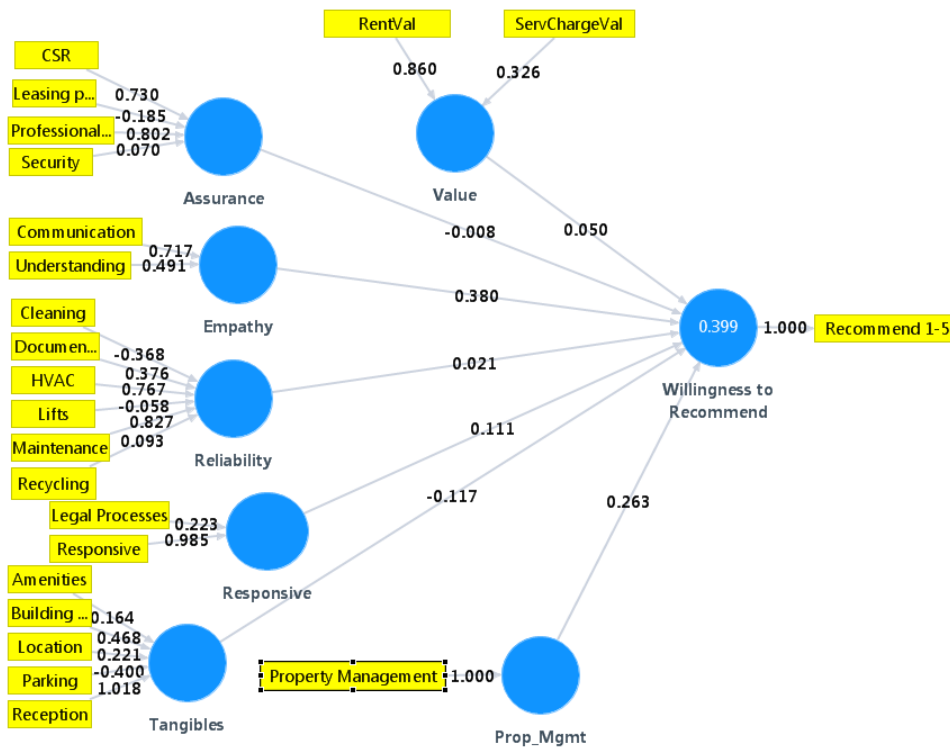
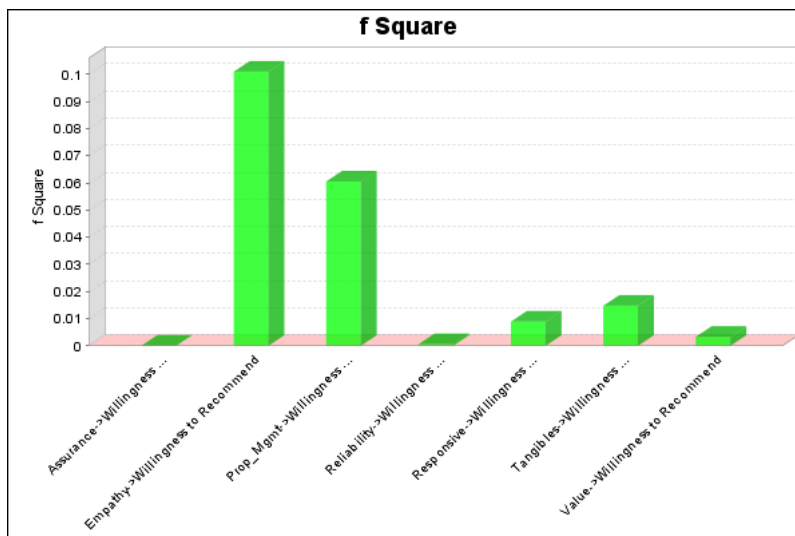


Figure 7-20: Effect Size Office Occupier Advocacy



### 7.5.3 Industrial Occupiers' Willingness to Recommend their Landlord or Estate Manager

For Industrial Occupiers, the paths with the highest coefficients are from 'Empathy', 'Value', 'Reliability' and 'Tangibles' (Figure 7-21), each of which is statistically highly significant following Bootstrapping ( $p=0.000$ ). Of these paths, 'Value' has the greatest effect size, albeit 'small' to 'moderate' using Cohen's criteria. Value for both rent and service charge is an important factor in Industrial Occupiers' willingness to recommend their landlord or Estate Manager, as are communication, understanding needs, accuracy and clarity of documentation, estate maintenance and amenities, and the building itself.  $R^2$  in this model is larger than for the sample of office occupiers and retailers, at 0.456.

Figure 7-21: Path Diagram for Industrial Occupiers

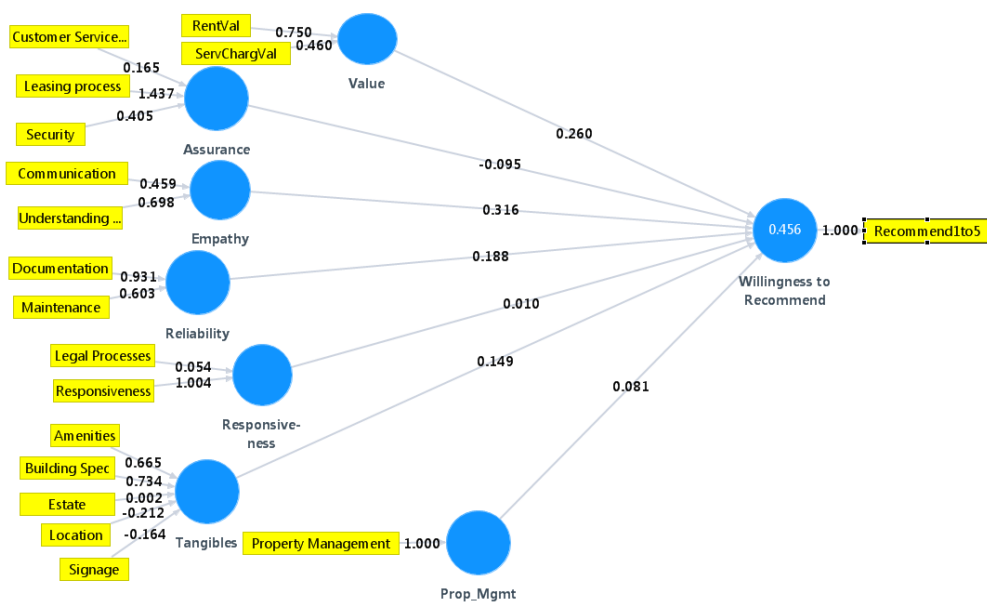
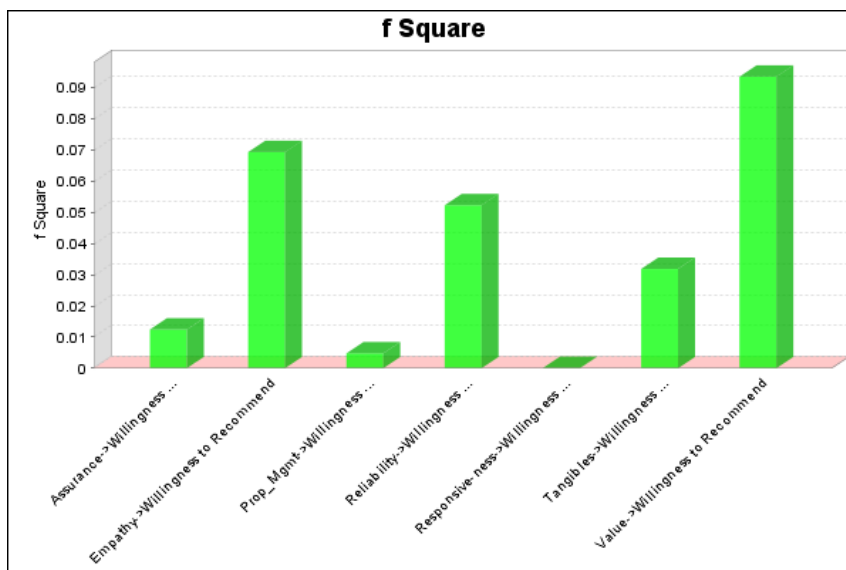


Figure 7-22: Effect Size Industrial Occupier Advocacy



## 7.6 Investigating Advocacy using Binary Logistic Regression

### 7.6.1 Introduction

The idea of the 'Net Promoter Score' (Reichheld, 2003, 2006) is that customers who are strongly willing to recommend a company can be considered promoters or advocates of a company, and that the difference between the number of promoters and detractors gives a good indicator of whether a company is likely to flourish<sup>67</sup>. What can a landlord do to turn a tenant into an advocate who will actively recommend their landlord or property manager? An 'advocate / magnet occupier' (Edington, 1997 p. 21) should reduce the costs associated with letting commercial property, and increase occupancy rates, by encouraging other organisations to rent from the landlord. There has been little academic research into what aspects of property management have most impact on creating magnet occupiers, a situation which this Section attempts to remedy.

As mentioned in Chapter 5, the data set contained two variables relating to advocacy: 1) Willing to Recommend – Yes / No, and 2) Willingness to Recommend – rated '1' – '5'. Each respondent was asked one or other of these questions, but not both. The former question, with a binary response variable, was found to be a poor discriminator when used as the dependent variable in regressions, because many occupiers had responded that they "wouldn't 'not recommend'" their landlord, which was recorded by the interviewer as a "yes", resulting in no differentiation between those who are active advocates and those who passively tolerate the relationship.

In order to use a variable which discriminated better, the willingness to recommend variable (ordinal response '1' to '5') was initially modified to form a categorical variable RecBinary in which a rating of '4' or '5' was treated as a "Yes" response, while a rating of '1' – '3' was treated as "No". However, because approximately 90% of respondents rated their willingness '4' or '5' on the 5-point scale, logistic regression using RecBinary did not add much to the naive model with no predictor variables, whereby the assumption that respondents would be willing to recommend had a 90% probability of being correct. Therefore, in order to even up the sample sizes, a binary logistic regression was carried out for which a 'Willingness to recommend' score of '5' was compared with any other score. This is analogous to the Net Promoter score which uses a 10-point scale, with scores of '9' or '10' being considered "promoters". The independent variables in this analysis consist of the five SERVQUAL dimensions; these comprise the individual variables as shown in Chapter 5, **Table 5-39**. Unlike the

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<sup>67</sup> As discussed in Chapter 2 of this Thesis, the Net Promoter Score (NPS) is based on responses to the single question "How likely is it that you would recommend this company to a friend or colleague?" Customers rate the likelihood that they would recommend the company (or its product or service) to others. Those that give a score of 0 – 6 are considered "detractors"; 7 – 8 is neutral or passive whilst "promoters" are the customers who rate their likelihood to recommend 9 – 10. NPS is calculated by subtracting the percentage of detractors from the percentage of promoters.

Structural Equation Modelling, Property Management is not included as a separate construct, although the impact of Value for Money is considered in the analysis.

### 7.6.2 Logistic Regression: Methodology

Data analysis was undertaken in several ways to ensure robust conclusions could be drawn. Firstly, the full sample was analysed with the binary “Willingness to recommend” as dependent variable in a logistic regression with the five SERVQUAL dimensions and the ‘Value for Money’ variables as predictors. A constant was included to represent the likelihood of recommendation if all of the predictors are zero, a scenario that could arise if other factors affect the willingness of occupiers to recommend their landlord.

Following this, the binary logistic regression was repeated to include sector dummy variables, using shopping centres as the reference category.

These regressions were repeated, this time omitting the ‘Value’ predictor variables, in order to focus on the impact of property management service, using just the SERVQUAL dimensions as predictors (independent variables). This was then extended to assess the relationship between the SERVQUAL dimensions and advocacy for the three sectors separately.

With binary logistic regression, the linear regression is the natural logarithm of the probability of being in one group (e.g. willing to recommend) divided by the probability of being in the other group. The analysis used listwise inclusion of cases, omitting those for which data was not available for one or more of the predictors. This affects the sample size; more cases have data for all variables when the ‘Value’ predictors are excluded.

### 7.6.3 Binary Logistic Regression with SERVQUAL and Value Predictors: Results

Analysing all properties, the naive model, which makes the assumption that occupiers would not be advocates, predicts 63.3% of the 420 cases correctly:

Classification Table					
	Observed		Predicted		
			Rec14n5yRnd		Percentage Correct
			.000	1.000	
Step 0	Rec14n5yRnd	.000	266	0	100.0
		1.000	154	0	.0
	Overall Percentage				63.3

N=420



The goodness of fit test of model coefficients<sup>68</sup> shows that the model is significantly ( $p < 0.0005$ ) better than the naive model which assumed no-one would rate their willingness to recommend their landlord or property manager '5' on a scale of '1' – '5' (Chi-square = 96.78 with 7df). The Hosmer and Lemeshow test also provides support for the model, with a non-significant result (Chi-square = 5.79 with 8df,  $p = 0.671$ ) indicating that the null hypothesis that there is no difference between observed and model-predicted values should not be rejected<sup>69</sup>. The model as a whole explained between 21% (Cox & Snell  $R^2$ )<sup>70</sup> and 28% (Nagelkerke's  $R^2$ ) of the variance in occupiers' willingness to recommend their landlord, and correctly classified 73.1% of cases.

Classification Table					
	Observed	Predicted			
		Rec14n5yRnd		Percentage Correct	
		.000	1.000		
Step 1	Rec14n5yRnd	.000	228	38	85.7
		1.000	75	79	51.3
	Overall Percentage				73.1

**Table 7-9: Logistic Regression Results for Full Sample**

		B	S.E.	Wald	Sig.	Exp(B)
Step 1 <sup>a</sup>	SQ_Assurance	.151	.209	.522	.470	1.163
	SQ_Empathy	.910	.238	14.613	<b>.000</b>	<b>2.485</b>
	SQ_Reliability	.192	.244	.624	.430	1.212
	SQ_Responsiveness	.027	.203	.017	.896	1.027
	SQ_Tangibles	.259	.199	1.682	.195	1.295
	RentValueforMoney	.894	.181	24.464	<b>.000</b>	<b>2.444</b>
	ServiceChargeValueforMoney	.022	.168	.017	.898	1.022
	Constant	-9.457	1.318	51.507	.000	.000

The coefficients for the regression are given in **Table 7-9**. These results indicate that only 'Empathy' and Value for Money for Rent are significant predictors of willingness of occupiers to recommend

<sup>68</sup> Significance of coefficients is tested using Wald Statistic [squared coefficient divided by squared standard error of coefficient] which follows a Chi<sup>2</sup> distribution

Model comparison - Goodness of fit: A model log likelihood is obtained by summing the individual log likelihoods of each case, and nested models can be compared by comparing the log likelihoods (multiplied by -2), which also follows a Chi<sup>2</sup> distribution.

<sup>69</sup> In the Hosmer-Lemeshow Test a non-significant value ( $> 0.05$ ) indicates support for a model. Researchers have, however, raised concerns about the validity of the test as it depends upon how many groups are chosen for calculating observed and expected frequencies (Allison, 2014) and with large sample sizes small departures from expected values can produce a non-significant test result.

<sup>70</sup> As discussed in Section 7.6, various goodness of fit measures exist for logistic regression analogous to  $R^2$  in linear regression. Cox & Snell's  $R^2$  is based on a log-likelihood for the model compared with a baseline model with no predictors, but the maximum value is always less than 1. Nagelkerke's  $R^2$  is an adjusted version of Cox & Snell's  $R^2$  which can attain 1 (Pallant, 2010; Tabachnick & Fidell, 2013).

their landlord or property manager. From the column Exp (B) it can be seen that for each unit increase in satisfaction with 'Empathy', the odds of a respondent recommending the landlord increase by a factor of 2.5 (all other aspects remaining unchanged<sup>71</sup>). A similar odds ratio is observed for Value for Money for Rent.

Analysing the full sample using a single model with dummy variables for the sectors, **Table 7-10** has similar explanatory power as the model without sector: 21.4% (Cox & Snell R<sup>2</sup>) and 29.3% (Nagelkerke's R<sup>2</sup>). The model correctly classified 74.3% of cases, compared with 63.3% for the naive model with no terms in the equation. The omnibus test of model coefficients was significant (Chi-square = 101.3 with 9df). The Hosmer and Lemeshow test also provides support for the model, with a non-significant result (Chi-square = 12.7 with 8df, p=0.121).

**Categorical Variables Coding**

		Frequency	Parameter coding	
			(1)	(2)
Sector	Industrial	187	1.000	.000
	Office	129	.000	1.000
	Retail (SC)	104	.000	.000

**Model with no predictors: Classification Table**

	Observed	Rec14n5yRnd	Predicted		Percentage Correct
			Rec14n5yRnd		
			.000	1.000	
Step 0	Rec14n5yRnd	.000	608	0	100.0
		1.000	407	0	.0
	Overall Percentage				59.9

**Full Model Classification Table**

	Observed	Rec14n5yRnd	Predicted		Percentage Correct
			Rec14n5yRnd		
			.000	1.000	
Step 1	Rec14n5yRnd	.000	510	98	83.9
		1.000	185	222	54.5
	Overall Percentage				72.1

<sup>71</sup> In fact this is not a realistic scenario in practice, because of correlations between SERVQUAL dimensions, but it is the statistical interpretation of the equation.

**Table 7-10: Regression with Sector Dummy Variables**

	B	S.E.	Wald	Sig.	Exp(B)
SQ_Assurance	.115	.218	.276	.599	1.122
SQ_Empathy	.882	.244	13.095	<b>.000</b>	<b>2.417</b>
SQ_Reliability	.147	.250	.344	.558	1.158
SQ_Responsiveness	.029	.211	.019	.890	1.030
SQ_Tangibles	.345	.215	2.579	.108	1.413
Rent Value for Money	.914	.185	24.358	<b>.000</b>	<b>2.495</b>
Service Charge Value for Money	.050	.170	.086	.770	1.051
Ref Shopping Centre			4.512	.105	
Office	-.598	.291	4.239	<b>.040</b>	<b>.550</b>
Industrial	-.198	.323	.377	.539	.820
Constant	-9.214	1.343	47.093	.000	.000

These results are similar to the model which excludes Sector, with only the ‘Empathy’ dimension and satisfaction with Value for Money for Rent being significant predictors of the willingness of occupiers to recommend their landlord or property manager.

The results appear to show that sector as a whole is marginally significant at the 10% level ( $p=0.105$ ). The reference group is retailers in shopping centres. There is a small difference between office and shopping centre respondents ( $\text{exp}(B) = 0.55$ ,  $\text{sig} = 0.04$ ), but the difference for occupiers in industrial estates is not statistically significant ( $p=0.539$ ).

From this analysis, it is apparent that value for money for rent overshadows all aspects of property management service quality apart from ‘Empathy’. In order to focus on the property management aspects themselves, the preceding analysis was repeated, omitting the Value for Money variables. This also has the benefit of increasing the sample size from 420 to 1015.

#### 7.6.4 Binary Logistic Regression using only SERVQUAL Predictors: Results

Analysing all properties, the naive model, which makes the assumption that occupiers would not be advocates, predicts 59.9% correctly:

		Predicted		
		Rec14n5yRnd		Percentage Correct
Observed	.000	1.000		
Step 0	Rec14n5yRnd	.000	1.000	
		608	0	100.0
		407	0	.0
	Overall Percentage			59.9

The goodness of fit test of model coefficients shows that the model is significantly ( $p<0.0005$ ) better than the naive model which assumed no-one would rate their willingness to recommend their landlord or property manager ‘5’ on a scale of ‘1’ – ‘5’ (Chi-square = 229.6 with 5df). The Hosmer and Lemeshow test also provides support for the model, with a non-significant result (Chi-square = 11.95 with 8df,  $p=0.153$ ) indicating that the null hypothesis that there is no difference between observed

and model-predicted values should not be rejected. The model as a whole explained between 20% (Cox & Snell  $R^2$ ) and 27% (Nagelkerke's  $R^2$ ) of the variance in occupiers' willingness to recommend their landlord, and correctly classified 72.2% of cases.

Observed			Predicted		
			Rec14n5yRnd		Percentage Correct
			.000	1.000	
Step 1	Rec14n5yRnd	.000	514	94	84.5
		1.000	188	219	53.8
	Overall Percentage				72.2

**Table 7-11: Logistic Regression Results**

	B	S.E.	Wald	df	Sig.	Exp(B)	95% C.I. for EXP(B)	
							Lower	Upper
SQ_Assurance	.539	.144	14.054	1	.000	1.714	1.293	2.271
SQ_Empathy	1.051	.155	45.751	1	.000	2.860	2.109	3.878
SQ_Reliability	.312	.135	5.307	1	.021	1.366	1.048	1.781
SQ_Responsiveness	.218	.122	3.228	1	.072	1.244	.980	1.579
SQ_Tangibles	.265	.106	6.245	1	.012	1.303	1.059	1.605
Constant	-9.759	.810	145.312	1	.000	.000		

Looking at the coefficients in **Table 7-11**, the results indicate that, having excluded 'Value for Money' from the regressions, each of the SERVQUAL dimensions is now a significant predictor of the willingness of occupiers to recommend their landlord or property manager, although 'Responsiveness' is only marginally significant ( $p=0.072$ ). From the column Exp (B) it can be seen that for each unit increase in satisfaction with 'Assurance', the odds of a respondent recommending the landlord increase by a factor of 1.7 (all other aspects remaining unchanged). The SERVQUAL dimension of 'Empathy' has the greatest impact - for each unit increase in satisfaction with 'Empathy', the odds of a respondent recommending the landlord increase by a factor of 2.9. For 'Reliability', 'Responsiveness' and 'Tangibles', the respective odds increases are around 1.3.

Analysing the full sample using a single model with dummy variables for the sectors has similar explanatory power as the model without sector: 20.6% (Cox & Snell  $R^2$ ) and 27.9% (Nagelkerke's  $R^2$ ). The model correctly classified 72.1% of cases, compared with 59.9% for the naive model with no terms in the equation. The omnibus test of model coefficients was significant (Chi-square = 234.6 with 7df). The Hosmer and Lemeshow test also provides support for the model, with a non-significant result (Chi-square = 11.18 with 8df,  $p=0.192$ ).

**Categorical Variables Coding**

	Frequency	Parameter coding		
		(1)	(2)	
Sector	Industrial	225	.000	.000
	Office	275	1.000	.000
	Retail	515	.000	1.000

**Model with no predictors: Classification Table**

	Observed	Rec14n5yRnd	Predicted		
			Rec14n5yRnd		Percentage Correct
			.000	1.000	
Step 0	Rec14n5yRnd	.000	608	0	100.0
		1.000	407	0	.0
	Overall Percentage				59.9

**Full Model Classification Table**

	Observed	Rec14n5yRnd	Predicted		
			Rec14n5yRnd		Percentage Correct
			.000	1.000	
Step 1	Rec14n5yRnd	.000	510	98	83.9
		1.000	185	222	54.5
	Overall Percentage				72.1

**Table 7-12: Regression with Sector Dummy Variables**

**Variables in the Equation**

	B	S.E.	Wald	df	Sig.	Exp(B)	95% C.I. for EXP(B)	
							Lower	Upper
Step 1 <sup>a</sup> SQ_Assurance	.518	.147	12.345	1	.000	1.679	1.257	2.242
SQ_Empathy	1.023	.157	42.189	1	.000	2.781	2.043	3.787
SQ_Reliability	.280	.142	3.876	1	.049	1.324	1.001	1.750
SQ_Responsiveness	.211	.123	2.942	1	.086	1.235	.970	1.573
SQ_Tangibles	.310	.108	8.186	1	.004	1.363	1.102	1.685
Ref Shopping Centres			4.953	2	.084			
Office	-.380	.202	3.529	1	.060	.684	.460	1.017
Industrial	.099	.177	.312	1	.577	1.104	.780	1.562
Constant	-9.524	.828	132.259	1	.000	.000		

a. Variable(s) entered on step 1: SQ\_Assurance, SQ\_Empathy, SQ\_Reliability, SQ\_Responsiveness, SQ\_Tangibles, Sector.

The parameters in **Table 7-12** are similar to those in the model which excludes Sector (**Table 7-11**), with the SERVQUAL dimensions all being significant predictors of willingness of occupiers to recommend their landlord or property manager, although again 'Responsiveness' is only significant at the 10% level ( $p=0.086$ ). As with the previous model, the main determinants of occupiers' willingness to recommend their landlord, taking the sample as a whole, are 'Empathy' and 'Assurance'.

The results appear to show that sector as a whole is significant at the 10% level ( $p=0.084$ ). The reference group is retailers in shopping centres. There is a small difference between office and shopping centre respondents ( $\exp(B) = 0.684$ ,  $\text{sig} = 0.06$ ), but the difference for occupiers in industrial estates is not statistically significant ( $p=0.577$ ). However, it is important to note that different variables form the SERVQUAL dimensions for each sector. For this reason, it is more appropriate to acknowledge differences between the sectors, and to analyse determinants of advocacy for each sector separately.

#### **7.6.5 Analysing the sectors separately**

As discussed previously, for retailers on Retail Parks, 94% of the respondents answered "Yes" to the binary response question, "Would you be willing to recommend your landlord?" Therefore the two groups (Yes / No) are too unequal for a statistically meaningful analysis of the predictors of lease renewal to be determined from this sample. The alternative version of the question, using a '1' to '5' rating, was not included in any of the Retail Park occupier satisfaction studies. For the remaining sectors, Retail (shopping centre), Office and Industrial, binary logistic regressions were carried out using the same binary dependent variable as was used in the previous section, in which a rating of '1' – '4' was treated as 'No' and a rating of '5' was treated as 'Yes'.

In the full sample of 1933 occupiers who were asked to rate their willingness to recommend their landlord or property manager using the ordinal response scale '1' – '5', 40.3% of store managers, 42.2% of office occupiers and 33.7% of industrial occupiers gave a rating of '5'. However respondents' data was included in the logistic regressions only if data was available for each of the predictor variables i.e. cases were excluded listwise. Of the cases used in the regressions, 215/515 (41.7%) of retailers in shopping centres gave a rating of '5' to their willingness to recommend, compared with 131/275 (47.6%) of office occupiers and 61/225 (27.1%) of industrial occupiers. This indicates that the missing data introduces a slight bias against industrial occupiers and in favour of office occupiers. Therefore robustness checks were carried out by conducting regressions with all five SERVQUAL dimensions as predictors, and also regressions in which one dimension at a time was excluded (**Table 7-13**).

This allowed different cases to be included in the analysis, yet the coefficients for the SERVQUAL dimensions are very similar. As well as confirming that missing cases do not introduce significant bias in the analysis, this also demonstrates that multicollinearity of predictors is not a problem.

**Table 7-13: Coefficients Exp (B), Hosmer/Lemeshow and Percentage of correct classifications for the models with sectors separately**

	Assurance	Empathy	Reliability	Responsiveness	Tangibles	H/L	%Correct naive model	%Correct Block 1
Retail – shopping centre	2.29	3.85	1.24	1.39	1.17	0.772	58.3	80.3
		4.60	1.48	1.42	1.22	0.963	58.3	69.7
	3.18		1.23	2.07	1.43	0.788	58.3	70.7
	2.56	3.84		1.39	1.16	0.850	59.1	70.2
	2.32	4.69	1.32		1.16	0.484	58.6	69.2
	2.20	4.05	1.20	1.39		0.377	58.9	69.6
Office	4.78	1.77	1.175	1.06	1.20	0.464	52.4	71.3
		2.55	1.53	1.20	1.51	0.971	52.5	69.2
	5.56		1.23	1.35	1.26	0.658	52.5	69.2
	5.09	1.84		1.08	1.19	0.142	52.8	71.3
	4.73	1.85	1.09		1.23	0.427	52.5	70.7
	3.91	1.89	1.12	1.24		0.736	57.2	72.5
Industrial	0.895	2.50	1.545	1.09	2.18	0.647	72.9	76.9
		4.14	1.56	1.09	2.47	0.057	68.5	77.6
	1.035		1.76	1.57	2.17	0.270	73.0	76.5
	0.99	2.48		1.16	2.31	0.298	72.6	77.0
	0.93	2.37	1.66		2.19	0.822	72.8	75.7
	1.06	2.60	1.61	1.17		0.934	71.3	74.3

### 7.6.6 Advocacy amongst Retailers

For retailers in shopping centres, the best predictors of willingness to recommend are ‘Empathy’ and ‘Assurance’, with ‘Responsiveness’ being significant at the 10% level. For each unit increase in satisfaction with ‘Empathy’, the odds of a retail store manager recommending the landlord increase by a factor of about 4. For ‘Assurance’, the figure is about 2.5. The individual correlations, which are all highly significant, are shown below:

#### Shopping Centres: Correlations for *Empathy* and *Assurance*

		Recommend 1-5	Understanding Needs	Communication	CSR	Security	Health & Safety	Customer Service / Professionalism
Recommend 1-5	Pearson Correlation	1	.500**	.487**	.321**	.296**	.263**	.314**
	Sig. (2-tailed)		.000	.000	.000	.000	.000	.000
	N	636	630	634	587	533	528	231

\*\* . Correlation is significant at the 0.01 level (2-tailed).

For the non-significant SERVQUAL dimensions of ‘Reliability’ and ‘Responsiveness’, the individual items cleaning, responsiveness and legal processes are all significant at the 1% level, and billing and documentation (which includes service charge budgets and reconciliations, for example) is significant at the 5% level.

#### Shopping Centres: Correlations for *Reliability* and *Responsiveness*

		Recommend 1-5	Maintenance	Cleaning	Billing & Documentation	Waste & Recycling	Responsiveness	Approvals & Legal Processes
Recommend 1-5	Pearson Correlation	1	.125	.242**	.160*	.079	.457**	.333**
	Sig. (2-tailed)		.085	.000	.034	.226	.000	.000
	N	636	191	529	177	239	620	175

\*\* . Correlation is significant at the 0.01 level (2-tailed).

\* . Correlation is significant at the 0.05 level (2-tailed).

The SERVQUAL dimension ‘Tangibles’ would appear to have little impact on retailers’ willingness to recommend the landlord or centre manager, and this is supported by the individual correlations, only one of which is significant – Marketing and Events. That is not to say the other aspects do not matter to occupiers - they certainly have an effect on occupiers’ overall satisfaction - but retailers are not influenced by these physical and tangible service aspects when considering whether to recommend their landlord or property manager.



Shopping Centres: Correlations for *Tangibles*

		Rec 1-5	Locati on	Building Spec	Parking	Public trans	Tenant mix	Marketing / Events	Amenities Services	HVAC & Lighting	Lifts	Sign age	Entrances / Reception
Recommend 1-5	Pearson Correlat ion	1	-.050	-.159	.004	.079	-.058	.297**	-.068	.004	- .032	-.009	.019
	Sig. (2- tailed)		.717	.322	.957	.363	.461	.000	.415	.967	.729	.906	.822
	N	636	55	41	175	136	163	541	144	108	120	173	144

\*\* . Correlation is significant at the 0.01 level (2-tailed).

\* . Correlation is significant at the 0.05 level (2-tailed).

**7.6.7 Advocacy amongst Office Occupiers**

For office occupiers, the most significant predictors of willingness to recommend are also the SERVQUAL dimensions of ‘Assurance’ and ‘Empathy’ (see **Table 7-13**).

For each unit increase in satisfaction with ‘Assurance’, the odds of a respondent recommending the landlord increase by a factor of approximately 4 - 5. Looking at the bivariate correlations between the items which comprise the ‘Assurance’ dimension for Offices, it is apparent that each is strongly correlated with the ordinal response variable ‘willingness to recommend (1-5)’:

Office Properties: Correlations for *Assurance*

		Recommend 1-5	CSR	Security	Customer Service / Professionalism	Leasing process
Recommend 1-5	Pearson Correlation	1	.507**	.280**	.596**	.528**
	Sig. (2-tailed)		.000	.000	.000	.000
	N	501	193	306	292	141

\*\* . Correlation is significant at the 0.01 level (2-tailed).

In the binary logistic regression, for each unit increase in satisfaction with ‘Empathy’, the odds of a respondent recommending the landlord increase by a factor of approximately 2. The relationship between willingness to recommend and the two items comprising the SERVQUAL dimension of ‘Empathy’ is equally apparent and strongly significant:

Office Properties: Correlations for *Empathy*

		Recommend 1-5	Understanding Needs	Communication
Recommend 1-5	Pearson Correlation	1	.558**	.547**
	Sig. (2-tailed)		.000	.000
	N	501	462	466

\*\* . Correlation is significant at the 0.01 level (2-tailed).

The dimensions of ‘Reliability’, ‘Responsiveness’ and ‘Tangibles’ are not significant predictors in the logistic regression, but some of the items individually nevertheless show strong correlations with willingness to recommend. The two items comprising the ‘Responsiveness’ dimension are both strongly correlated with willingness to recommend, but twice as many respondents give a rating of ‘4’ compared with those giving the advocacy rating of ‘5’ for these two items.

Office Properties: Correlations for *Reliability*

		Recommend 1-5	Maintenance	Cleaning	Billing & Documentation	Waste & Recycling
Recommend 1-5	Pearson Correlation	1	.325**	.138*	.214**	.069
	Sig. (2-tailed)		.000	.012	.001	.615
	N	501	334	330	253	55

\*\* . Correlation is significant at the 0.01 level (2-tailed).

\* . Correlation is significant at the 0.05 level (2-tailed).

Office Properties: Correlations for *Responsiveness*

		Recommend 1-5	Responsiveness	Approvals & Legal Processes
Recommend 1-5	Pearson Correlation	1	.582**	.368**
	Sig. (2-tailed)		.000	.000
	N	501	457	137

\*\* . Correlation is significant at the 0.01 level (2-tailed).

Office Properties: Correlations for *Tangibles*

		Recommend 1-5	Location	Building Specification	Parking	Amenities & Services	HVAC & Lighting	Lifts	Entrances / Reception
Rec 1-5	Pearson Correlation	1	.018	.245*	-.046	.257	.347**	.078	.364**
	Sig. (2-tailed)		.918	.020	.768	.058	.000	.544	.001
	N	501	36	90	44	55	151	63	77

\* . Correlation is significant at the 0.05 level (2-tailed).

\*\* . Correlation is significant at the 0.01 level (2-tailed).

### 7.6.8 Advocacy amongst Industrial Occupiers

For Industrial properties, the models with no predictors already achieve a high level of accurate prediction; therefore the scope for improvement is smaller. From **Table 7-13**, it can be seen that for Industrial properties the most significant predictors of willingness to recommend are the SERVQUAL dimensions of ‘Tangibles’ and ‘Empathy’. For each unit increase in satisfaction with ‘Tangibles’ the odds of a respondent recommending the landlord increase by a factor of approximately 2.3. For each unit increase in satisfaction with ‘Empathy’, the odds of a respondent recommending the landlord increase by a factor of 2.5. (The version of the model which excludes ‘Assurance’ places a much greater emphasis on ‘Empathy’, but the Hosmer and Lemeshow test provides little support for this model.)

‘Reliability’ is also marginally statistically significant. When the regressions were run using the binary response “Yes/No” variable, Reliability was found to be a statistically significant predictor of industrial occupiers’ willingness to recommend their landlord.

The SERVQUAL dimension ‘Tangibles’, for Industrial properties, consists of the three physical aspects location, property specification and satisfaction with the estate itself, together with only one aspect that might be deemed directly related to property management – signage on the estate. Of these, bivariate correlations show the strongest relationship with the property specification and estate satisfaction. These are also the aspects that have been found to have the greatest impact on industrial occupiers’ choice of premises (see Chapter 4 and Sanderson & Edwards, 2014).

#### Industrial Properties: Correlations for *Tangibles*

		Recommend 1-5	Location	Building Specification	Estate Satisfaction	Signage
Recommend 1-5	Pearson Correlation	1	-.009	.318**	.179*	.032
	Sig. (2-tailed)		.918	.000	.046	.725
N		795	130	691	125	123

\*\* . Correlation is significant at the 0.01 level (2-tailed).

\* . Correlation is significant at the 0.05 level (2-tailed).

The SERVQUAL dimension of ‘Empathy’ covers satisfaction with communication and the belief that the property manager understands the occupier’s business needs. ‘Reliability’, for Industrial Occupiers, incorporates estate and building maintenance, and billing and documentation. Each of these is strongly correlated with Industrial occupiers’ willingness to recommend their landlord:

**Industrial Properties: Correlations for *Empathy and Reliability***

		Recommend 1-5	Communication	Understanding Needs	Maintenance	Billing & Documentation
Recommend 1-5	Pearson Correlation	1	.461**	.507**	.275**	.348**
	Sig. (2-tailed)		.000	.000	.000	.000
N		795	701	670	333	607

\*\* . Correlation is significant at the 0.01 level (2-tailed).

The fact that the dimension of ‘Responsiveness’ appears to matter less to occupiers of Industrial property may reflect less day-to-day contact between occupiers and property managers or landlords than for other sectors. However, occupiers’ responses to satisfaction with responsiveness do actually show a strong correlation with their willingness to recommend (see table below). This relationship seems to be masked when using the SERVQUAL dimension of ‘Responsiveness’ (as opposed to the individual item from occupier satisfaction studies) in the binary logistic regression. In the correlations, each item uses an ordinal response scale of 1 – 5. In the logistic regression, the willingness to recommend variable treats responses of 1 – 4 as ‘no’, and 5 as ‘yes’, so requires a more emphatic assertion of willingness to recommend for the relationship to be apparent. The dimension of ‘Assurance’ also appears to be of much less significance to occupiers of Industrial units in the logistic regression. In the classification used for this study, ‘Assurance’ incorporates professionalism, customer service, corporate social responsibility, security, and satisfaction with the leasing process. It can be seen from the table below that in fact CSR, security and satisfaction with the leasing process do in fact show strong correlations with occupiers’ willingness to recommend their landlord or property manager.

**Industrial Properties: Correlations for *Responsiveness and Assurance***

		Recommend 1-5	Responsiveness	Approvals & Legal Processes	CSR	Security	Customer Service / Professionalism	Leasing process
Recommend 1-5	Pearson Correlation	1	.394**	.189	.462*	.185**	.211	.498**
	Sig. (2-tailed)		.000	.138	.023	.001	.129	.000
N		795	670	63	24	302	53	78

\*\* . Correlation is significant at the 0.01 level (2-tailed).

\* . Correlation is significant at the 0.05 level (2-tailed).

**Table 7-14** summarises the determinants of advocacy by sector, to help property managers understand where to focus property management efforts in order to convert occupiers to advocates. Statistical significance is shown at the 1% (\*\*\*) , 5% (\*\*) and 10% (\*) levels.

**Table 7-14: Determinants of occupiers' willingness to recommend their landlord or property manager**

Sector	SERVQUAL Dimensions for Predicting Advocacy ('5' on scale of '1' - '5')	Exp (B)	Statistically significant item correlations with 'willingness to recommend'
Retail	Empathy **	3.85	Understanding Needs***
			Communication***
	Assurance**	2.29	Corporate Social Responsibility***
			Customer Service / Professionalism***
			Security***
			Health & Safety***
	Responsiveness*	1.39	Responsiveness***
			Approvals / Legal Processes***
	Reliability	1.24	Cleaning***
			Billing & Documentation**
	Tangibles	1.17	Marketing & Events***
Office	Assurance**	4.78	Customer Service / Professionalism***
			Leasing Process***
			Corporate Social Responsibility***
			Security***
	Empathy **	1.77	Understanding Needs***
			Communication***
	Tangibles	1.20	Entrances / Reception***
			HVAC / Lighting***
			Building Specification**
	Reliability	1.18	Maintenance***
			Billing & Documentation***
			Cleaning**
	Responsiveness	1.06	Responsiveness***
		Approvals / Legal Processes***	
Industrial	Empathy **	2.50	Understanding Needs***
			Communication***
	Tangibles**	2.18	Building Specification***
			Estate Satisfaction**
	Reliability*	1.55	Billing & Documentation***
		Maintenance***	
Responsiveness	1.09	Responsiveness***	
		Leasing Process***	
Assurance	0.90	Security***	
		Corporate Social Responsibility**	

## 7.7 Determinants of Loyalty and Advocacy: Discussion of Results

### 7.7.1 Stated likelihood of Lease Renewal

Correlations between lease renewal intentions and the variables used as independent variables in the regressions (the SERVQUAL dimensions and Value for Money for Rent and Service Charge) are all positive and statistically significant (**Table 7-4**), indicating that all aspects of service and value may be relevant to occupiers in deciding whether or not to renew their lease.

Considering the sectors as a whole, the analysis using SMART-PLS suggests that the constructs 'Assurance', 'Reliability' and 'Value' have the greatest impact on occupiers' intention to renew their lease. For retailers on Retail Parks, only the 'Assurance' construct has a meaningful effect size. For office occupiers, 'Responsiveness' is also important, primarily the quality of legal processes.

Of the formative indicators for the 'Assurance' construct, the Corporate Social Responsibility and Professionalism of the Landlord and Property Manager have most influence on the construct for Retailers in Shopping Centres, whilst for managers of Retail Warehouses the key indicators are CSR and Retail Park security. For office and industrial occupiers, 'Assurance' is mainly influenced by the leasing process. The question of satisfaction with the leasing process was not included in interviews with managers of retail warehouses, and may also have been of less importance to retailers in shopping centres, because the store managers interviewed for the study were not involved in the actual leasing in most cases, as this was done by property directors at Head Office.

For the 'Reliability' construct, how waste and recycling are dealt with at a shopping centre or Retail Park appears to be most influential for retailers. For office occupiers, the main determinants of the construct are also waste and recycling, whilst documentation and the internal climate (heating, ventilation and air-conditioning) are also important. For industrial occupiers fewer interviewees were asked about waste and recycling, with many businesses organising their own service, so this does not feature in the model. Instead, the key determinant is the clarity and accuracy of billing and other documentation.

For the 'Value' construct, Trading Performance (for retailers) and Rent Value (for all occupiers) are much more important than value for money for Service Charge when considering likelihood of lease renewal. Service Charges constitute a relatively low proportion of occupiers' total overall Costs of Occupancy (Gibson et al., 2000; Gibson, 2000; IPD Occupiers, 2013), and although service charges can be contentious and influential in occupiers' overall satisfaction, they appear not to be a key factor in lease renewal decisions.

Perhaps surprisingly, the 'Tangibles' construct does not feature highly amongst determinants of lease renewal, although the specification of the building itself is of importance to retailers and industrial occupiers. Intuitively, it seems likely that retailers are attached to a particular store, because it is visited by customers and it might be harder to build a loyal clientele elsewhere. The increase in on-line shopping might make this even more important in future, as "real-life shopping" becomes more of a leisure and experiential activity. Industrial occupiers may have invested a lot of money in plant, equipment and fitting out their unit, so they, too, have significant barriers to re-locating. Office occupiers, however, may find it easier to move since the fit-out process is likely to be more straightforward than for retailers or industrial occupiers, with many offices offering as standard the telecommunications infrastructure required, such as Wi-Fi. Particularly if their offices are not visited by customers, there may be less need for businesses to be in a particular building, and the determinants of loyalty amongst office occupiers appear to be more diverse and less clear-cut than for the other sectors.

The alternative method of analysis, using multinomial logistic regression and the smaller sample of cases for which data was available for all independent variables, found 'Value for Money for Rent' to be the most influential factor in determining stated likelihood of lease renewal, with 'Empathy' also being of some importance.

Both methods of analysis had low Coefficients of Determination (pseudo  $R^2$  in the case of the logistic regressions), and it seems likely that lease renewal hinges on more than the property management service that occupiers' receive. In particular, the needs of an occupier's business, including expansion or contraction and locational requirements, are likely to be over-riding determinants of lease renewal. Nevertheless, and unsurprisingly, perception of receiving Value for Money for Rent appears to be crucial in the decision. This reiterates the importance of demonstrating to occupiers the value offered by their rent, and of providing services that add value. Ways in which this might be achieved include facilitating collaboration between different corporate occupiers at a property to achieve savings by bulk-buying; or enabling occupiers to network with each other and benefit from one another's businesses. Such an approach might encourage loyalty to the property, as the benefits of collaboration or networking might be lost if an occupier moves elsewhere.

### 7.7.2 Advocacy of Landlord

For occupiers' willingness to recommend their landlord on a scale of '1' to '5', the PLS analysis finds 'Empathy' to be the most influential dimension across all sectors. This largely applies, too, when using the 'Net Promoter' analogue in which those giving a rating of '5' are considered to be advocates; the SERVQUAL dimensions which have most impact on turning occupiers into advocates who are most likely to recommend their landlord or property manager are found to be 'Empathy' and 'Assurance', with 'Tangibles' also being important for occupiers of Industrial property.

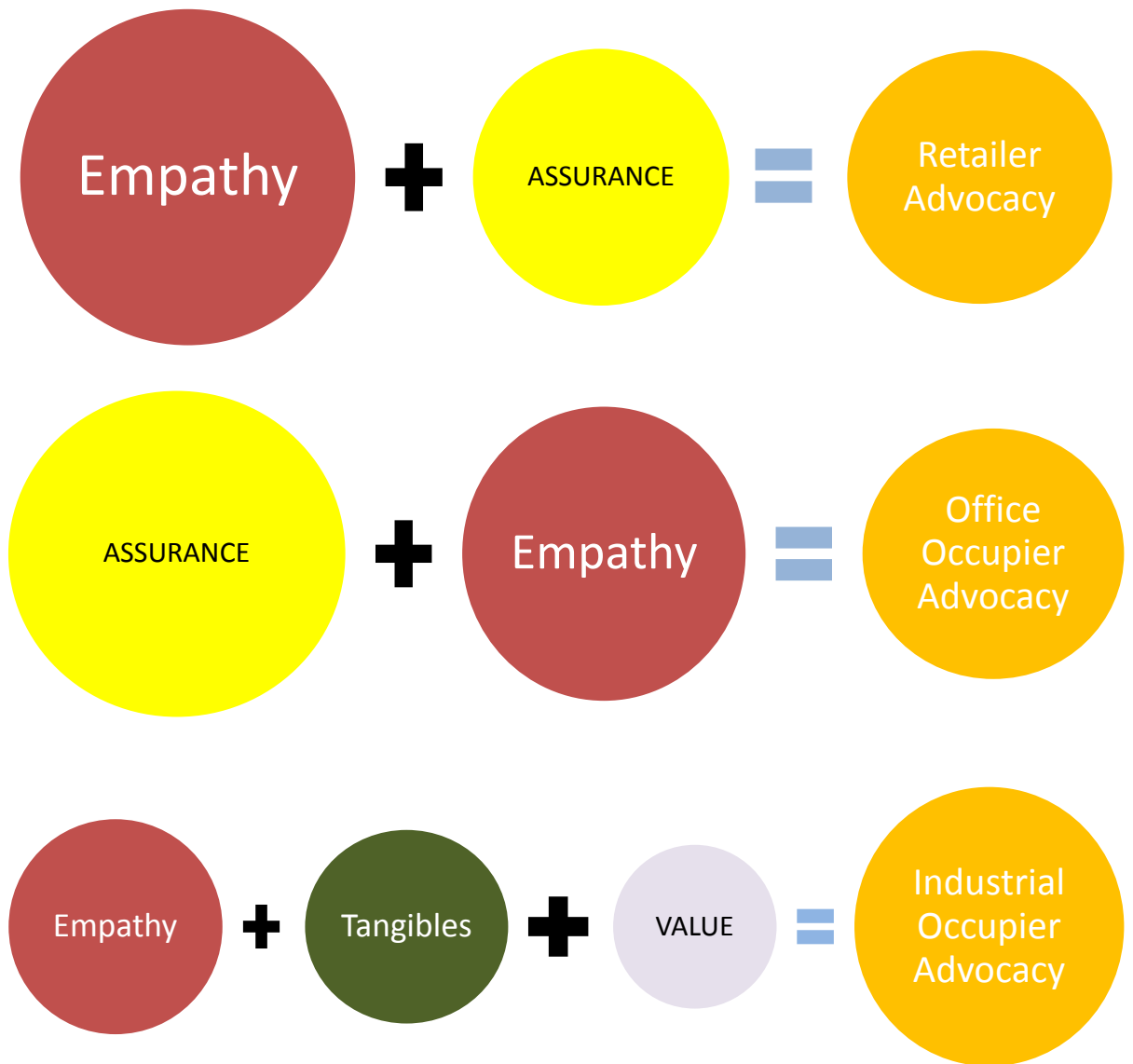
As was found with the loyalty analysis, when Value for Money for Rent is included in the logistic regression, it overshadows most of the SERVQUAL dimensions in its importance in occupiers' advocacy of their landlord; occupiers would appear to be unwilling to recommend to a friend or colleague a landlord whom they felt gave occupiers poor value for money. The one SERVQUAL dimension that appears to be of equal importance to 'Value for Money for Rent' was the 'Empathy' shown by the landlord or property manager.

Once the 'Value for Money' variables were excluded from the binary logistic regression, the 'Assurance' dimension did become highly influential in turning a 'Detractor' or 'Passive Occupier' (those who rate their 'Willingness to Recommend' '1' to '4') into an 'Advocate' (giving a rating of '5'). This is unsurprising, since 'Assurance' was also found to be strongly positively correlated with Willingness to Recommend (**Table 7-8**).

'Empathy', comprising understanding occupiers' needs and communicating effectively, underpins the ideas of relationship marketing and customer relationship management, whilst 'Assurance' incorporates aspects such as corporate social responsibility and professionalism. The findings from this research suggest that the greatest return on investment in customer service by landlords should be achieved by building a close, professional relationship with occupiers. The key relationships are shown pictorially in **Figure 7-23**.



Figure 7-23: Advocacy of Landlord by Sector



## **Summary of Thesis Part 2**

The overall aim of this research is to investigate whether excellence in Property Management delivers superior financial returns. However excellence in Property Management can be assessed only by eliciting occupiers' opinions, as discussed in Part 1 of this Thesis. Part 2 of the Thesis has focused on commercial occupiers' satisfaction, loyalty and advocacy of their landlord and the aspects of customer service which have most impact on occupiers' opinions and behavioural intentions. It has investigated determinants of occupier satisfaction, lease renewal intentions, willingness to recommend the landlord and factors affecting perception of receiving value for money.

Understanding these relationships should enable landlords and Property Managers to deliver excellent customer service to their occupiers. Whether investment in such service delivers positive financial returns is examined in Part 3 of this Thesis.

**Part 3: Statistical  
Analysis of the  
Relationship  
between Occupier  
Satisfaction and  
Financial Return**

# Chapter 8 Quantitative study into the relationship between Occupier Satisfaction and Property Returns

## 8.1 Introduction

This chapter describes the statistical analysis undertaken to test whether the preceding theory is borne out in practice. The framework described in Chapter 3 – “the Service – Profit Chain applied to Commercial Real Estate” suggests that by understanding occupiers’ requirements and delivering a professional and empathetic property management service, property returns should be higher. This research uses financial performance and occupier satisfaction data for 273 properties over an 11-year period to address the following research question:

- *Question 3: Is there a positive relationship between financial performance and the satisfaction of occupiers at a property?*

The following specific hypotheses will be tested:

- 1a. **Null hypothesis  $H_0$ :** The difference between the total return achieved by a property and the benchmark return is uncorrelated with the satisfaction of occupiers at that property
- 1b. **Alternative hypothesis  $H_1$ :** The difference between the total return of a property and the benchmark return shows positive correlation<sup>72</sup> with occupier satisfaction

Testing the relationship for the different sectors:

- 2a. **Null hypothesis  $H_0$ :** The relationship between occupier satisfaction and property performance is the same for all sectors
- 2b. **Alternative hypothesis  $H_1$ :** The relationship between occupier satisfaction and property performance differs between sectors

Investigating whether the relationship between occupier satisfaction and property performance is the same for all property owners:

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<sup>72</sup> This implies a 1-tailed test of statistical significance, although the non-normality of the returns distribution means that tests of statistical significance need to be interpreted with caution

3a. **Null hypothesis H<sub>0</sub>**: The relationship between occupier satisfaction and property performance is unaffected by property owner and their business strategy

3b. **Alternative hypothesis H<sub>1</sub>**: The relationship between occupier satisfaction and property performance differs between property owners and is affected by business strategy

Testing the impact of supply and demand on the relationship between occupier satisfaction and property performance:

4a. **Null hypothesis H<sub>0</sub>**: The relationship between occupier satisfaction and property performance is unaffected the property cycle and the supply of and demand for commercial property

4b. **Alternative hypothesis H<sub>1</sub>**: The relationship between occupier satisfaction and property performance differs according to the stage in the property market cycle and the supply of and demand for commercial property

## **8.2 Data**

In order to get a time-series of data rather than a cross-sectional snapshot of occupier satisfaction, only properties for which occupier satisfaction data had previously been collected were included in the research. Most of the UK REITs<sup>73</sup> were asked if they would permit access to data. Several declined on the grounds of shareholder confidentiality, or failed to respond to repeated requests, but four of the major UK landlords agreed, subject to assurances of non-disclosure of information which could identify individual properties. The sample of properties from these landlords used in this study consists of 273 properties – a property being a shopping centre, retail park, industrial estate, business park or office building. The total floor area of the properties in the sample exceeds 7.3 million m<sup>2</sup>. This represents only a fraction of the portfolios for these landlords, but consists of those properties for which occupier satisfaction data exists over some or all of the period 2002 – 2013.

### **8.2.1 Occupier Satisfaction Data**

Most of the occupier satisfaction data used for this research was gathered by RealService consultants on behalf of landlords, or by landlords conducting their own satisfaction studies. For this part of the analysis, and for three of the landlords, the occupier satisfaction data comprises the average (mean) of the scores given by occupiers when asked to rate their overall satisfaction as an occupier on a scale of '1' to '5'. Analysis in Part 2 of this thesis has demonstrated the strong correlation between overall occupier satisfaction, loyalty and advocacy, and found that satisfaction with property

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<sup>73</sup> Members of RealService Best Practice Group, and other landlords who had expressed an interest in this research and who were known to conduct occupier satisfaction studies

management is the most significant determinant of occupiers' overall satisfaction. The mean ratings of the satisfaction of occupiers at a particular property thus serve as a valid proxy for the quality of the property management service delivered to tenants. The fourth landlord conducted its own occupier satisfaction studies from 2008 onwards, using a different methodology from the studies performed by RealService. This landlord focuses on serviced offices and short-term industrial lets, and has a strategy of encouraging occupiers to move within its portfolio when their space requirements change. For the properties owned by Landlord 4, the occupier satisfaction data was scored so as to enable the properties to be ranked into terciles of satisfaction each year. In order to compare these with the remaining properties, those in the top tercile (the third of properties with the highest occupier satisfaction) were given a rating equal to the mean of the top tercile of the properties belonging to the other three landlords. A similar process was carried out for the other two terciles.

The number of interviews at each property each year depended upon the total number of tenants. Typically around 30 store managers were interviewed each year that an occupier satisfaction study took place at a large shopping centre, whereas at retail parks, which have fewer stores, only five to ten interviews were conducted. On large industrial estates, around 30 interviews with lease-holders of industrial units were conducted each year that there was a study into occupier satisfaction, whereas on smaller estates only 10 – 20 interviews were conducted. In multi-tenanted offices, the number of interviews ranged from four to ten, according to the size of office and the total number of businesses located there. At some properties occupier satisfaction studies were conducted every year from 2002 – 2013 whereas at others only occasional studies were carried out. The studies were not carried out at a fixed point in the year, although typically repeat studies took place approximately 12 months apart.

**Table 8-1** gives the descriptive statistics for the occupier satisfaction data used for this study. The data exhibits negative skewness, meaning that scores are clustered towards higher values. This is more apparent in the later years, because of the inclusion of data from Landlord 4, using a different method of measurement, as described above. **Table 8-2** shows the descriptive statistics for the remaining properties, excluding those of LL4, which has the effect of reducing skewness for overall occupier satisfaction. Most values of kurtosis are positive, meaning that the distribution is clustered in the centre, with relatively long thin tails (Pallant, 2010, p. 57). Non-normal kurtosis produces an underestimate of the variance of a variable, but this should not matter if the sample size exceeds about 100 (p. 80 Tabachnick & Fidell, 2013). A comparison between **Table 8-1** and **Table 8-2** shows that it is the occupier satisfaction scores from Landlord 4 which are mainly responsible for the positive kurtosis.

**Table 8-1: Descriptive Statistics for Annual Overall Occupier Satisfaction**

	N	Min	Max	Mean	Std. Dev	Skewness		Kurtosis	
		Statistic	Statistic	Statistic	Statistic	Statistic	Std. Error	Statistic	Std. Err
Overall Sat 2002	25	3.17	4.17	3.66	.24	-.12	.46	-.16	.90
Overall Sat 2003	37	2.90	4.33	3.85	.31	-.73	.39	.97	.76
Overall Sat 2004	58	3.00	4.44	3.75	.33	-.21	.31	-.39	.62
Overall Sat 2005	75	2.75	4.46	3.82	.33	-.86	.28	.85	.55
Overall Sat 2006	79	2.78	4.29	3.63	.33	-.12	.27	-.62	.53
Overall Sat 2007	80	2.75	4.37	3.82	.33	-.80	.27	.19	.53
Overall Sat 2008	81	2.50	4.50	3.84	.40	-1.36	.27	2.09	.53
Overall Sat 2009	47	2.00	4.45	3.60	.78	-1.21	.35	.07	.68
Overall Sat 2010	69	2.00	4.50	3.75	.62	-1.68	.29	2.29	.57
Overall Sat 2011	72	2.00	4.50	3.88	.45	-1.72	.28	3.76	.56
Overall Sat 2012	65	2.00	4.47	3.73	.70	-1.61	.30	1.60	.59
Overall Sat 2013	55	2.00	5.00	3.83	.64	-1.71	.32	2.85	.63

**Table 8-2: Occupier Satisfaction data for 2008 – 2013, excluding LL4**

	N	Min	Max	Mean	Std. Dev	Skewness		Kurtosis	
		Statistic	Statistic	Statistic	Statistic	Statistic	Std. Error	Statistic	Std. Error
Overall Sat 2008	68	2.50	4.50	3.83	0.41	-1.28	0.29	2.12	0.57
Overall Sat 2009	30	3.40	4.45	4.04	0.24	-1.04	0.43	0.97	0.83
Overall Sat 2010	52	3.25	4.50	3.99	0.27	-0.66	0.33	0.65	0.65
Overall Sat 2011	59	3.42	4.50	4.02	0.24	-0.25	0.31	-0.15	0.61
Overall Sat 2012	47	3.20	4.47	4.01	0.30	-0.78	0.35	0.30	0.68
Overall Sat 2013	39	3.56	5.00	4.09	0.27	0.96	0.38	2.51	0.74

It is worth noting that the range of ratings occupiers give to their overall satisfaction as a tenant differs between sectors. For example, the median satisfaction for occupiers (store managers) in shopping centres in this sample is 3.98, whilst for retail parks the median is 3.67. For offices the median satisfaction is 3.71, whilst for lease holders in units on industrial estates, the median occupier satisfaction is 3.83. Interestingly, this ranking differs from that of the OSI studies (RealService Ltd & Property Industry Alliance, 2012) discussed in Chapter 2 of this Thesis, which found office occupiers had the highest satisfaction scores based on the questions used to compile the Index. Correlation statistics show that occupier satisfaction changes only slowly from year to year, with correlations mostly highly statistically significant for several years (**Table 8-3**)

**Table 8-3: Occupier Satisfaction Pairwise Annual Correlations**

		Overall	Overall	Overall	Overall	Overall	Overall	Overall	Overall	Overall	Overall	Overall	
		Sat	Sat	Sat	Sat	Sat	Sat	Sat	Sat	Sat	Sat	Sat	
		2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Overall	Correlation	1	.905**	.715**	.383	-.481	.675*	.710**	.693**	.676**	-.329	-.735**	-.961**
Sat	Sig. (2-tail)		.000	.000	.079	.228	.016	.001	.002	.003	.213	.002	.000
2002	N	25	19	25	22	8	12	17	17	17	16	15	12
Overall	Correlation	.905**	1	.935**	.563**	.214	.082	.606**	.713**	.677**	-.182	-.314	-.979**
Sat	Sig. (2-tail)	.000		.000	.001	.443	.724	.005	.001	.003	.501	.255	.000
2003	N	19	37	26	31	15	21	20	17	17	16	15	12
Overall	Correlation	.715**	.935**	1	.657**	.254	.497**	.843**	.322	.291	-.049	-.161	-.825**
Sat	Sig. (2-tail)	.000	.000		.000	.211	.016	.000	.179	.242	.852	.551	.001
2004	N	25	26	58	50	26	23	23	19	18	17	16	13
Overall	Correlation	.383	.563**	.657**	1	.711**	.582**	.545**	.103	.602**	.421	-.130	-.004
Sat	Sig. (2-tail)	.079	.001	.000		.000	.001	.003	.656	.006	.073	.619	.990
2005	N	22	31	50	75	33	29	28	21	19	19	17	14
Overall	Correlation	-.481	.214	.254	.711**	1	.540**	.197	.389	.042	.365	.696**	.358
Sat	Sig. (2-tail)	.228	.443	.211	.000		.001	.264	.152	.848	.113	.001	.173
2006	N	8	15	26	33	79	35	34	15	23	20	19	16
Overall	Correlation	.675*	.082	.497**	.582**	.540**	1	.613**	.471**	.333	.272	-.061	-.547*
Sat	Sig. (2-tail)	.016	.724	.016	.001	.001		.000	.042	.112	.210	.787	.023
2007	N	12	21	23	29	35	80	47	19	24	23	22	17
Overall	Correlation	.710**	.606**	.843**	.545**	.197	.613**	1	.488**	.438**	.616**	.474**	.615**
Sat	Sig. (2-tail)	.001	.005	.000	.003	.264	.000		.006	.010	.000	.005	.001
2008	N	17	20	23	28	34	47	81	30	34	32	34	27
Overall	Correlation	.693**	.713**	.322	.103	.389	.471**	.488**	1	.800**	.751**	.730**	.684**
Sat	Sig. (2-tail)	.002	.001	.179	.656	.152	.042	.006		.000	.000	.000	.000
2009	N	17	17	19	21	15	19	30	47	39	34	36	31
Overall	Correlation	.676**	.677**	.291	.602**	.042	.333	.438**	.800**	1	.526**	.682**	.477**
Sat	Sig. (2-tail)	.003	.003	.242	.006	.848	.112	.010	.000		.000	.000	.003
2010	N	17	17	18	19	23	24	34	39	68	47	46	37
Overall	Correlation	-.329	-.182	-.049	.421	.365	.272	.616**	.751**	.526**	1	.706**	.716**
Sat	Sig. (2-tail)	.213	.501	.852	.073	.113	.210	.000	.000	.000		.000	.000
2011	N	16	16	17	19	20	23	32	34	47	71	42	37
Overall	Correlation	-.735**	-.314	-.161	-.130	.696**	-.061	.474**	.730**	.682**	.706**	1	.670**
Sat	Sig. (2-tail)	.002	.255	.551	.619	.001	.787	.005	.000	.000	.000		.000
2012	N	15	15	16	17	19	22	34	36	46	42	65	37
Overall	Correlation	-.961**	-.979**	-.825**	-.004	.358	-.547*	.615**	.684**	.477**	.716**	.670**	1
Sat	Sig. (2-tail)	.000	.000	.001	.990	.173	.023	.001	.000	.003	.000	.000	
2013	N	12	12	13	14	16	17	27	31	37	37	37	55

\*\* . Correlation is significant at the 0.01 level (2-tailed).

\* . Correlation is significant at the 0.05 level (2-tailed).



### 8.2.2 Financial Performance Data

If “good customer service” has a positive effect on property performance, the total return for a property in which occupiers are highly satisfied should be higher than it otherwise would be. This additional return cannot be established with certainty, but, as mentioned in Appendix A, a benchmark does exist with which individual property returns can be compared – the Investment Property Databank (IPD) Indices.

Valuations used by IPD are appraisal-based, making use of the “RICS Valuation – Professional Standards Guide” (also known as the “Red Book”) to assess the market value of a property. As discussed in Appendix A, International Valuation Standards, to which RICS subscribes, define Market Value as “the estimated amount for which an asset or liability should exchange on the valuation date between a willing buyer and a willing seller in an arm's length transaction, after proper marketing and where the parties had each acted knowledgeably, prudently and without compulsion” (“International Valuation Standards Council,” n.d.). The appraiser must have regard to the “highest and best use” of the property, i.e. the use which would maximise its value, regardless of its current use.

IPD produces quarterly and annual indices showing property performance and splits the “All Property Benchmark” into Portfolio Analysis Service (PAS) Segments, as shown in **Table 8-4**. Individual property returns can be benchmarked against those for the relevant IPD Segment.

**Table 8-4: Investment Property Databank Portfolio Allocation Service Segments**

PAS	Description of Segment
1	Standard Retails - South East
2	Standard Retails - Rest of UK
3	Shopping Centres
4	Retail Warehouses
5	Offices - City
6	Offices - West End
7	Offices - South East
8	Offices - Rest of UK
9	Industrials - South East
10	Industrials - Rest of UK
11	Other Commercial

Comparing returns with the appropriate PAS benchmark helps to control for some of the heterogeneity of property, since the sector and broad geographical region are incorporated into the benchmark. The financial performance data for the properties in this research was supplied by IPD<sup>74</sup> after contracts had been signed with the property owners. The raw performance data consisted of the following fields for each property, for the years it was owned by the landlord concerned (See also MSCI, 2015 for definitions):

1. Property Code
2. PAS (See Table 8-4)
3. Address
4. Annual Total Return for each year from Dec 2003 to Dec 2013 or Mar 2004 – Mar 2014 according to the valuation year end date used by the landlord

$$\text{Total Return} = \left( \frac{CV_t - CV_{t-1} - CAPEX_t + \text{Net Income}_t}{CV_{t-1} + CAPEX_t} \right) * 100$$

5. Annual Income Returns

$$\text{IncRet}_t = \left( \frac{\text{Net Income}_t}{CV_{t-1} + CAPEX_t} \right) * 100$$

6. Annual Appraised Capital Growth (%)

$$\text{CG}_t = \left( \frac{CV_t - CV_{t-1} - CAPEX_t + \text{CAPRpt}_t}{CV_{t-1} + CAPEX_t} \right) * 100$$

7. Annual Estimated Rental Value Growth (%)
8. Annual Passing Rent
9. Floor Space

The spreadsheets were provided for each landlord who had agreed access to their data, and were password protected.

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<sup>74</sup> My thanks go to Andrew Gerrity who produced the raw data and Christopher Hedley who permitted use of the data once I had obtained authorisation from the landlords concerned

The non-disclosure agreements and confidentiality clauses agreed with the landlords whose data was to be used in the research stipulated that only properties for which occupier satisfaction data existed could be retained for analysis. Therefore all rows on the spreadsheets for which no satisfaction data existed had to be deleted. Matching properties was not straightforward as they were known by different addresses or codes in the IPD database and the occupier satisfaction studies, and required additional checks. For some offices and industrial estates this involved checking addresses with on-line maps, confirming property details in Company Annual Reports and checking the properties in CoStar<sup>75</sup>. In the case of retail parks and some shopping centres, checks included confirming that the stores at the property were the ones whose store managers had been interviewed for the occupier satisfaction studies. Once the properties had been matched, and the properties outside the sample had been deleted, data for the remaining properties was prepared for analysis.

The non-disclosure agreements also included the proviso that no-one else could see the property performance data, and various measures were put in place to ensure its confidentiality. This brought with it the additional responsibility to ensure the analysis was reliable and that the data entry and validation processes were accurate and robust. A pilot study was conducted initially, which analysed data from just one of the landlords. When the full study was carried out, the data was collected again rather than re-using the data from the pilot study, to check results were consistent and give reassurance about the accuracy of the process.

Most of the data preparation was done by organising Excel Spreadsheets with data in 273 rows (one per property) and around 150 columns. Properties were only included in the analysis for those years in which the property was owned by the landlord participating in this research. Excess return was calculated by putting the IPD PAS Average returns for each year-end date (Mar 2004 – Mar 2014 inclusive and Dec 2003 – Dec 2013 inclusive) in a table on a separate sheet and using a formula to subtract the appropriate IPD return from the total return for the particular property, taking into account its sector and the year, and whether that landlord used a March or a December year end. Returns were based on the UK IPD Annual Index with the appropriate year end. Almost all of the properties in this sample are in PAS Segments 3, 4, 5, 6, 7, 9 and 10, corresponding to shopping centres, retail parks, offices and industrial estates.

In order to calculate compounded excess returns over 3- and 5- years, additional columns were added to the spreadsheet, and used a formula such as:

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<sup>75</sup> <http://gateway.costar.com/Gateway/>  
<http://property.costar.com/Property/Results/PropertyResults.aspx>

$$\text{FiveYearXSRet} = ((1 + (\text{XSRet}_{\text{yearY}}/100))^* (1 + ((\text{XSRet}_{\text{yearY+1}})/100))^* (1 + ((\text{XSRet}_{\text{yearY+2}})/100))^* (1 + ((\text{XSRet}_{\text{yearY+3}})/100))^* (1 + ((\text{XSRet}_{\text{yearY+4}})/100)) - 1)$$

This “Five-Year Compounded Excess Return” was chosen because the average lease length nowadays is around 5 years. Taking a snapshot of the total return does not give an accurate picture of property performance, as it is affected by many factors, for example under-renting or over-renting as rents agreed several years ago may not reflect market rates, and expenditure on refurbishment, with costs incurred one year not recouped until a later year. Historically at least, lease terms included upward only rent reviews to market rent, meaning that the impact of occupier dissatisfaction can only be realised at lease expiry or at the exercise of a break clause. The five-year duration is also supported by Scarrett, (1995, p. 56) who suggests that “five years is probably the shortest period over which the performance of an individual property should be judged”.

Strictly speaking, this formula does not give exactly the same result as compounding the property returns over five years, compounding the IPD sector averages over five years, and subtracting the latter from the former, although the difference is small.

The layout of the spreadsheet with performance data was not conducive to direct statistical analysis. Rather the data needed to be stacked to create a pooled panel, and this was done by importing it into Stata and converting the file from Wide to Long format in several stages. Measures taken to ensure the accuracy of the analysis included ensuring that missing values were not inadvertently included in the analysis as zeros, conducting many spot checks on calculated values, using graphs to facilitate spotting unusual cases, and carrying out analysis in several ways to ensure robustness of results. Once the spreadsheets had been checked for accuracy, they were imported into SPSS for most of the statistical analysis.

**Table 8-5 -Table 8-8** provide the descriptive statistics for the property performance data. As explained in the previous section, excess total return is the difference between the total return for a property and its PAS Benchmark return for the corresponding year (and is negative in the case of under-performance). From **Table 8-5** it can be seen that the excess total returns data is generally positively skewed with large positive kurtosis, so excess returns are clustered towards the lower end, but the distribution is thinner and more peaked than a normal distribution. The non-normality of property returns has been widely noted (see, for example, Bond & Patel, 2003; Lizieri & Ward, 2000; Young, Lee, & Devaney, 2006; Stein, Piazzolo, & Stoyanov, 2015). For this sample, the deviation of returns from the benchmark is also not distributed according to the normal distribution.

From the values for the means of excess total return, it can be seen that in most years, they vary between approximately 3% above and 3% below the IPD sector benchmark. However the most apparent feature of the statistics is the existence of very large outliers, with particularly large maxima in 2006 and 2011. These may arise as a result of major renovations, such as the addition of new malls to a shopping centre, or they may simply be data entry errors in the spreadsheet supplied. If a property has been empty for more than a year, the percentage year-on-year increase in income return once it has tenants will be infinite, and the capital value will have increased greatly too. Within the 11 year period of the data in this study, many of the properties underwent renovation, and many others were bought or sold, thus distorting the financial data for the purpose of this research.

Removal of the most extreme outliers, those for which total returns exceed twice the benchmark<sup>76</sup>, reduces skewness and kurtosis, as shown in **Table 8-6**.

Nevertheless, significant volatility in the data still occurs, for example in properties whose year-end is December 2004 or March 2005, and it is difficult to eradicate and smooth the data without distorting it or excluding so many cases that the results would be meaningless. Without the outliers, this sample of properties tends slightly towards underperforming the IPD benchmark, by about 0.5% on average. It is important to note that this sample may not be representative of the full portfolios for these landlords, and constitutes only a relatively small proportion of their portfolio<sup>77</sup>. It does consist, however, of those properties for which the landlord commissioned an occupier satisfaction study, for whatever reason.

**Table 8-7** shows the data for income return, and again anomalies are apparent. For example in 2010 and 2011 an income return greater than 100% is achieved for at least one property, which means more income has been received than the appraised value of the property. The accuracy of this data was confirmed in discussions with IPD. Such figures can arise as a result of the early surrender of a lease, with the tenant having to pay several years' rent. In the case of the most extreme outlier, the building was being re-developed, and very short, all-inclusive leases were offered which distorted the underlying figures. It also distorts this research as income achieved through short-term changes in strategy cannot be attributed to changes in occupier satisfaction. The drop in income return during 2007 and 2008, the worst of the global financial crisis, is also apparent from the Table.

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<sup>76</sup> This applied to ten of the observations, and all were instances of returns which exceeded their respective benchmark, which has the effect of reducing the mean returns for the sample.

<sup>77</sup> apart from Landlord 4 where 80% of the full portfolio (by floor space) is included

Data is only included for the years for which the property was owned by the landlord participating in this research. As can be seen, only 52 of the 273 properties produced income for these four landlords for the full 11 year period and only 42 have total returns data for each of the 11 years (40 after the removal of outliers). Ideally this research would have been based on standing properties – those owned by the same landlord for the full period – but that would have restricted the sample size too much for reliable conclusions to be drawn, and might have distorted the results because of survivorship bias.

**Table 8-5: Descriptive Statistics for the difference between the annual returns for a property and its IPD sector average annual return (%)**

	N	Min	Max	Mean	Std. Dev	Skewness		Kurtosis	
		Statistic	Statistic	Statistic	Statistic	Statistic	Std. Error	Statistic	Std. Error
Excess Tot Ret to Dec 2003 or Mar 2004	96	-95.18	81.00	-0.85	16.44	-0.58	0.25	16.83	0.49
Excess Tot Ret to Dec 2004 or Mar 2005	144	-66.55	246.44	1.51	28.23	5.37	0.20	43.37	0.40
Excess Tot Ret to Dec 2005 or Mar 2006	179	-50.01	20316	112.47	1518.7	13.38	0.18	179.0	0.36
Excess Tot Ret to Dec 2006 or Mar 2007	191	-45.42	56.25	-2.87	12.91	0.99	0.18	4.42	0.35
Excess Tot Ret to Dec 2007 or Mar 2008	182	-45.56	54.66	3.33	12.25	-0.09	0.18	4.62	0.36
Excess Tot Ret to Dec 2008 or Mar 2009	170	-28.16	45.55	-1.48	12.01	1.08	0.19	2.22	0.37
Excess Tot Ret to Dec 2009 or Mar 2010	186	-50.91	66.90	-2.01	15.99	0.28	0.18	1.65	0.35
Excess Tot Ret to Dec 2010 or Mar 2011	186	-38.95	10076	53.99	738.90	13.63	0.18	185.9	0.35
Excess Tot Ret to Dec 2011 or Mar 2012	179	-54.55	36.02	0.45	10.89	-0.71	0.18	4.69	0.36
Excess Tot Ret to Dec 2012 or Mar 2013	168	-31.28	52.23	1.15	10.73	0.68	0.19	3.63	0.37
Excess Tot Ret to Dec 2013 or Mar 2014	154	-51.82	54.86	-0.04	12.14	0.66	0.20	4.79	0.39
Valid N (listwise)	42								

**Table 8-6: Descriptive Statistics for Excess total return (%) with the most extreme outliers removed**

	N	Min	Max	Mean	Std. Dev	Skewness		Kurtosis	
	Stat	Statistic	Statistic	Statistic	Statistic	Statistic	Std. Error	Stat	Std. Error
Excess Tot Ret to Dec 2003 or Mar 2004	94	-30.72	41.57	-0.65	10.41	0.45	0.25	2.41	0.49
Excess Tot Ret to Dec 2004 or Mar 2005	141	-66.55	84.77	-0.72	14.69	0.74	0.20	9.93	0.41
Excess Tot Ret to Dec 2005 or Mar 2006	175	-50.01	54.64	-1.81	13.54	0.41	0.18	3.24	0.37
Excess Tot Ret to Dec 2006 or Mar 2007	190	-45.42	56.25	-2.88	12.94	0.98	0.18	4.38	0.35
Excess Tot Ret to Dec 2007 or Mar 2008	182	-45.56	54.66	3.47	12.45	-0.04	0.18	4.34	0.36
Excess Tot Ret to Dec 2008 or Mar 2009	170	-28.16	45.55	-1.53	12.04	1.08	0.19	2.20	0.37
Excess Tot Ret to Dec 2009 or Mar 2010	186	-50.91	66.90	-2.10	16.00	0.30	0.18	1.65	0.35
Excess Tot Ret to Dec 2010 or Mar 2011	185	-38.95	43.91	-0.22	10.52	0.60	0.18	2.87	0.36
Excess Tot Ret to Dec 2011 or Mar 2012	179	-54.55	36.02	0.40	10.90	-0.70	0.18	4.67	0.36
Excess Tot Ret to Dec 2012 or Mar 2013	168	-31.28	52.23	1.18	10.72	0.68	0.19	3.66	0.37
Excess Tot Ret to Dec 2013 or Mar 2014	154	-51.82	54.86	-0.04	12.14	0.66	0.20	4.79	0.39
Valid N (listwise)	40								

**Table 8-7: Descriptive Statistics for Annual Percentage Income Return**

Percentage income Return	N	Min	Max	Mean	Std. Dev	Skewness		Kurtosis	
	Statistic	Statistic	Statistic	Statistic	Statistic	Statistic	Std. Error	Statistic	Std. Error
Income Return To Mar 2004 <sup>78</sup>	113	0.00	68.75	6.67	7.01	6.52	0.23	55.76	0.45
Income Return To Mar 2005	142	0.00	77.27	5.96	6.97	8.13	0.20	80.19	0.40
Income Return To Mar 2006	178	0.04	47.52	4.95	4.12	6.71	0.18	66.00	0.36
Income Return To Mar 2007	192	0.02	75.81	4.62	5.72	10.36	0.18	127.1	0.35
Income Return To Mar 2008	182	0.02	42.93	4.68	4.07	5.85	0.18	47.94	0.36
Income Return To Mar 2009	170	0.09	57.05	6.11	4.98	7.25	0.19	68.92	0.37
Income Return To Mar 2010	185	0.01	103.6	7.16	8.74	8.68	0.18	88.63	0.36
Income Return To Mar 2011	184	0.00	155.6	7.11	13.03	9.87	0.18	103.9	0.36
Income Return To Mar 2012	177	0.01	46.55	6.55	4.85	5.11	0.18	35.22	0.36
Income Return To Mar 2013	165	0.03	13.05	5.90	2.44	-0.01	0.19	0.96	0.38
Income Return To Mar 2014	151	0.00	12.68	5.70	2.25	-0.16	0.20	0.99	0.39
Valid N (listwise)	52								

**Table 8-8** shows the descriptive statistics for excess total return, compounded over five years, including data for the full sample and also the 5% trimmed mean which omits the largest and smallest 5% of values. From this it can be seen that the full sample slightly outperforms the benchmarks (by about 0.5% to 2.5% over 5 years) but the trimmed means are very close indeed to the benchmark returns.

<sup>78</sup> Data shown as a March year end also includes properties with year end the preceding December



**Table 8-8: 5yr compounded Excess Return Showing Mean and 95% Trimmed Mean**

		Statistic	
2004 5yr compounded Excess Return ( i.e.2004 – 2008)	Mean	<b>0.5361</b> <sup>79</sup>	
	95% Confidence Interval for Mean	Lower Bound	-0.5284
		Upper Bound	1.6007
	5% Trimmed Mean	<b>-0.0110</b>	
	Median	-0.0066	
	Variance	29.6706	
	Minimum	-0.6752	
	Maximum	55.1858	
Range	55.8610		
2005 5yr compounded Excess Return ( i.e.2005 – 2009)	Mean	<b>0.8496</b>	
	95% Confidence Interval for Mean	Lower Bound	-0.8540
		Upper Bound	2.5532
	5% Trimmed Mean	<b>-0.0238</b>	
	Median	-0.0664	
	Variance	75.9817	
	Minimum	-0.7285	
	Maximum	88.3944	
Range	89.1228		
2006 5yr compounded Excess Return ( i.e.2006 – 2010)	Mean	<b>2.3648</b>	
	95% Confidence Interval for Mean	Lower Bound	-2.3467
		Upper Bound	7.0763
	5% Trimmed Mean	<b>-0.0266</b>	
	Median	-0.0581	
	Variance	581.1555	
	Minimum	-0.7229	
	Maximum	244.6253	
Range	245.3482		
2007 5yr compounded Excess Return ( i.e.2007 – 2011)	Mean	<b>1.2927</b>	
	95% Confidence Interval for Mean	Lower Bound	-1.2417
		Upper Bound	3.8270
	5% Trimmed Mean	<b>0.0081</b>	
	Median	-0.0055	
	Variance	168.1494	
	Minimum	-0.8308	
	Maximum	131.5771	
Range	132.4079		
2008 5yr compounded Excess Return ( i.e.2008 – 2012)	Mean	<b>1.4024</b>	
	95% Confidence Interval for Mean	Lower Bound	-1.2752
		Upper Bound	4.0800
	5% Trimmed Mean	<b>0.0513</b>	
	Median	0.0224	
	Variance	187.7055	
	Minimum	-0.7998	
	Maximum	139.0662	
Range	139.8659		
2009 5yr compounded Excess Return ( i.e.2009 – 2013)	Mean	<b>1.1414</b>	
	95% Confidence Interval for Mean	Lower Bound	-1.0223
		Upper Bound	3.3050
	5% Trimmed Mean	<b>0.0445</b>	
	Median	0.0501	
	Variance	122.5574	
	Minimum	-0.7974	
	Maximum	112.3601	
Range	113.1575		
2010 5yr compounded Excess Return ( i.e.2010 – 2014)	Mean	<b>0.7309</b>	
	95% Confidence Interval for Mean	Lower Bound	-0.5697
		Upper Bound	2.0315
	5% Trimmed Mean	<b>0.0679</b>	
	Median	-0.0016	
	Variance	44.2856	
	Minimum	-0.7876	
	Maximum	67.5062	
Range	68.2938		

<sup>79</sup> i.e. from 2004 to 2008 inclusive, the compounded excess total return exceeded the IPD benchmark by 0.54%

Unlike occupier satisfaction, total returns, and particularly excess total returns, show more variability from year to year, as can be seen from **Table 8-9** and **Table 8-10**.

**Table 8-9: Pearson Correlations between Annual Returns for the Sample**

		Total Return To Dec 2003 or Mar 2004	Total Return To Dec 2004 or Mar 2005	Total Return To Dec 2005 or Mar 2006	Total Return To Dec 2006 or Mar 2007	Total Return To Dec 2007 or Mar 2008	Total Return To Dec 2008 or Mar 2009	Total Return To Dec 2009 or Mar 2010	Total Return To Dec 2010 or Mar 2011	Total Return To Dec 2011 or Mar 2012	Total Return To Dec 2012 or Mar 2013	Total Return To Dec 2013 or Mar 2014
Total Return To Dec 2003 or Mar2004	Correlation	1	-.041	-.073	-.262**	-.304**	-.050	-.058	-.048	-.007	-.039	.082
	Sig. (2-tail)		.674	.454	.007	.003	.659	.614	.701	.954	.771	.553
	N	116	109	107	104	91	79	77	67	65	57	55
Total Return To Dec 2004 or Mar2005	Correlation	-.041	1	.451**	-.091	-.223*	-.072	.012	.146	.299**	-.014	.038
	Sig. (2-tail)	.674		.000	.284	.013	.470	.906	.175	.006	.906	.757
	N	109	144	142	139	124	103	100	88	83	74	67
Total Return To Dec 2005 or Mar2006	Correlation	-.073	.451**	1	.031	-.076	.017	-.042	-.099	.116	-.071	-.096
	Sig. (2-tail)	.454	.000		.684	.342	.844	.631	.284	.224	.480	.366
	N	107	142	179	175	160	138	133	119	112	100	90
Total Return To Dec 2006 or Mar2007	Correlation	-.262**	-.091	.031	1	.202**	-.053	.171*	.221*	.012	.072	.089
	Sig. (2-tail)	.007	.284	.684		.007	.512	.038	.011	.895	.456	.382
	N	104	139	175	190	175	153	148	133	123	109	98
Total Return To Dec 2007 or Mar2008	Correlation	-.304**	-.223*	-.076	.202**	1	.187*	-.058	.138	.128	.254**	.172
	Sig. (2-tail)	.003	.013	.342	.007		.019	.474	.108	.153	.007	.087
	N	91	124	160	175	180	158	152	136	126	112	100
Total Return To Dec 2008 or Mar2009	Correlation	-.050	-.072	.017	-.053	.187*	1	-.087	-.083	-.087	.160	-.006
	Sig. (2-tail)	.659	.470	.844	.512	.019		.269	.322	.317	.081	.952
	N	79	103	138	153	158	168	162	146	134	120	107
Total Return To Dec 2009 or Mar2010	Correlation	-.058	.012	-.042	.171*	-.058	-.087	1	.355**	.141	.117	-.070
	Sig. (2-tail)	.614	.906	.631	.038	.474	.269		.000	.080	.168	.436
	N	77	100	133	148	152	162	184	168	155	141	125
Total Return To Dec 2010 or Mar2011	Correlation	-.048	.146	-.099	.221*	.138	-.083	.355**	1	.177*	.139	.178*
	Sig. (2-tail)	.701	.175	.284	.011	.108	.322	.000		.021	.087	.037
	N	67	88	119	133	136	146	168	184	169	154	138
Total Return To Dec 2011 or Mar2012	Correlation	-.007	.299**	.116	.012	.128	-.087	.141	.177*	1	.340**	.207*
	Sig. (2-tail)	.954	.006	.224	.895	.153	.317	.080	.021		.000	.012
	N	65	83	112	123	126	134	155	169	178	162	145
Total Return To Dec 2012 or Mar2013	Correlation	-.039	-.014	-.071	.072	.254**	.160	.117	.139	.340**	1	.500**
	Sig. (2-tail)	.771	.906	.480	.456	.007	.081	.168	.087	.000		.000
	N	57	74	100	109	112	120	141	154	162	167	150
Total Return To Dec 2013 or Mar2014	Correlation	.082	.038	-.096	.089	.172	-.006	-.070	.178*	.207*	.500**	1
	Sig. (2-tail)	.553	.757	.366	.382	.087	.952	.436	.037	.012	.000	
	N	55	67	90	98	100	107	125	138	145	150	152

\*\* . Correlation is significant at the 0.01 level (2-tailed). \* . Correlation is significant at the 0.05 level (2-tailed).

**Table 8-10: Correlations between Annual Excess Property Returns<sup>80</sup>**

		Excess Tot Ret to Mar 2004	Excess Tot Ret to Mar 2005	Excess Tot Ret to Mar 2006	Excess Tot Ret to Mar 2007	Excess Tot Ret to Mar 2008	Excess Tot Ret to Mar 2009	Excess Tot Ret to Mar 2010	Excess Tot Ret to Mar 2011	Excess Tot Ret to Mar 2012	Excess Tot Ret to Mar 2013	Excess Tot Ret to Mar 2014
Excess Tot Ret to Mar 2004	Pearson Correlation	1	-.051	-.134	.012	-.283*	-.010	-.053	.108	.200	-.132	.116
	Sig. (2-tail)		.636	.214	.911	.013	.938	.681	.438	.155	.394	.464
	N	96	89	88	85	76	64	63	54	52	44	42
Excess Tot Ret to Mar 2005	Pearson Correlation	-.051	1	-.199*	-.048	-.161	-.062	-.049	.184	.287**	.093	.096
	Sig. (2-tail)	.636		.018	.578	.073	.530	.625	.084	.008	.425	.438
	N	89	144	142	139	125	104	101	89	84	75	68
Excess Tot Ret to Mar 2006	Pearson Correlation	-.134	-.199*	1	-.054	.046	.256**	-.033	-.119	-.023	-.016	-.045
	Sig. (2-tail)	.214	.018		.480	.563	.002	.702	.194	.813	.871	.675
	N	88	142	179	175	161	139	134	120	113	101	91
Excess Tot Ret to Mar 2007	Pearson Correlation	.012	-.048	-.054	1	.150*	-.026	.227**	-.074	-.074	-.073	-.014
	Sig. (2-tail)	.911	.578	.480		.046	.750	.005	.392	.415	.447	.888
	N	85	139	175	191	177	155	150	135	125	111	100
Excess Tot Ret to Mar 2008	Pearson Correlation	-.283*	-.161	.046	.150*	1	.188*	.005	.089	.105	.100	-.076
	Sig. (2-tailed)	.013	.073	.563	.046		.018	.950	.300	.237	.288	.449
	N	76	125	161	177	182	160	154	138	128	114	102
Excess Tot Ret to Mar 2009	Pearson Correlation	-.010	-.062	.256**	-.026	.188*	1	.024	.278**	-.072	.120	-.153
	Sig. (2-tail)	.938	.530	.002	.750	.018		.762	.001	.404	.188	.112
	N	64	104	139	155	160	170	164	148	136	122	109
Excess Tot Ret to Mar 2010	Pearson Correlation	-.053	-.049	-.033	.227**	.005	.024	1	-.031	.108	.251**	.210*
	Sig. (2-tail)	.681	.625	.702	.005	.950	.762		.693	.177	.002	.018
	N	63	101	134	150	154	164	186	170	157	143	127
Excess Tot Ret to Mar 2011	Pearson Correlation	.108	.184	-.119	-.074	.089	.278**	-.031	1	-.062	-.054	-.105
	Sig. (2-tail)	.438	.084	.194	.392	.300	.001	.693		.421	.506	.219
	N	54	89	120	135	138	148	170	186	171	156	140
Excess Tot Ret to Mar 2012	Pearson Correlation	.200	.287**	-.023	-.074	.105	-.072	.108	-.062	1	.330**	.098
	Sig. (2-tail)	.155	.008	.813	.415	.237	.404	.177	.421		.000	.236
	N	52	84	113	125	128	136	157	171	179	163	147
Excess Tot Ret to Mar 2013	Pearson Correlation	-.132	.093	-.016	-.073	.100	.120	.251**	-.054	.330**	1	.497**
	Sig. (2-tail)	.394	.425	.871	.447	.288	.188	.002	.506	.000		.000
	N	44	75	101	111	114	122	143	156	163	168	152
Excess Tot Ret to Mar 2014	Pearson Correlation	.116	.096	-.045	-.014	-.076	-.153	.210*	-.105	.098	.497**	1
	Sig. (2-tail)	.464	.438	.675	.888	.449	.112	.018	.219	.236	.000	
	N	42	68	91	100	102	109	127	140	147	152	154

\*. Correlation is significant at the 0.05 level (2-tailed).

\*\* . Correlation is significant at the 0.01 level (2-tailed).

<sup>80</sup> As for the previous Table, Returns for a March Year End also include properties whose year end is the preceding December. Returns for all properties are benchmarked against the IPD Returns Index for the appropriate PAS and year end.

The following tables show annual correlations between the mean satisfaction of occupiers obtained from a survey of a property and the annual returns for that property (**Table 8-11**), or IPD benchmark outperformance (**Table 8-12**). The occupier satisfaction studies could have been conducted at any point during the year shown. From these tables, it is apparent that if there is a relationship between occupier satisfaction and property performance, it is not obvious, nor immediate.

**Table 8-11: Correlations between Annual Occupier Satisfaction and Annual Returns**

	Tot_Sat_2002	Tot_Sat_2003	Tot_Sat_2004	Tot_Sat_2005	Tot_Sat_2006	Tot_Sat_2007	Tot_Sat_2008	Tot_Sat_2009	Tot_Sat_2010	Tot_Sat_2011	Tot_Sat_2012	Tot_Sat_2013
Total Return Correl	-.380	-.039	.001	.017	-.151	-.012	.094	.384*	.058	.189	.252	.077
To Dec 2003 Sig.2t	.109	.839	.992	.894	.409	.951	.598	.048	.785	.366	.236	.741
or Mar 2004 N	19	30	50	62	32	30	34	27	25	25	24	21
Total Return Correl	-.235	.205	-.113	-.022	.117	-.205	-.023	.119	-.142	-.053	-.059	-.279
To Dec 2004 Sig.2t	.381	.305	.444	.866	.434	.211	.893	.547	.422	.775	.750	.159
or Mar 2005 N	16	27	48	62	47	39	38	28	34	32	32	27
Total Return Correl	-.122	.288	.084	.049	.170	-.269*	.013	.154	.055	.033	-.135	-.282
To Dec 2005 Sig.2t	.654	.137	.571	.698	.166	.037	.928	.378	.732	.835	.418	.118
or Mar 2006 N	16	28	48	64	68	60	53	35	42	42	38	32
Total Return Correl	.184	-.243	-.174	-.068	.114	.040	-.095	.028	-.156	-.028	.048	-.134
To Dec 2006 Sig.2t	.464	.205	.233	.592	.347	.749	.470	.870	.295	.856	.767	.450
or Mar 2007 N	18	29	49	64	70	66	60	38	47	45	40	34
Total Return Correl	-.080	-.256	-.149	.023	.161	.260*	-.128	-.257	-.186	-.112	-.228	-.137
To Dec 2007 Sig.2t	.785	.239	.346	.869	.189	.031	.324	.143	.238	.476	.188	.470
or Mar 2008 N	14	23	42	55	68	69	61	34	42	43	35	30
Total Return Correl	.235	-.280	-.168	-.033	-.044	-.022	-.003	-.266	-.097	.119	-.109	-.110
To Dec 2008 Sig.2t	.487	.219	.333	.825	.737	.859	.979	.129	.538	.440	.526	.548
or Mar 2009 N	11	21	35	48	61	66	64	34	43	44	36	32
Total Return Correl	.507	.129	.230	.321*	.079	.039	.024	.255	.303*	.316*	.064	.166
To Dec 2009 Sig.2t	.112	.577	.191	.028	.547	.762	.851	.134	.034	.022	.677	.307
or Mar 2010 N	11	21	34	47	60	62	64	36	49	52	45	40
Total Return Correl	-.094	-.012	.331	-.084	-.048	.078	-.049	.241	.111	.042	.123	.099
To Dec 2010 Sig.2t	.783	.963	.079	.603	.733	.581	.707	.177	.434	.755	.396	.524
or Mar 2011 N	11	19	29	41	54	52	61	33	52	58	50	44
Total Return Correl	-.653*	-.344	-.397*	-.344*	-.240	-.384**	-.310*	-.597**	-.355**	-.224	-.386**	-.397**
To Dec 2011 Sig.2t	.016	.127	.027	.024	.084	.005	.019	.000	.007	.082	.004	.008
or Mar 2012 N	13	21	31	43	53	51	57	36	56	61	53	44
Total Return Correl	-.693*	-.617**	.003	.193	-.017	.142	-.030	-.365*	-.244	-.307*	-.379**	-.156
To Dec 2012 Sig.2t	.012	.005	.988	.251	.911	.352	.834	.040	.081	.021	.005	.306
or Mar 2013 N	12	19	27	37	48	45	51	32	52	56	53	45
Total Return Correl	-.119	-.396	-.052	-.087	-.047	-.104	-.104	-.442*	-.293*	-.604**	-.425**	-.315*
To Dec 2013 Sig.2t	.713	.093	.798	.608	.761	.505	.485	.011	.046	.000	.002	.035
or Mar 2014 N	12	19	27	37	44	43	47	32	47	51	53	45

**Table 8-12: Correlations between Occupier Satisfaction and Annual Excess Property Returns**

		Overall	Overall	Overall	Overall	Overall	Overall	Overall	Overall	Overall	Overall	Overall	Overall
		Sat	Sat	Sat	Sat	Sat	Sat	Sat	Sat	Sat	Sat	Sat	Sat
		2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Excess Tot Ret to Mar 2004	Correlation	-.224	-.152	.073	.010	-.149	-.136	-.041	-.229	-.742**	-.082	-.663*	.213
	Sig. (2-t)	.358	.430	.617	.939	.415	.473	.837	.431	.002	.763	.026	.555
	N	19	29	49	61	32	30	27	14	14	16	11	10
Excess Tot Ret to Mar 2005	Correlation	-.078	.204	-.063	.006	.165	-.205	-.011	.023	-.209	-.135	-.092	-.331
	Sig. (2-t)	.775	.317	.675	.966	.269	.211	.950	.908	.243	.470	.617	.092
	N	16	26	47	61	47	39	38	28	33	31	32	27
Excess Tot Ret to Mar 2006	Correlation	-.094	.372	.154	.112	.162	-.239	.097	.148	.168	.187	-.117	-.262
	Sig. (2-t)	.729	.056	.300	.382	.186	.066	.490	.396	.293	.242	.483	.147
	N	16	27	47	63	68	60	53	35	41	41	38	32
Excess Tot Ret to Mar 2007	Correlation	.208	-.041	.031	.006	.009	.118	.025	.268	.065	.088	.255	.037
	Sig. (2-t)	.407	.835	.836	.960	.940	.344	.849	.104	.667	.570	.113	.834
	N	18	28	48	63	70	66	60	38	46	44	40	34
Excess Tot Ret to Mar 2008	Correlation	-.029	-.093	-.134	.008	.073	.247*	-.125	-.069	.004	.051	-.032	.101
	Sig. (2-t)	.921	.674	.396	.952	.557	.040	.338	.700	.980	.749	.856	.594
	N	14	23	42	55	68	69	61	34	41	42	35	30
Excess Tot Ret to Mar 2009	Correlation	.257	-.085	-.091	.029	-.058	-.045	.048	.007	.058	.289	.089	.060
	Sig. (2-t)	.446	.716	.602	.845	.660	.719	.706	.970	.716	.060	.604	.743
	N	11	21	35	48	61	66	64	34	42	43	36	32
Excess Tot Ret to Mar 2010	Correlation	.500	.296	.328	.434**	.095	.097	.122	-.017	.101	.054	-.101	-.029
	Sig. (2-t)	.117	.193	.058	.002	.470	.455	.335	.920	.494	.707	.508	.858
	N	11	21	34	47	60	62	64	36	48	51	45	40
Excess Tot Ret to Mar 2011	Correlation	-.030	.049	.222	-.155	-.119	.008	-.029	.092	.083	-.044	.090	.047
	Sig. (2-t)	.931	.841	.246	.333	.392	.957	.825	.612	.561	.747	.535	.763
	N	11	19	29	41	54	52	61	33	51	57	50	44
Excess Tot Ret to Mar 2012	Correlation	-.620*	-.166	-.390*	-.336*	-.303*	-.371**	-.240	-.494**	-.268*	-.203	-.263	-.329*
	Sig. (2-t)	.024	.472	.030	.028	.027	.008	.072	.002	.048	.119	.057	.029
	N	13	21	31	43	53	50	57	36	55	60	53	44
Excess Tot Ret to Mar 2013	Correlation	-.583*	-.371	.016	.219	-.136	.100	-.005	-.388*	-.231	-.357**	-.357**	-.180
	Sig. (2-t)	.047	.118	.938	.192	.358	.516	.972	.028	.102	.008	.009	.238
	N	12	19	27	37	48	44	51	32	51	55	53	45
Excess Tot Ret to Mar 2014	Correlation	.036	-.064	.009	-.019	-.109	.037	.011	-.336	-.171	-.555**	-.349*	-.249
	Sig. (2-t)	.912	.795	.965	.910	.483	.815	.940	.060	.256	.000	.010	.099
	N	12	19	27	37	44	43	47	32	46	50	53	45

\*\* . Correlation is significant at the 0.01 level (2-tailed).

\* . Correlation is significant at the 0.05 level (2-tailed).

### 8.2.3 Pilot Study

A pilot study was carried out using a subset of the data from a single landlord, to test the methodology (Sanderson, 2014). Results from this preliminary analysis indicated the existence of a positive relationship between occupier satisfaction and property performance, although most results were not statistically significant, in part owing to the small sample size. For example, independent sample t-tests, with the sample split according to occupier satisfaction below and above the median, showed that all measures of performance tested were higher in properties where occupier satisfaction was above the median, but that only the five-year compounded excess total return was significant at the 95% level – See **Table 8-13**. The dependent variables used were measures of income return, total return in excess of the IPD benchmark and a proxy for occupancy (here called VAC-Proxy). The last of these was calculated by dividing income return by ERV (estimated rental value) to give a measure of the extent to which ERV was achieved, whether through greater occupancy or through fewer rent concessions, but it is affected by under- or over- renting (how the passing rent compares with market rent). Of the dependent variables used in the pilot study, the only ones that control for the heterogeneity of property are those which take IPD sector averages into account, i.e. the excess total return and the compounded excess total return, and it is these which are used as dependent variables in this research.

These preliminary findings indicated that statistically significant results might be achieved with a larger sample of properties, from more than one landlord. The pilot study also demonstrated that property returns are very volatile; in order to test hypotheses about the nature of the relationship with occupier satisfaction it is necessary to examine returns over several years in order for the posited relationship to be tested.

**Table 8-13: Results from Pilot Study - Independent Samples t-Test: Group Statistics**

	Overall Sat	N	Mean	Std. Deviation	Std. Error Mean
Income Ret	>= 3.80	137	6.295	3.986	.341
	< 3.80	102	5.784	2.595	.257
Five-Yr-Inc Ret	>= 3.80	147	1.417	1.379	.114
	< 3.80	116	1.331	.220	.020
DIFF-TOT-RET	>= 3.80	135	1.194	13.565	1.167
	< 3.80	101	.397	12.490	1.243
Five-Yr-DiffTotRet*	>= 3.80	140	1.094	.425	.036
	< 3.80	112	1.002	.290	.027
VAC-PROXY	>= 3.80	135	.885	.1467	.013
	< 3.80	100	.855	.150	.015
Mean-Vac-Proxy	>= 3.80	147	.919	.109	.009
	< 3.80	113	.895	.119	.011

#### 8.2.4 Methodology

The analysis was conducted in several ways to address the hypotheses and ensure robustness of findings. The first method was an approach similar to that of Jensen (1968) who examined the performance of 115 funds over a 20-year period (1945 – 1964) to assess their riskiness and whether they achieved superior abnormal returns. In his sample, five funds out-performed the market with a statistically significant  $\alpha$  (t-stat > 2) before fund management costs were taken into account, and five funds underperformed. Once management costs were included, only one of the funds outperformed the market, yet two or three of these would have been expected to beat the market by chance alone (Brooks, 2008) implying an inability on the part of fund managers to beat the market, as predicated by the theory of efficient markets. In their study of UK property fund management, Mitchell & Bond (2010) found limited evidence of the ability to generate systematic outperformance and abnormal positive alpha, and only for “a small elite of top performers”.

Although the concepts of outperformance, abnormal returns, alpha and beta are normally associated with investment funds, they can be applied to the performance of individual assets over time. Whereas with funds, outperformance is deemed to occur as a result of astute trading and investment decisions, with individual assets - standing properties in this case - any outperformance must come from the performance of the asset itself. If a property manager has exceptional skill, resulting in highly satisfied occupiers, low vacancy rates and the ability to charge rents which exceed market rents, s/he may be able to outperform the benchmark for property returns.

For this part of the analysis, properties were included only if financial performance data was available for at least 8 consecutive years. This duration was chosen to permit sufficient time to elapse for the effects of occupier satisfaction to be seen, whilst including as many properties as possible in the sample. Coincidentally, this resulted in the inclusion of 114 of the full sample of 273 properties, almost the same sample size as that used by Jensen in his study of fund performance.

For each property, a regression of total return against IPD PAS Benchmark return was carried out in order to obtain the alpha and beta coefficients, according to the equation  $R_{it} = \alpha_{it} + \beta R_{Mt} + \varepsilon_{it}$

**$R_{it}$  is the total return of property i for year t**

**$R_{Mt}$  is the Market return for year t i.e. the IPD benchmark return for the relevant PAS Segment**

**$\alpha$  is the intercept on the ordinate and represents outperformance**

$\beta$  gives the sensitivity of the asset compared with the market, i.e. its riskiness. If  $\beta$  is less than 1, the property is less volatile than the benchmark and might, on average, be expected to give lower returns because of the lower risk.

Once the 114 regressions had been performed,  $\alpha$  for each was correlated with occupier satisfaction. The results were found for the full sample, and also for the sectors separately. Two measures of occupier satisfaction were used:

- the “mean occupier satisfaction” ratings for a property, averaged over each year an occupier satisfaction study was conducted
- the maximum “mean occupier satisfaction” rating achieved at a property

The rationale for including the second of these measures is that it gives more weight to properties in which multiple occupier satisfaction studies were conducted, since these are ones in which one would expect any relationship between occupier satisfaction and property performance to be more apparent if such a relationship exists.

Alpha (benchmark outperformance) is then correlated with these measures of satisfaction for each property in the sample.

This method of analysing the relationship between occupier satisfaction and benchmark outperformance has the advantage of allowing risk to be accounted for, since investors would expect to obtain higher returns for riskier assets i.e. properties with highly volatile returns (higher beta; higher risk). Benchmark outperformance could be a function of risk rather than occupier satisfaction. However, because there are only a few observations for each property (between 8 and 11) and these are of low frequency (annual), the estimates of alpha and beta may be unreliable. Additionally, this method of analysis makes little use of any temporal link between occupier satisfaction and alpha. Therefore a second method of analysis was performed.

This additional analysis was carried out using the compounded five-year excess return variable. The use of this variable enabled the analysis to include the full sample of 273 properties rather than the subsample of 114 used for the first part of the research, since properties could be included as long as they had been owned for 5 years, rather than the minimum of 8 years required for the previous analysis. The method also makes use of the additional occupier satisfaction data available from the multiple surveys conducted at the properties, allowing a more detailed investigation of the relationship between occupier satisfaction and property returns. For this additional analysis, regressions were carried out with five year compounded excess return as dependent variable and occupier satisfaction as independent variable. To test the various hypotheses described earlier, additional regressions were carried out using dummy variables for landlord and for sector, for example:



$$\begin{aligned}
&FiveYrCmpdXSRet_{it} \\
&= \alpha + \beta OccSat_{it} + \delta_1 SC + \delta_2 RP + \delta_3 Office + \delta_4 Ind + \gamma_1 LL1 + \gamma_2 LL2 \\
&+ \gamma_3 LL3 + \gamma_4 LL4 + \varepsilon_{itjk}
\end{aligned}$$

for property *i*, time *t*, sector *j* and landlord *k*. The dummy variable *SC* takes the value 1 if the property is a shopping centre, zero otherwise, and so on for the other dummy variables. In the regressions, the dropped dummy variables are shopping centres and landlord 1, so coefficients on the remaining dummy variables give changes in intercept relative to these.

Further analysis was carried out to assess whether the relationship between property performance and occupier satisfaction changed during the global financial crisis, when demand for commercial property decreased.

### 8.3 Results

#### 8.3.1 The Relationship between Occupier Satisfaction and Superior Returns

**Table 8-14** gives the descriptive statistics for the alpha and beta coefficients following the 114 regressions, and also for the occupier satisfaction data used for this part of the analysis. From this, it can be seen that the mean alpha is 0.898, implying an outperformance of the benchmarks for this sample of nearly 1%. The mean beta is 0.911, so this sample is slightly less risky than the respective PAS benchmarks against which each property is tested. However the volatility of the data and the small number of data points for each property (8 – 11) means that most of the coefficients are not statistically significant<sup>81</sup>.

**Table 8-14: Descriptive Statistics for Alpha, Beta and Satisfaction**

	N	Minimum	Maximum	Mean	Std. Deviation	Skewness		Kurtosis	
	Statistic	Statistic	Statistic	Statistic	Statistic	Statistic	Std. Error	Statistic	Std. Error
Alpha	114	-16.680	25.368	.898	4.885	.897	.226	5.744	.449
AlphaSig	114	.000	.996	.488	.321	-.060	.226	-1.369	.449
Beta	114	-.065	1.794	.911	.336	-.495	.226	.706	.449
AvSat	114	2.000	4.500	3.684	.493	-1.409	.226	2.761	.449
MaxSat	114	2.000	4.500	3.841	.462	-1.823	.226	5.004	.449
Valid N (listwise)	114								

From **Table 8-15** it is apparent that any relationship between alpha and occupier satisfaction is not clear-cut. There is a positive correlation between the alpha t-statistic (alpha divided by its standard

<sup>81</sup> To test the statistical significance of beta, regressions were performed of Excess Return against Benchmark Return, which has a gradient of  $(\beta-1)$ . This was tested to see if it was significantly different from zero.

error) and the average of the mean occupier satisfaction scores over the 8 – 11 year period for which data is available for each property. There is also a positive correlation between the maximum mean occupier satisfaction score for a property and both alpha and its t-statistic. However the correlation between alpha and the average of the mean occupier satisfaction scores is negative, albeit not statistically significant. The correlation between the average satisfaction and the maximum satisfaction is statistically significant at the 0.01 level.

**Table 8-15: Correlations between Occupier Satisfaction and Benchmark Outperformance**

	Alpha	Alpha t-stat	AvSat	MaxSat
Alpha	1	.031	-.011	.173
Alpha t-stat		1	.056	.027
AvSat			1	.857**
N				114

13 of the properties have a statistically significant alpha ( $p < 0.05$ ), which is approximately twice as many as would occur by chance alone if the returns followed a normal distribution. However several studies have demonstrated that property returns do not follow a normal distribution, but are skewed, (Bond & Patel, 2003; Lizieri & Ward, 2000; Young, Lee, & Devaney, 2006; Stein, Piazzolo, & Stoyanov, 2015), which affects the estimate of standard errors of statistics. Using only the subsample of 13 properties which ostensibly have a statistically significant alpha ( $p < 0.05$ ), there is a positive correlation between the alpha t-statistic and the average occupier satisfaction over the 8 – 11 year period, and also between alpha and the maximum annual mean satisfaction rating of occupiers (see **Table 8-16**). Of these 13 properties, 6 are shopping centres, one is a Retail Park, three are offices and three are industrial estates.

**Table 8-16: Correlations between Occupier Satisfaction and Benchmark Outperformance for Properties with Statistically Significant Alpha**

	Alpha	Alpha t-stat	AvSat	MaxSat
Alpha	1	-.064	-.081	.136
Alpha t-stat		1	.075	-.111
AvSat			1	.548
N				13

These seemingly conflicting results can be explained, in part, by the fact that mean occupier satisfaction ratings vary with sector, as discussed earlier. Thus a score of, say, 3.8 would be low for shopping centres, high for retail parks and offices and average for industrial estates, based on the 4400+ interviews analysed in Part 2 of this thesis. This may mask the relationship between alpha and occupier satisfaction when treating the sample as a whole. Therefore a similar analysis was conducted splitting the sample into PAS segments (as defined in **Table 8-4**).

Using the sample of 114 properties **Table 8-17** shows correlations between occupier satisfaction and benchmark outperformance for each of the sectors separately. From this it can be seen that correlations are positive, albeit not statistically significant, for shopping centres, retail parks and offices, but marginally negative for the industrial estates in this sample. PAS Segment 10 contains too few properties for meaningful results, but is included in the table for completeness. **Table 8-18** provides results for the same data, organised by landlord. In this case, the correlations are positive for landlords 1, 3 and 4, and statistically significant when using the “Maximum Satisfaction” variable for landlords 3 and 4.

**Table 8-17: Correlations between Alpha and Occupier Satisfaction by IPD Segment**

<b>PAS</b>		<b>AvSat</b>	<b>MaxSat</b>	
<b>3 – Shopping Centres</b>	<b>Alpha</b>	<b>Pearson Correlation</b>	<b>.067</b>	<b>.256</b>
		<b>Sig. (2-tailed)</b>	<b>.750</b>	<b>.216</b>
		<b>N</b>	<b>25</b>	<b>25</b>
<b>4 – Retail Parks</b>	<b>Alpha</b>	<b>Pearson Correlation</b>	<b>.024</b>	<b>.051</b>
		<b>Sig. (2-tailed)</b>	<b>.908</b>	<b>.808</b>
		<b>N</b>	<b>25</b>	<b>25</b>
<b>5 – City Offices</b>	<b>Alpha</b>	<b>Pearson Correlation</b>	<b>.239</b>	<b>.241</b>
		<b>Sig. (2-tailed)</b>	<b>.569</b>	<b>.566</b>
		<b>N</b>	<b>8</b>	<b>8</b>
<b>6 – West End Offices</b>	<b>Alpha</b>	<b>Pearson Correlation</b>	<b>.076</b>	<b>.261</b>
		<b>Sig. (2-tailed)</b>	<b>.757</b>	<b>.281</b>
		<b>N</b>	<b>19</b>	<b>19</b>
<b>7 – South East Offices</b>	<b>Alpha</b>	<b>Pearson Correlation</b>	<b>-.022</b>	<b>.177</b>
		<b>Sig. (2-tailed)</b>	<b>.923</b>	<b>.443</b>
		<b>N</b>	<b>21</b>	<b>21</b>
<b>9 – South East Industrials</b>	<b>Alpha</b>	<b>Pearson Correlation</b>	<b>.227</b>	<b>.256</b>
		<b>Sig. (2-tailed)</b>	<b>.502</b>	<b>.447</b>
		<b>N</b>	<b>11</b>	<b>11</b>
<b>10 _ Industrials (Rest of UK)</b>	<b>Alpha</b>	<b>Pearson Correlation</b>	<b>-.117</b>	<b>-.010</b>
		<b>Sig. (2-tailed)</b>	<b>.883</b>	<b>.990</b>
		<b>N</b>	<b>4</b>	<b>4</b>

**Table 8-18: Correlations between Alpha and Occupier Satisfaction by Landlord**

Landlord			AvSat	MaxSat
LL1	Alpha	Pearson Correlation	.026	.194
		Sig. (2-tailed)	.844	.133
		N	61	61
LL2	Alpha	Pearson Correlation	-.119	-.112
		Sig. (2-tailed)	.648	.668
		N	17	17
LL3	Alpha	Pearson Correlation	.446	.506*
		Sig. (2-tailed)	.072	.038
		N	17	17
LL4	Alpha	Pearson Correlation	.351	.478*
		Sig. (2-tailed)	.141	.039
		N	19	19

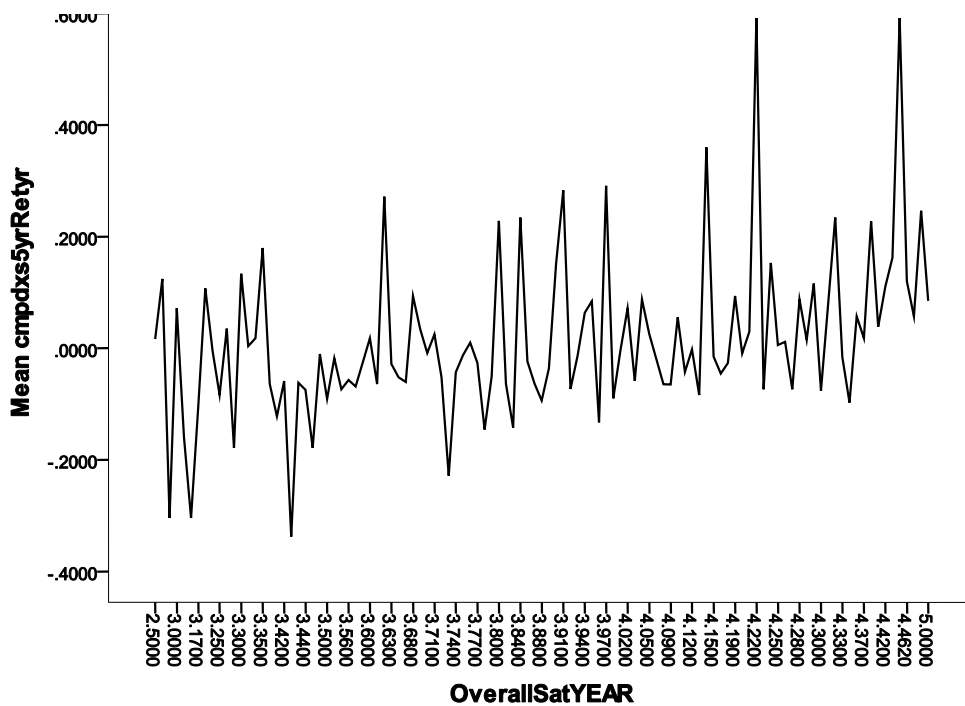
As mentioned previously, the disadvantages of this method of analysis are the restricted sample size and the fact that it involves little temporal link between occupier satisfaction and financial performance, using either the average or the maximum over a period of 8 – 11 years. The analysis does not enable the effect on financial returns of changes in occupier satisfaction at a property to be investigated. Therefore additional analysis was carried out using occupier satisfaction data and excess total returns compounded over five- years, with other durations also examined for robustness testing.

### 8.3.2 The Relationship between Occupier Satisfaction and Five-Year Compounded Excess Returns

This section examines the relationship between occupier satisfaction at the 273 properties between 2002 and 2013 and the extent to which the total returns at those properties exceed their IPD PAS benchmark. As shown in **Table 8-1**, Occupier satisfaction surveys at these properties began in 2002, with fewer studies in 2002, 2003 and 2009 than in the other years. Financial performance data is available from 2004. Correlations between occupier satisfaction and total return benchmark out-performance compounded over 5 years are shown in Appendix H, **Tables H-1 – H-3**.

**Figure 8-1** illustrates the relationship between the mean rating given by occupiers in an occupier satisfaction study for their overall satisfaction, and the (compounded) excess returns achieved at the property for the year of the study and the successive four years. From this, the positive slope coefficient (gradient) is apparent, but so is the volatility of the data.

**Figure 8-1: Five-Year Compounded Excess Return as a function of Occupier Satisfaction**



The correlations in the preceding tables do not make full use of the cross-sectional but also time-series nature of the data. In order to make better use of the (incomplete) panel data, all pairs of observations for a property were included in a rolling five-year analysis of the relationship between occupier satisfaction and property performance. This increases the sample size, and hence the possibility of attaining statistical significance. A regression of five-year compounded excess return on occupier satisfaction was performed, using this rolling 5-year compounded excess return, and the results are given in **Table 8-19**:

$$FiveYrCmpdXSRet_{it} = \alpha + \beta OccSat_{it} + \varepsilon_{it}$$

**Table 8-19: Coefficients for Regression using Full Sample**

		Unstandardized Coefficients		t	Sig.	95.0% Confidence Interval for $\beta$	
		$\beta$	Std. Error			Lower Bound	Upper Bound
	(Constant) $\alpha$	-.277	.049	-5.637	.000	-.373	-.181
	OccSat	.075	.013	5.829	.000	.049	.100

N=4606

From this Coefficients table, it can be seen that for every increase in mean occupier satisfaction of 1 unit (on a scale of 1 – 5) the five-year compounded excess return appears to increase by 7.5%, which equates to an annualised benchmark out-performance of 1.46%. The 95% confidence limits are 0.049 and 0.10 i.e. between 5% and 10%. However it should be noted that an increase of 1 unit in mean occupier satisfaction is actually a very large increase, since the range of mean occupier satisfaction ratings most years is about 1.5 units, typically from around 2.75 to 4.25. Also, the coefficient of determination  $R^2$  is only 0.007, so occupier satisfaction explains less than 1% of the variability in five-year total return, implying a very weak relationship, and the positive kurtosis and skewness of the distribution means that the statistical significance of the results may be being overstated. A low  $R^2$  is perhaps unsurprising, given the myriad of factors that explain property returns, but the size of the coefficient on OccSat supports the hypothesis that the correlation between property returns and occupier satisfaction does appear to be positive, and merits further probing.

### **8.3.3 Robustness Testing of Methodology using Three-Year Periods and Rent and size control variables**

The Table of correlations (**Table 8-12**) has already demonstrated that there is no obvious contemporaneous relationship between occupier satisfaction and benchmark outperformance for this sample of properties. In order to test whether there is a significant relationship between occupier satisfaction and property returns over a period longer than one year but shorter than five years, a regression was also performed using three-year compounded excess returns which produced a small, non-significant, negative coefficient for occupier satisfaction (see Appendix H). In order to assess the effect of including rent and lot size variables as controls, this regression was re-run with additional variables being added step-wise: Rent per square m, passing rent and property lot size. Although there is some multicollinearity between these control variables, they do test slightly different aspects of a property, and the coefficients on the controls do change as additional controls are added, yet in each case, the coefficient on occupier satisfaction is unchanged by the addition of the rent and size variables.

Therefore, a three-year compounded excess return, with mean occupier satisfaction averaged over the preceding three years, fails to reject the null hypothesis that the total return for properties with highly satisfied customers is no different from that of properties with poor customer satisfaction, when treating the sample as a whole. However, as shown in the previous section, when returns are compounded over a rolling 5-year period, the null hypothesis is rejected at a 95% significance level, albeit with a low coefficient of determination. Properties in which occupier satisfaction is higher do appear to achieve higher total returns over a five-year period, although the results using the sample as a whole are not very convincing. One explanation for the masking of the relationship between occupier satisfaction and property performance could be that occupiers, or at least lease-holders, are most satisfied if their rent is low, and low rents provide lower returns for investors unless the capital value of the property is also very low. Another explanation for the weak relationship is that this analysis does not consider the sectors separately, so does not take into account the fact that the range and mean for occupier satisfaction differs between sectors, a situation which the next section remedies.



## 8.4 Analysis of Sectors Separately

Year by year correlations between occupier satisfaction and 5-year compounded excess total return are shown in **Tables 8-20 – 8-23** for the sectors separately. Few correlations are statistically significant, in part because the sample size is relatively small for each sub-sample.

**Table 8-20: Correlations: Overall Satisfaction and Five-Year Compounded Excess Returns for Shopping Centres**

		Overall Sat 2002	Overall Sat 2003	Overall Sat 2004	Overall Sat 2005	Overall Sat 2006	Overall Sat 2007	Overall Sat 2008	Overall Sat 2009	Overall Sat 2010	Overall Sat 2011	Overall Sat 2012	Overall Sat 2013
2004 5yr compounded xs Return	Pearson Correlation	<b>-.167</b>	<b>-.173</b>	<b>-.018</b>	<b>.262</b>	<b>-.036</b>	<b>.285</b>	<b>-.049</b>	<b>.260</b>	<b>-.026</b>	<b>.279</b>	<b>.260</b>	<b>-.345</b>
	Sig. (2-tailed)	<b>.569</b>	<b>.537</b>	<b>.946</b>	<b>.239</b>	<b>.889</b>	<b>.223</b>	<b>.841</b>	<b>.255</b>	<b>.907</b>	<b>.208</b>	<b>.331</b>	<b>.228</b>
	N	<b>14</b>	<b>15</b>	<b>17</b>	<b>22</b>	<b>17</b>	<b>20</b>	<b>19</b>	<b>21</b>	<b>22</b>	<b>22</b>	<b>16</b>	<b>14</b>
2005 5yr compounded xs Return	Pearson Correlation	<b>.000</b>	<b>-.119</b>	<b>-.015</b>	<b>.288</b>	<b>-.139</b>	<b>.348</b>	<b>.000</b>	<b>.375</b>	<b>.129</b>	<b>.322</b>	<b>.308</b>	<b>-.417</b>
	Sig. (2-tailed)	<b>.999</b>	<b>.712</b>	<b>.959</b>	<b>.232</b>	<b>.595</b>	<b>.144</b>	<b>.999</b>	<b>.103</b>	<b>.577</b>	<b>.155</b>	<b>.265</b>	<b>.138</b>
	N	<b>11</b>	<b>12</b>	<b>14</b>	<b>19</b>	<b>17</b>	<b>19</b>	<b>18</b>	<b>20</b>	<b>21</b>	<b>21</b>	<b>15</b>	<b>14</b>
2006 5yr compounded xs Return	Pearson Correlation	<b>.194</b>	<b>.122</b>	<b>.085</b>	<b>.355</b>	<b>-.142</b>	<b>.407</b>	<b>.078</b>	<b>.574**</b>	<b>.418</b>	<b>.541*</b>	<b>.421</b>	<b>-.389</b>
	Sig. (2-tailed)	<b>.567</b>	<b>.705</b>	<b>.772</b>	<b>.136</b>	<b>.587</b>	<b>.084</b>	<b>.758</b>	<b>.008</b>	<b>.053</b>	<b>.011</b>	<b>.118</b>	<b>.169</b>
	N	<b>11</b>	<b>12</b>	<b>14</b>	<b>19</b>	<b>17</b>	<b>19</b>	<b>18</b>	<b>20</b>	<b>22</b>	<b>21</b>	<b>15</b>	<b>14</b>
2007 5yr compounded xs Return	Pearson Correlation	<b>.209</b>	<b>.139</b>	<b>.117</b>	<b>.286</b>	<b>-.068</b>	<b>.295</b>	<b>.040</b>	<b>.564**</b>	<b>.399*</b>	<b>.454*</b>	<b>.407</b>	<b>-.199</b>
	Sig. (2-tailed)	<b>.538</b>	<b>.667</b>	<b>.692</b>	<b>.235</b>	<b>.795</b>	<b>.220</b>	<b>.874</b>	<b>.010</b>	<b>.048</b>	<b>.020</b>	<b>.105</b>	<b>.478</b>
	N	<b>11</b>	<b>12</b>	<b>14</b>	<b>19</b>	<b>17</b>	<b>19</b>	<b>18</b>	<b>20</b>	<b>25</b>	<b>26</b>	<b>17</b>	<b>15</b>
2008 5yr compounded xs Return	Pearson Correlation	<b>.071</b>	<b>.037</b>	<b>-.041</b>	<b>.219</b>	<b>-.040</b>	<b>.250</b>	<b>.037</b>	<b>.467*</b>	<b>.361</b>	<b>.371*</b>	<b>.385</b>	<b>-.142</b>
	Sig. (2-tailed)	<b>.808</b>	<b>.897</b>	<b>.876</b>	<b>.340</b>	<b>.876</b>	<b>.274</b>	<b>.873</b>	<b>.021</b>	<b>.054</b>	<b>.040</b>	<b>.085</b>	<b>.599</b>
	N	<b>14</b>	<b>15</b>	<b>17</b>	<b>21</b>	<b>18</b>	<b>21</b>	<b>21</b>	<b>24</b>	<b>29</b>	<b>31</b>	<b>21</b>	<b>16</b>
2009 5yr compounded xs Return	Pearson Correlation	<b>-.103</b>	<b>-.040</b>	<b>-.101</b>	<b>.078</b>	<b>-.265</b>	<b>.113</b>	<b>-.045</b>	<b>.282</b>	<b>.320</b>	<b>.326</b>	<b>.360</b>	<b>-.042</b>
	Sig. (2-tailed)	<b>.727</b>	<b>.893</b>	<b>.710</b>	<b>.745</b>	<b>.303</b>	<b>.634</b>	<b>.848</b>	<b>.183</b>	<b>.085</b>	<b>.073</b>	<b>.109</b>	<b>.879</b>
	N	<b>14</b>	<b>14</b>	<b>16</b>	<b>20</b>	<b>17</b>	<b>20</b>	<b>21</b>	<b>24</b>	<b>30</b>	<b>31</b>	<b>21</b>	<b>16</b>
2010 5yr compounded xs Return	Pearson Correlation	<b>-.279</b>	<b>-.218</b>	<b>-.154</b>	<b>.010</b>	<b>-.238</b>	<b>-.096</b>	<b>-.090</b>	<b>.073</b>	<b>.253</b>	<b>.272</b>	<b>.280</b>	<b>.131</b>
	Sig. (2-tailed)	<b>.335</b>	<b>.454</b>	<b>.570</b>	<b>.967</b>	<b>.374</b>	<b>.706</b>	<b>.704</b>	<b>.736</b>	<b>.177</b>	<b>.139</b>	<b>.219</b>	<b>.629</b>
	N	<b>14</b>	<b>14</b>	<b>16</b>	<b>20</b>	<b>16</b>	<b>18</b>	<b>20</b>	<b>24</b>	<b>30</b>	<b>31</b>	<b>21</b>	<b>16</b>

\*\* . Correlation is significant at the 0.01 level (2-tailed).

\* . Correlation is significant at the 0.05 level (2-tailed).

**Table 8-21: Correlations between Overall Satisfaction and Five-Year Compounded Excess Property Returns for Retail Parks**

		Overall Sat 2004	Overall Sat 2005	Overall Sat 2006	Overall Sat 2007
2004 5yr compounded xs Return	Pearson Correlation	<b>-.015</b>	<b>.130</b>	<b>.465</b>	<b>-.246</b>
	Sig. (2-tailed)	<b>.949</b>	<b>.554</b>	<b>.052</b>	<b>.557</b>
	N	<b>20</b>	<b>23</b>	<b>18</b>	<b>8</b>
2005 5yr compounded xs Return	Pearson Correlation	<b>-.100</b>	<b>.217</b>	<b>.488*</b>	<b>-.210</b>
	Sig. (2-tailed)	<b>.674</b>	<b>.320</b>	<b>.040</b>	<b>.617</b>
	N	<b>20</b>	<b>23</b>	<b>18</b>	<b>8</b>
2006 5yr compounded xs Return	Pearson Correlation	<b>-.016</b>	<b>.382</b>	<b>.463</b>	<b>-.455</b>
	Sig. (2-tailed)	<b>.945</b>	<b>.072</b>	<b>.053</b>	<b>.257</b>
	N	<b>20</b>	<b>23</b>	<b>18</b>	<b>8</b>
2007 5yr compounded xs Return	Pearson Correlation	<b>.015</b>	<b>.393</b>	<b>.356</b>	<b>-.348</b>
	Sig. (2-tailed)	<b>.952</b>	<b>.078</b>	<b>.147</b>	<b>.399</b>
	N	<b>18</b>	<b>21</b>	<b>18</b>	<b>8</b>

Note: Occupier satisfaction studies on Retail Parks were mainly conducted between 2004 and 2007

**Table 8-22: Correlations between Overall Satisfaction and Five-Year Compounded Excess Property Returns for Offices**

		Overall Sat 2002	Overall Sat 2003	Overall Sat 2004	Overall Sat 2005	Overall Sat 2006	Overall Sat 2007	Overall Sat 2008	Overall Sat 2009	Overall Sat 2010	Overall Sat 2011	Overall Sat 2012	Overall Sat 2013
<b>2004 5yr compounded xs Return</b>	Pearson Correlation	<b>.396</b>	<b>.336</b>	<b>.110</b>	<b>-.255</b>	<b>-.086</b>	<b>-.421*</b>	<b>-.189</b>	<b>.414</b>	<b>-.147</b>	<b>-.055</b>	<b>.155</b>	<b>-.533</b>
	Sig. (2-tailed)	<b>.437</b>	<b>.220</b>	<b>.707</b>	<b>.253</b>	<b>.695</b>	<b>.016</b>	<b>.262</b>	<b>.181</b>	<b>.631</b>	<b>.858</b>	<b>.614</b>	<b>.091</b>
	N	<b>6</b>	<b>15</b>	<b>14</b>	<b>22</b>	<b>23</b>	<b>32</b>	<b>37</b>	<b>12</b>	<b>13</b>	<b>13</b>	<b>13</b>	<b>11</b>
<b>2005 5yr compounded xs Return</b>	Pearson Correlation	<b>.323</b>	<b>.361</b>	<b>-.149</b>	<b>-.318</b>	<b>.110</b>	<b>-.396*</b>	<b>-.130</b>	<b>.277</b>	<b>.087</b>	<b>.141</b>	<b>.117</b>	<b>-.123</b>
	Sig. (2-tailed)	<b>.532</b>	<b>.187</b>	<b>.612</b>	<b>.161</b>	<b>.609</b>	<b>.022</b>	<b>.444</b>	<b>.383</b>	<b>.759</b>	<b>.616</b>	<b>.677</b>	<b>.688</b>
	N	<b>6</b>	<b>15</b>	<b>14</b>	<b>21</b>	<b>24</b>	<b>33</b>	<b>37</b>	<b>12</b>	<b>15</b>	<b>15</b>	<b>15</b>	<b>13</b>
<b>2006 5yr compounded xs Return</b>	Pearson Correlation	<b>.624</b>	<b>.342</b>	<b>.043</b>	<b>-.144</b>	<b>.304</b>	<b>.128</b>	<b>.147</b>	<b>.182</b>	<b>.199</b>	<b>.165</b>	<b>.011</b>	<b>.069</b>
	Sig. (2-tailed)	<b>.186</b>	<b>.213</b>	<b>.884</b>	<b>.534</b>	<b>.149</b>	<b>.478</b>	<b>.380</b>	<b>.553</b>	<b>.443</b>	<b>.527</b>	<b>.966</b>	<b>.808</b>
	N	<b>6</b>	<b>15</b>	<b>14</b>	<b>21</b>	<b>24</b>	<b>33</b>	<b>38</b>	<b>13</b>	<b>17</b>	<b>17</b>	<b>17</b>	<b>15</b>
<b>2007 5yr compounded xs Return</b>	Pearson Correlation	<b>.537</b>	<b>.091</b>	<b>.100</b>	<b>-.068</b>	<b>.026</b>	<b>.190</b>	<b>.125</b>	<b>.146</b>	<b>.099</b>	<b>.079</b>	<b>.072</b>	<b>.190</b>
	Sig. (2-tailed)	<b>.272</b>	<b>.756</b>	<b>.734</b>	<b>.768</b>	<b>.905</b>	<b>.289</b>	<b>.448</b>	<b>.635</b>	<b>.706</b>	<b>.762</b>	<b>.783</b>	<b>.498</b>
	N	<b>6</b>	<b>14</b>	<b>14</b>	<b>21</b>	<b>24</b>	<b>33</b>	<b>39</b>	<b>13</b>	<b>17</b>	<b>17</b>	<b>17</b>	<b>15</b>
<b>2008 5yr compounded xs Return</b>	Pearson Correlation	<b>.816</b>	<b>.329</b>	<b>-.018</b>	<b>.183</b>	<b>-.128</b>	<b>.114</b>	<b>.076</b>	<b>-.023</b>	<b>-.002</b>	<b>.058</b>	<b>-.061</b>	<b>.065</b>
	Sig. (2-tailed)	<b>.184</b>	<b>.323</b>	<b>.955</b>	<b>.467</b>	<b>.562</b>	<b>.529</b>	<b>.647</b>	<b>.940</b>	<b>.993</b>	<b>.824</b>	<b>.816</b>	<b>.818</b>
	N	<b>4</b>	<b>11</b>	<b>12</b>	<b>18</b>	<b>23</b>	<b>33</b>	<b>39</b>	<b>13</b>	<b>17</b>	<b>17</b>	<b>17</b>	<b>15</b>
<b>2009 5yr compounded xs Return</b>	Pearson Correlation	<b>.<sup>a</sup></b>	<b>.464</b>	<b>.121</b>	<b>.288</b>	<b>-.019</b>	<b>-.020</b>	<b>.118</b>	<b>.183</b>	<b>.158</b>	<b>-.078</b>	<b>.008</b>	<b>.127</b>
	Sig. (2-tailed)	<b>.</b>	<b>.150</b>	<b>.776</b>	<b>.299</b>	<b>.941</b>	<b>.912</b>	<b>.481</b>	<b>.549</b>	<b>.575</b>	<b>.781</b>	<b>.977</b>	<b>.666</b>
	N	<b>1</b>	<b>11</b>	<b>8</b>	<b>15</b>	<b>18</b>	<b>32</b>	<b>38</b>	<b>13</b>	<b>15</b>	<b>15</b>	<b>15</b>	<b>14</b>
<b>2010 5yr compounded xs Return</b>	Pearson Correlation	<b>.<sup>a</sup></b>	<b>.487</b>	<b>.554</b>	<b>.436</b>	<b>.014</b>	<b>.036</b>	<b>.085</b>	<b>.269</b>	<b>.167</b>	<b>-.274</b>	<b>.076</b>	<b>.044</b>
	Sig. (2-tailed)	<b>.</b>	<b>.128</b>	<b>.154</b>	<b>.104</b>	<b>.956</b>	<b>.841</b>	<b>.611</b>	<b>.374</b>	<b>.552</b>	<b>.323</b>	<b>.788</b>	<b>.881</b>
	N	<b>1</b>	<b>11</b>	<b>8</b>	<b>15</b>	<b>18</b>	<b>33</b>	<b>38</b>	<b>13</b>	<b>15</b>	<b>15</b>	<b>15</b>	<b>14</b>

\*\* . Correlation is significant at the 0.01 level (2-tailed).

\* . Correlation is significant at the 0.05 level (2-tailed).

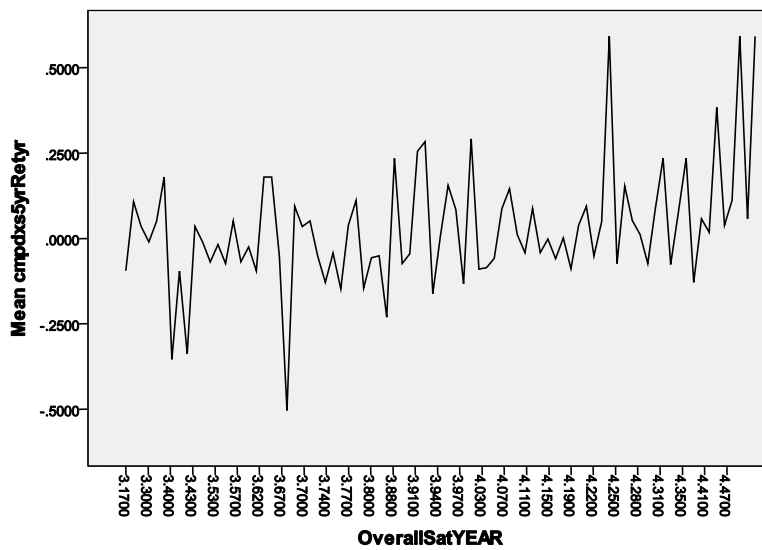
**Table 8-23: Correlations between Overall Satisfaction and Five-Year Compounded Excess Property Returns for Industrial Estates**

		Overall Sat 2006	Overall Sat 2007	Overall Sat 2008	Overall Sat 2010	Overall Sat 2011	Overall Sat 2012	Overall Sat 2013
2004 5yr compounded xs Return	Pearson Correlation	<b>.285</b>	<b>.147</b>	<b>.340</b>	<b>-.134</b>	<b>-.265</b>	<b>-.495</b>	<b>-.295</b>
	Sig. (2-tailed)	<b>.344</b>	<b>.707</b>	<b>.370</b>	<b>.712</b>	<b>.667</b>	<b>.146</b>	<b>.520</b>
	N	<b>13</b>	<b>9</b>	<b>9</b>	<b>10</b>	<b>5</b>	<b>10</b>	<b>7</b>
2005 5yr compounded xs Return	Pearson Correlation	<b>.303</b>	<b>.238</b>	<b>.339</b>	<b>-.175</b>	<b>-.147</b>	<b>-.152</b>	<b>-.142</b>
	Sig. (2-tailed)	<b>.271</b>	<b>.508</b>	<b>.307</b>	<b>.586</b>	<b>.753</b>	<b>.637</b>	<b>.695</b>
	N	<b>15</b>	<b>10</b>	<b>11</b>	<b>12</b>	<b>7</b>	<b>12</b>	<b>10</b>
2006 5yr compounded xs Return	Pearson Correlation	<b>.248</b>	<b>.305</b>	<b>.506</b>	<b>-.051</b>	<b>.129</b>	<b>-.280</b>	<b>-.277</b>
	Sig. (2-tailed)	<b>.372</b>	<b>.391</b>	<b>.113</b>	<b>.857</b>	<b>.690</b>	<b>.245</b>	<b>.300</b>
	N	<b>15</b>	<b>10</b>	<b>11</b>	<b>15</b>	<b>12</b>	<b>19</b>	<b>16</b>
2007 5yr compounded xs Return	Pearson Correlation	<b>.222</b>	<b>.404</b>	<b>.356</b>	<b>.043</b>	<b>.088</b>	<b>-.068</b>	<b>-.063</b>
	Sig. (2-tailed)	<b>.426</b>	<b>.246</b>	<b>.283</b>	<b>.878</b>	<b>.776</b>	<b>.764</b>	<b>.798</b>
	N	<b>15</b>	<b>10</b>	<b>11</b>	<b>15</b>	<b>13</b>	<b>22</b>	<b>19</b>
2008 5yr compounded xs Return	Pearson Correlation	<b>.043</b>	<b>.519</b>	<b>.258</b>	<b>-.140</b>	<b>.411</b>	<b>-.387</b>	<b>-.237</b>
	Sig. (2-tailed)	<b>.878</b>	<b>.124</b>	<b>.472</b>	<b>.649</b>	<b>.164</b>	<b>.102</b>	<b>.360</b>
	N	<b>15</b>	<b>10</b>	<b>10</b>	<b>13</b>	<b>13</b>	<b>19</b>	<b>17</b>
2009 5yr compounded xs Return	Pearson Correlation	<b>-.169</b>	<b>.292</b>	<b>.274</b>	<b>-.134</b>	<b>.538</b>	<b>-.471*</b>	<b>-.249</b>
	Sig. (2-tailed)	<b>.620</b>	<b>.446</b>	<b>.475</b>	<b>.678</b>	<b>.071</b>	<b>.049</b>	<b>.352</b>
	N	<b>11</b>	<b>9</b>	<b>9</b>	<b>12</b>	<b>12</b>	<b>18</b>	<b>16</b>
2010 5yr compounded xs Return	Pearson Correlation	<b>-.212</b>	<b>.074</b>	<b>.256</b>	<b>-.090</b>	<b>.499</b>	<b>-.655**</b>	<b>-.343</b>
	Sig. (2-tailed)	<b>.532</b>	<b>.861</b>	<b>.507</b>	<b>.781</b>	<b>.099</b>	<b>.003</b>	<b>.194</b>
	N	<b>11</b>	<b>8</b>	<b>9</b>	<b>12</b>	<b>12</b>	<b>18</b>	<b>16</b>

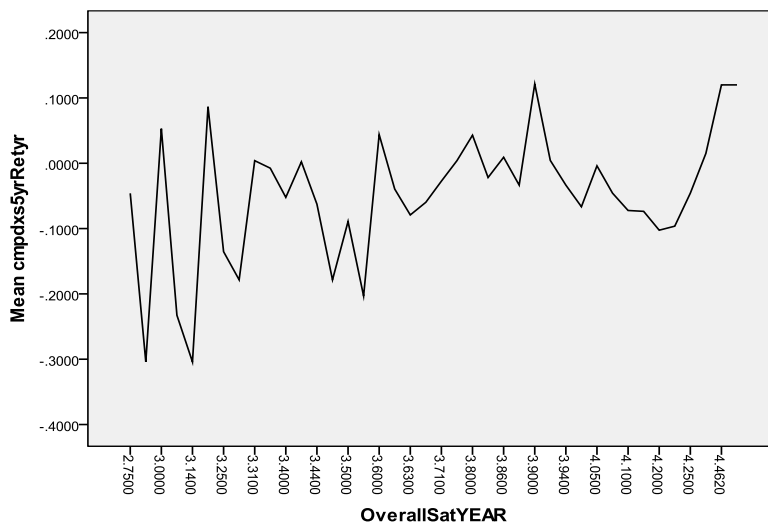
Note: No occupier satisfaction data prior to 2006 was available for industrial estates, nor for 2009

Figures 8-2 to 8-5 plot Five-Year Compounded Excess Return as a function of Occupier Satisfaction for shopping centres, retail parks, offices and industrial estates respectively. The upward trend is discernible for the retail sectors, but not for offices or industrial estates when the PAS segments are grouped together for each sector. For Industrial Estates, the graph has a somewhat quadratic trend, with a dip in the middle. The relationships are investigated in the following sections, including making use of dummy variables for landlords to try to assess whether factors such as the inclusion of serviced offices, for example, affects the results.

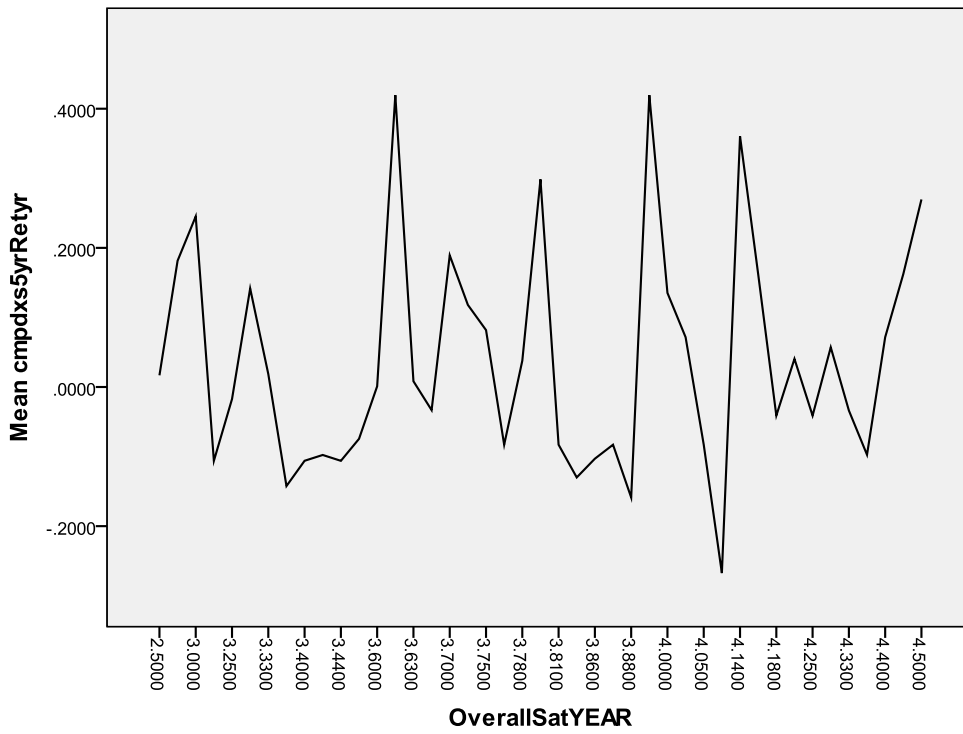
**Figure 8-2: Five-Year Compounded Excess Return as a function of Occupier Satisfaction for Shopping Centres**



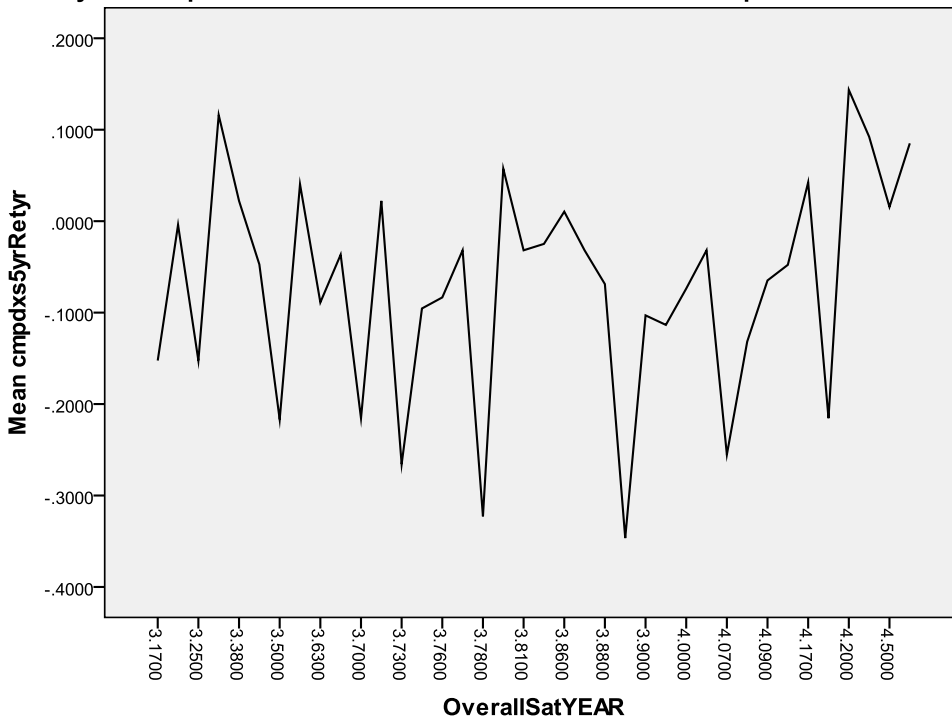
**Figure 8-3: Five-Year Compounded Excess Return as a function of Occupier Satisfaction for Retail Parks**



**Figure 8-4: Five-Year Compounded Excess Return as a function of Occupier Satisfaction for Offices**



**Figure 8-5: Five-Year Compounded Excess Return as a function of Occupier Satisfaction for Industrial Estates**

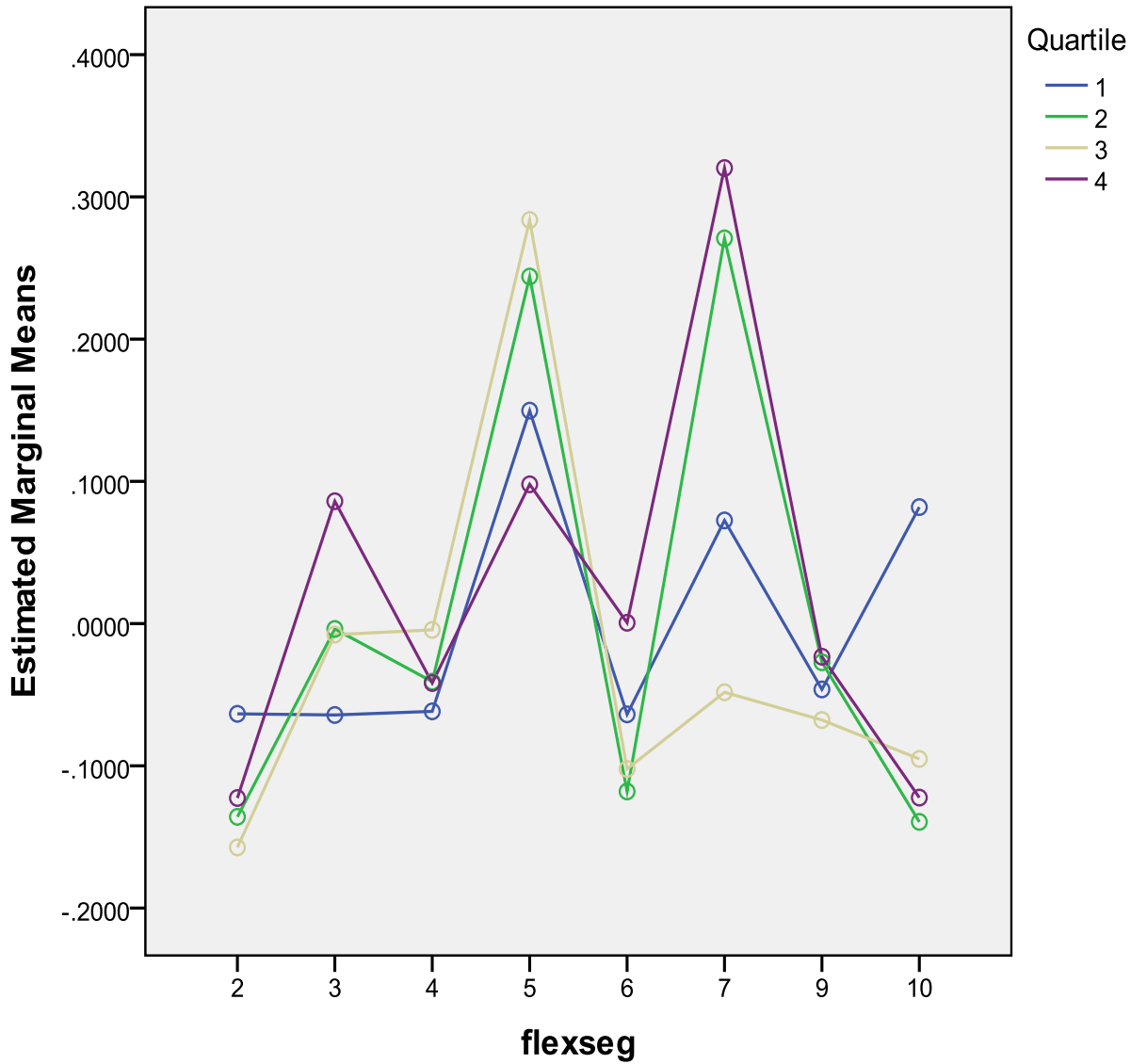


#### **8.4.1 An examination of returns for the quartiles of Occupier Satisfaction: Analysis of Variance within and between PAS segments**

In order to explore further the individual and joint effects of occupier satisfaction and sector on total returns, a two-way, between groups ANOVA test was carried out (see Appendix H and **Figure 8-6**). For shopping centres (PAS segment 3) the ordering of the quartiles of occupier satisfaction lends support to a positive relationship between occupier satisfaction and financial returns, whereas for retail parks in this sample and for industrial estates, occupier satisfaction appears to have little impact on returns. In the case of retail parks, the explanation might be related to the longer leases typical of the sector, particularly since this sample comprises properties for which satisfaction studies were conducted prior to 2007, so many retail warehouses would still have been tied to 20 – 25-year leases. For industrial estates, the lack of a clear relationship between occupier satisfaction and financial return might be attributable to a more distant relationship between industrial lease-holders and estate managers, particularly on Estates where few services are provided. Indeed for industrial estates outside the South East, those with the lowest satisfaction appear to give the best returns, but the sample size in this case is very small.

For offices, the picture is mixed; offices in London's West End (PAS segment 6) with the highest occupier satisfaction do appear to have higher returns, whereas for City offices (PAS segment 5) in this sample, those with occupier satisfaction in the 2<sup>nd</sup> and 3<sup>rd</sup> quartiles seem to outperform the others. The picture may be distorted by the inclusion of serviced offices for which occupiers pay a premium in return for flexibility of lease duration. During the period of this study, the additional premium appears to have more than offset the added risk to the landlord of increased vacancy rates. These results from the two-way, between groups ANOVA test demonstrate that the relationship between occupier satisfaction and property performance does differ between sectors.

Figure 8-6: Two-way between groups ANOVA showing how occupier satisfaction quartiles and sector affect 5-year compounded excess return (flexseg = PAS segment)





## 8.5 Occupier Satisfaction and Property Returns: Model Variants

In order to probe the effect of sector on the relationship between occupier satisfaction and the financial returns from a property, several model variants were tested by performing fixed effects regressions with dummy variables, and also individual regressions using data for each sector and PAS segment separately. The results of these models are given in **Table 8-24**. Model 1 is the pooled panel regression using the full sample of properties discussed previously (**Table 8-19**). Model 2 uses sector dummy variables to determine the coefficients in the following fixed effects regression:

$$FiveYrCmpdXSRet_{it} = \alpha + \beta OccSat_{it} + \delta_1 SC + \delta_2 RP + \delta_3 Office + \delta_4 Ind + \varepsilon_{itj}$$

(for property  $i$ , time  $t$  and sector  $j$ ). The dummy variable  $SC$  takes the value 1 if the property is a shopping centre, zero otherwise, and so on for the other dummy variables. Table 8-24 gives the results of the regression, using shopping centres as the reference category. The coefficient for the independent variable  $OccSat$  gives the slope of the graph: for every unit increase in mean overall satisfaction, the five-year excess compound return increases by 10.7%, which equates to an annualised benchmark out-performance of 2.1%. Considering the coefficients for the dummy variables relating to sector, in this sample, retail parks and industrial estates appear to achieve lower excess returns than shopping centres, whereas offices outperform the IPD benchmark for their sector. However, the results for retail parks are not statistically significant. This regression results in a common slope coefficient for all properties, with the sector affecting the intercept. The coefficient of variation  $R^2$  is 0.045 implying that 4.5% of the variance in five-year compounded excess returns is attributable to occupier satisfaction and sector. This is statistically significant, according to the ANOVA table, which tests the null hypothesis that  $R^2$  in the population equals zero.

### Test for Homogeneity of Regression Slopes for the different sectors

The analysis in Model 2 assumes a common slope parameter, with any differences between sectors showing up as a different intercept. However, it is also possible that different sectors have different slope parameters, i.e. that the change in total return resulting from a unit change in occupier satisfaction is not the same for all the sectors. To test this, an analysis of covariance was carried out to see whether there are differences in slope coefficient and, if so, whether these are statistically significant. The interaction term  $Sector * OccSat$  was found to have a p-value of 0.00 meaning that the regression slopes are heterogeneous. Thus the second null hypothesis, that the relationship between occupier satisfaction and property performance is the same for all sectors, is rejected at the 95% level of significance. This applies both to the intercept (from the regression with dummy variables, above) and to the slope coefficients found from separate regressions.

**Table 8-24: Results of Regression Models (Dependent variable is compounded excess 5-year Total Return)**

\*\* / \* show statistical significance at the 1% and 5% levels respectively

	(1) Pooled Panel	(2) Sector Dummy Variables	(3) Landlord Dummy Variables	(4) Sector & Landlord Dummy Vars	(5) Separate Regressions (2004 –2014)	(6) Separate Regressions (2007–2009)
<b>Intercept</b>	<b>-0.277**</b> (-5.64)	<b>-0.424**</b> (-9.20)	<b>-0.264**</b> (-6.38)	<b>-0.314**</b> (-6.79)		
<b>Occupier Satisfaction</b>	<b>.075**</b> (5.83)	<b>.107**</b> (9.35)	<b>.069**</b> (6.46)	<b>0.080**</b> (6.93)		
RP		-.011 (-0.81)		<b>-.015</b> (-1.08)		
<b>Office</b>		<b>.114**</b> (11.86)		<b>.046**</b> (3.97)		
<b>Industrial</b>		<b>-.034**</b> (-2.77)		-.003 (-0.14)		
<b>LL2</b>			<b>-.037*</b> (-2.10)	-.034 (-1.89)		
<b>LL3</b>			<b>-.077**</b> (-7.13)	<b>-.076**</b> (-3.86)		
<b>LL4</b>			<b>.228**</b> (20.11)	<b>.197**</b> (13.76)		
<b>Shopping Centres</b>					<b>.136*</b> (2.20)	<b>.263**</b> (5.66)
<b>Retail Parks</b>					.064 (1.55)	<b>.079**</b> (2.85)
<b>Offices (all)</b>					.073 (1.75)	<b>.156**</b> (4.18)
City Offices					-.147 (-1.12)	.259 (1.58)
West End Offices					.010 (0.21)	.052 (1.59)
<b>SE Offices</b>					<b>.135*</b> (2.13)	<b>.132**</b> (2.78)
<b>Industrial Estates (All)</b>					-.056 (-1.19)	-.001 (-0.03)
<b>Industrial Estates (S E)</b>					.050 (0.99)	0.008 (0.25)
Industrial Estates LL3					<b>.199**</b> (3.24)	
Industrial Estates LL4					-.144 (-1.85)	
Rest of UK Industrial Estates					-.196 (-0.95)	-0.148 (-0.91)
	Full Sample Pooled Panel Adj R <sup>2</sup> 0.007	Ref Category Shopping Centres Adj R <sup>2</sup> 0.044	Reference Category Landlord 1 Adj R <sup>2</sup> 0.088	Ref Categories Shopping Centres and LL1 Adj R <sup>2</sup> 0.092	Adjusted R <sup>2</sup> 0.01 – 0.09	Adjusted R <sup>2</sup> 0.002-0.042

Model 3 tests whether the relationship between occupier satisfaction and property performance is the same for the four landlords whose data was used in this research.

$$FiveYrCmpdXSRet_{itk} = \alpha + \beta OccSat_{it} + \gamma_1 LL1 + \gamma_2 LL2 + \gamma_3 LL3 + \gamma_4 LL4 + \varepsilon_{itk}$$

The intercept in **Table 8-24** is for Landlord 1. The intercepts for Landlords 2 and 3 are statistically significantly lower, whilst that for Landlord 4 is significantly higher. This regression shows a slope coefficient of 0.069, meaning a one unit increase in occupier satisfaction results in a 6.9% greater excess total return over five years, Thus, using landlord dummy variables instead of those for the four sectors has slightly reduced the strength of the relationship between occupier satisfaction and property performance, since the  $\beta$  coefficient was 0.107 in the regression without landlord regressors.  $R^2$  for the regression is 0.088, meaning it explains 8.8% of the variance in the five-year compounded excess return, and the F-statistic is significant.

#### **Test for Homogeneity of Regression Slopes for the different landlords**

The dummy variable regression tests for a common slope parameter, with any differences between landlords and sectors showing up as a different intercept. An analysis of covariance was performed to test for heterogeneity in the regression slopes for the different landlords; the interaction term Landlord \* OccSat was found to have a non-significant value of 0.894 meaning that the regression slopes are homogeneous. Thus the third null hypothesis, that the relationship between occupier satisfaction and property performance is the same for all Landlords, is not rejected. The coefficient on occupier satisfaction of around 7% should apply to all landlords. However the intercepts do vary. In particular, the larger intercept for Landlord 4 may be explained by the different way of calculating occupier satisfaction for this landlord, and the fact that during the period being investigated, the flexibility offered by serviced offices and short-term industrial lets resulted in such properties achieving superior returns. Additionally, this landlord has a strategy of encouraging occupier loyalty to the landlord and the whole portfolio rather than to an individual property, and this may mask the relationship between occupier satisfaction and property performance at the individual property level.

Model 4 gives the results of a regression which includes both Sector and Landlord Dummy Variables, using landlord 1 and shopping centres as the reference categories:

$$\begin{aligned} FiveYrCmpdXSRet_{it} &= \alpha + \beta OccSat_{it} + \delta_1 SC + \delta_2 RP + \delta_3 Office + \delta_4 Ind + \gamma_1 LL1 + \gamma_2 LL2 \\ &+ \gamma_3 LL3 + \gamma_4 LL4 + \varepsilon_{itjk} \end{aligned}$$

The results can be interpreted as follows: from the coefficient for the independent variable OccSat it can be seen that for every unit increase in mean overall satisfaction, the five-year excess compound return increases by 8% (1.52% annualised). In models 3 and 4, which include landlord dummy variables instead of - or in addition to - those for the four sectors, there is a slight reduction in the strength of the relationship between occupier satisfaction and property performance, but the coefficient of determination of the regression is doubled, with the adjusted  $R^2$  increasing from 0.044 to 0.092 in Model 4. Thus these variables account for 9.2% of the variation in five-year compounded excess return.

The implication of the results for this model is that, compared with Landlord 1, the properties in this sample belonging to Landlord 2 achieve 3.4% lower five-year excess return for the same level of occupier satisfaction, although the coefficient for LL2 has a slightly higher than 5% probability of occurring by chance ( $p=0.059$ ). It is important to appreciate that these properties form a small sample of the landlords' overall portfolios, and no inference can be made from these results about the whole portfolios. Likewise, for this sample of properties, those owned by Landlord 3 achieve 7.6% lower excess returns over the five-year period for the same level of occupier satisfaction, whereas those owned by Landlord 4 achieve nearly 20% higher excess returns. There is some multicollinearity in Model 4, since the Variance Inflation Factors for LL3 and for the Industrial sector are fairly high (3.5 and 4.0 to 2s.f.) for example.

The slope coefficients for the individual regressions are shown in Model 5. As well as giving results for the broad sectors (shown enlarged and bold), results are also given for some sub-sectors in order to highlight where occupier satisfaction does appear to have an impact on property performance. From the results it can be seen that where sample sizes and data variance permit statistically significant results to be achieved, the slope coefficients are positive. However for City Offices, and some of the Industrial Estates, the relationship between occupier satisfaction and property performance appears to be negative, albeit not statistically significant.

### **8.5.1 The effect of the Global Financial Crisis (GFC)**

The preceding analysis has demonstrated that the relationship between occupier satisfaction and financial returns does differ for different sectors, and part of the explanation for the lack of a positive relationship for offices, for example, over the full period of the study was posited to be that returns were very high for offices for most of the period. Demand was high and vacancy rates low, so there was little scope to achieve even higher returns through superior property management.

Intuitively one might expect occupier satisfaction to have more of an impact on the financial returns of commercial property when there is a surfeit of property. At such times of supply exceeding demand, occupiers have plenty of choice and may be able to negotiate favourable rents and incentives such as rent-free periods.

The worst years of the financial crisis were 2007, 2008 and 2009, during which time the IPD average returns for all sectors were negative because capital values dropped considerably. In order to assess whether the relationship between Property Performance and Occupier Satisfaction is affected by the state of the economy and the supply of, and demand for, Commercial Property, the regressions of Model 1 (the full sample) and of Model 5 (the separate PAS Segment regressions) were re-run using occupier satisfaction from 2007 – 2009 only (Model 6).

This analysis finds that occupier satisfaction does appear to have greater impact when benchmark returns are low. Using the full sample, but with occupier satisfaction between 2007 and 2009, the slope coefficient increases to a statistically significant 0.134 (from a value of 0.075 when the full period is included), and the coefficient of determination for the regression,  $R^2$  increases from 0.007 to 0.021 (which is admittedly still a small value).

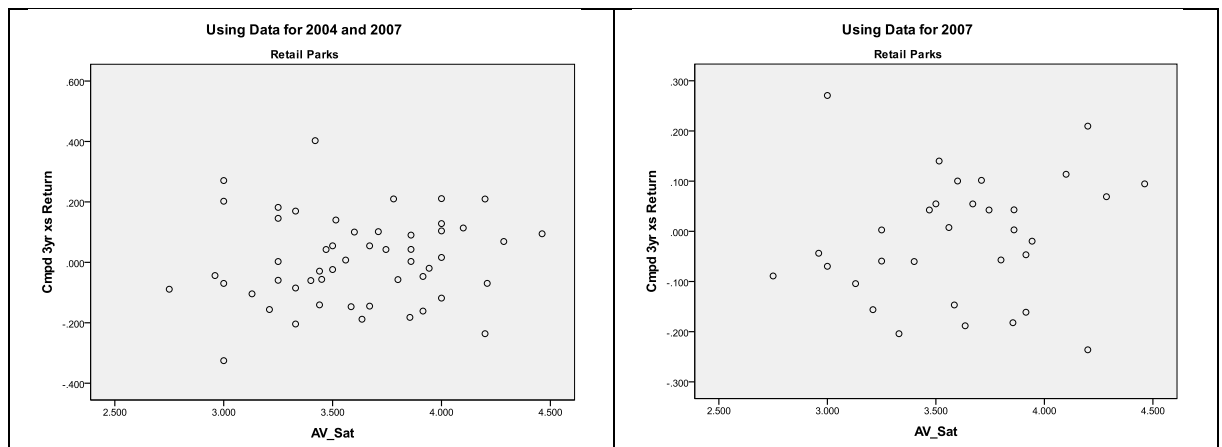
Comparison between Model 5 and Model 6, shows that the relationship between retailer satisfaction and shopping centre performance is very strong for period of the GFC. The relationship for offices is now much more apparent, in contrast to the results over the full period for City of London Offices in particular, for which the relationship may have been masked by the low vacancy rates and strong performance of the sector.

### Retail during the Global Financial Crisis

For shopping centres, (PAS Segment 3), a coefficient of 0.263 means that for every unit increase in mean occupier satisfaction in a shopping centre, the five year compounded excess return increases by 26.3%, compared with 13.6% when occupier satisfaction ratings for the full period are used. These equate to annualised figures of 4.78% versus 2.58%.

The slope coefficient for retail parks increases only slightly from the previous analysis, perhaps because occupier satisfaction data for Retail Parks was mainly gathered over the relatively short period between 2004 and 2007 inclusive. However it does attain statistical significance at 95% ( $p=0.005$ ) and the suggestion that occupier satisfaction has more impact on the financial performance of retail parks during a recession is supported by the following graphs. These show the three-year compounded excess return for 2004 and 2007 against occupier satisfaction. The second graph, which includes excess returns for 2007, 2008 and 2009, shows a positive correlation, which is obscured when data for 2004 – 2006 is included (first graph).

**Figure 8-7: Scatter Graphs showing the relationship between 3-Year Compound Excess Return and Occupier Satisfaction for Retail Parks**



### Offices during the Global Financial Crisis

Overall, the sensitivity of property returns to occupier satisfaction doubles for this sample of offices during the period of the economic downturn. The coefficient for City of London offices (0.259) is particularly dramatic for five year returns from 2007, 2008 and 2009, implying a 25.9% increase in five-year compounded excess returns per unit increase in mean occupier satisfaction (4.71% annualised), although the large standard error, arising from volatility of the data, means that the result is not statistically significant. The coefficient for West End Offices is less impressive, at 0.052,

and it, too, is not statistically significant. For offices in the South East of England, however, the slope coefficient equals 0.132, a large value, which is also statistically significant ( $p=0.006$ ). The value of the coefficient for the full time period was 0.135.

### **Industrial Estates during the Global Financial Crisis**

The results for industrial estates do not give statistically significant results, and no out-performance of the IPD benchmark with increased occupier satisfaction is evident when considering both PAS segments together. The apparent negative relationship between occupier satisfaction and property performance for this sample of industrial estates throughout the full time-span of the data does not occur when using data for the recession only; during the downturn no relationship between occupier satisfaction and property performance is observed. These results support the earlier findings of a difference between sectors in their response to occupier satisfaction. It also ties in with the findings from Chapter 7 that occupiers of Industrial Units are influenced by different aspects of tenancy when considering their willingness to recommend their landlord or property manager. For occupiers of industrial units, the physical aspects of their property appear to matter more than aspects of property management, compared with occupiers of other sectors of commercial property.

### **Evaluation of the statistical significance of the difference in slope coefficients for the economic downturn compared with the full period**

The statistical significance of the difference in slope coefficients can be assessed by calculating the z-statistic for this difference:

$$z = \frac{b_2 - b_1}{\sqrt{SE_{b_1}^2 + SE_{b_2}^2}}$$

in which  $b_1$  and  $b_2$  are the coefficients. If the data were distributed according to the normal distribution, a value for  $z$  in excess of 1.645 would equate to a 90% confidence level that the coefficients are significantly different with a two-tailed test, or a 95% confidence level for a 1-tailed test. In this case, a 1-tailed test is appropriate, since the hypothesis is investigating whether the slope is greater during the recession, as opposed to simply being different. However, the data is not normally distributed, so the z-statistic can give only an indication of whether the results should apply to the population as a whole and not simply to this sample.

**Table 8-25** gives the calculated z statistics.

In the case of the sample of properties as a whole,  $z = 2.39$ , confirming that the coefficients are statistically significantly different, so the null hypothesis, that the relationship between occupier

satisfaction and property performance is unaffected by the property cycle and the supply of and demand for commercial property, is rejected.

The z-statistic for the individual sectors and PAS segments is statistically significant only for Shopping Centres and City of London Offices.

**Table 8-25: Calculation of z-statistics for difference in Slope Coefficients**

	<b>Slope Coefficient (Recession)</b>	<b>SE</b>	<b>Slope Coefficient (Full period)</b>	<b>SE</b>	<b>b2-b1</b>	<b>z-statistic</b>
<b>Shopping Centres</b>	<b>0.263</b>	<b>0.046</b>	<b>0.136</b>	<b>0.062</b>	<b>0.127</b>	<b>1.645</b>
<b>Retail Parks</b>	<b>0.079</b>	<b>0.028</b>	<b>0.064</b>	<b>0.041</b>	<b>0.015</b>	<b>0.302</b>
<b>Offices (all)</b>	<b>0.156</b>	<b>0.037</b>	<b>0.073</b>	<b>0.042</b>	<b>0.083</b>	<b>1.483</b>
<b>City Offices</b>	<b>0.259</b>	<b>0.165</b>	<b>-0.147</b>	<b>0.131</b>	<b>0.406</b>	<b>1.927</b>
<b>West End Offices</b>	<b>0.052</b>	<b>0.032</b>	<b>0.01</b>	<b>0.048</b>	<b>0.042</b>	<b>0.728</b>
<b>SE Offices</b>	<b>0.132</b>	<b>0.048</b>	<b>0.135</b>	<b>0.064</b>	<b>-0.003</b>	<b>-0.038</b>
<b>Industrial Estates (All)</b>	<b>-0.001</b>	<b>0.033</b>	<b>-0.056</b>	<b>0.047</b>	<b>0.055</b>	<b>0.958</b>
<b>SE Industrial Estates</b>	<b>0.008</b>	<b>0.033</b>	<b>0.05</b>	<b>0.051</b>	<b>-0.042</b>	<b>-0.691</b>
<b>Rest of UK Industrial Estates</b>	<b>-0.148</b>	<b>0.163</b>	<b>-0.196</b>	<b>0.206</b>	<b>0.048</b>	<b>0.183</b>
<b>Full Sample</b>	<b>0.134</b>	<b>0.021</b>	<b>0.075</b>	<b>0.013</b>	<b>0.059</b>	<b>2.389</b>

Thus these findings do lend support to the proposition that superior property management can act as a hedge against falling demand, but the effect is not the same for all sectors. To achieve more reliable and statistically significant results, a larger sample of properties would be required.



## 8.6 Discussion of Results and Key Findings

### 8.6.1 Tests of Hypotheses

The first hypothesis, that, all else being equal, the total return for properties with highly satisfied customers is no different from that of properties with poor customer satisfaction is rejected when the dependent variable used is a rolling five-year compounded excess return from 2004 to 2014 but fails to be rejected when the dependent variable is the three-year compounded excess return for 2004, 2007, 2010 and 2013. The analysis using a sub-sample of 114 properties and data over 8 – 11 years also indicated a positive correlation between benchmark out-performance and occupier satisfaction. Thus, taking the sample as a whole gives some support for the premise of this thesis, that treating tenants as valued customers does result in superior returns in the long term. The total returns are net of property management costs, since the income return element comprises rental income minus costs, so landlords should see a return on investment in customer-focus and property management excellence. However, the results do appear to be sector specific, as the test of the second hypothesis showed; the null hypothesis that the relationship between occupier satisfaction and property performance is the same for all sectors was rejected.

A two-way, between groups ANOVA test was conducted and this demonstrated that differences between sectors do exist, and regressions showed differences in intercept. A test for homogeneity in the regression slopes for each sector revealed differences, so individual regressions were performed which demonstrated that the relationship between occupier satisfaction and property performance was most significant for the retail sector, certain segments of the office market and for South East Industrial Estates for the landlord with the largest sample in this sector.

Notwithstanding this last finding, the test of the hypothesis that the relationship between occupier satisfaction and property performance is unaffected by property owner and business strategy is not rejected. Whilst the results did show different intercepts for the different landlords, using dummy variables for landlords gave a significant slope coefficient of 0.07, which was confirmed by tests of homogeneity of slope to be insignificantly different for the landlords.

The fourth hypothesis test looked at the impact of the global financial crisis to test whether supply and demand affect the relationship between occupier satisfaction and property performance. The analysis rejected the null hypothesis that the relationship between occupier satisfaction and property performance is unaffected by the property cycle and the supply of and demand for commercial property at the 95% level of confidence for the sample as a whole, and for shopping centres and City of London Offices. It failed to reject the hypothesis for the other individual sectors:

the results showed that for these samples, although the relationship between occupier satisfaction and property performance is more highly correlated than over the full period of the study, the difference is not statistically significant. With a larger sample size, a statistically significant result might be obtained. There are certainly indications that satisfying occupiers is more important when there is an excess of property – supply exceeds demand – and when returns generally are low. Superior property management might mitigate the risks associated with falling demand.

### **8.6.2 Implications for the Retail Sector**

The retail sector shows one of the strongest relationships between occupier satisfaction and property performance, with the relationship for shopping centres being particularly convincing. However, the usual caveat about correlation not necessarily implying causation should be borne in mind here. It is possible that this significant relationship between store-managers' satisfaction and shopping centre performance might be attributable to high customer footfall. A shopping centre in which shops experience strong trading performance is likely to have a high income return and total return because stores will be able to afford higher rents, there will be fewer empty shops, the Centre should be able to support additional commercialisation activity such as advertising, and promotional events. The success of such a Centre might be attributable to excellent centre management and marketing, or it might be due to demographic aspects such as location, accessibility and lack of competition.

A further issue is that the store manager is unlikely to be the decision-maker in matters relating to property leases, since most shops in shopping centres or retail parks are chain stores nowadays. Therefore, the store manager may have little say in whether a lease gets renewed, for example, and may know little about the financial terms of the lease. On the other hand, the findings from this research could be used to argue that the impact of occupier satisfaction is sufficiently strong that it is transmitted through an intermediary, the store manager, to the decision-maker.

### **8.6.3 Implications for the Office Sector**

Findings for offices were mixed in this sample, although certain significant relationships were apparent, for example for offices in the South East of England, but outside London. In London itself, offices generally achieved very high returns over the period 2004 – 2014, and vacancy levels were low, so there was little opportunity to out-perform the IPD benchmark with superior service and satisfied occupiers. This may continue for a while, because offices are being converted to residential property, keeping supply low in spite of some recent prime developments including such iconic buildings as The Shard, the “Walkie-Talkie”, Heron Tower (subsequently re-named to accommodate the main tenant) and the “Cheese-grater”. At some point, though, previous property cycles have

demonstrated that future developments are likely to come on-line at a time when demand is falling. At such times, this research indicates that customer-focus is more important, and that maintaining a good reputation and encouraging loyalty amongst occupiers to the landlord should help to achieve returns which exceed those of the IPD benchmark.

#### **8.6.4 Implications for the Industrial Sector**

A graph of returns against occupier satisfaction for industrial units shows a “U” shape, with higher returns at both ends of the range of occupier satisfaction scores. Occupiers of industrial units may have little contact with the estate management team, and their main concern might be the rent and other costs of occupancy. Unless the capital value of a property is very low, low rents give low returns to investors, and low rents do not allow much expenditure on property management. The dip in the middle of the graph could reflect over-investment in trying to achieve occupier satisfaction without sufficient rental income to support the service.

The South East England industrial properties in this sample showed interesting results, particularly when split by landlord. For landlord 3 there was a very strong relationship between occupier satisfaction and property performance although on average the properties in this sample under-performed compared with the IPD sector average for this segment (PAS segment 9). The slope coefficient, which was statistically significant, showed that a unit increase in mean satisfaction resulted in a greater return of nearly 20% over five years. Although the same relationship was not apparent for Landlord 4, this can be explained in part by the different method of calculating satisfaction and the different strategy adopted by the landlord. The sample for Landlord 4 outperformed the benchmark but showed little correlation between individual property returns and the satisfaction of occupiers of that property. The findings lend weight to the contention that investment in occupier satisfaction is important for the industrial sector. However, the greater importance which seems to be attached to physical aspects of the property (Sanderson, 2015)<sup>1</sup>, mean that the sector appears to react differently from other sectors in an economic downturn.

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<sup>1</sup> Also discussed in the analysis of determinants of occupier satisfaction – Part 2 of Thesis

### **8.6.5 General implications for landlords, property managers and investors who wish to analyse the relationship between occupier satisfaction and property performance**

If owners and managers wish to apply this research approach to their own portfolio, they need to consider the time-frame to use in order to achieve meaningful results. The correlations and regressions in this study have shown that increases in occupier satisfaction take time to translate into improved returns. A snapshot of occupier satisfaction and annual return is unlikely to reveal anything meaningful. Even a three-year period seems to be insufficient because of the volatility of returns. This research has found that statistically significant results can be achieved using five-year compounded returns.

When analysing their own portfolio, owners or managers can use IPD or other published sector benchmarks as a comparison, and use outperformance as the dependent variable. This enables comparisons across sectors. Alternatively they can compare the actual performance of properties within their portfolio, in which case they need not refer to external benchmarks, but should ensure comparisons are made within the same sector.

Occupier satisfaction can be obtained in many ways. Although it is possible to ask occupiers a single question to get a rating for their overall satisfaction, this is unlikely to generate a considered response. It is preferable to ask about many aspects of tenancy, culminating in a question about overall satisfaction. This method allows occupiers to take account of many factors when summarising their views in a final “overall rating”. Equally importantly, it gives owners and managers useful information about where there is scope to improve service and satisfaction. It also offers additional scope for which independent variable(s) to use in regressions; a scale can be created by adding scores for satisfaction with individual aspects of tenancy, or different aspects can be used as multiple regressors, instead of the single independent variable – the mean overall satisfaction of occupiers participating in a satisfaction study at a property.

If a landlord finds no apparent relationship between occupier satisfaction and Total Return it is possible that the landlord is over-investing in achieving occupier satisfaction by focusing on aspects that do not matter to occupiers. It is important to concentrate on aspects in the bottom, right-hand quadrant of the Importance-Performance graph, where importance is high yet satisfaction is low (see Sanderson, 2015), in order to maximise return on investment in the service of property management. As long as performance in other areas is not allowed to deteriorate, such a strategy should enable higher returns to be achieved without jeopardising the satisfaction of the most highly satisfied occupiers.

## **Chapter 9 The Tenant as Customer: does good service enhance the financial performance of commercial real estate?**

The purpose of this research was to investigate the business case for landlords to treat tenants as valued customers. The industry is becoming more customer-focused, with the creation of organisations such as the RealService Best Practice Group, whose members endeavour to improve their treatment of tenants. Landlords want confirmation that such behaviour is not purely altruistic, but that it is justified financially. The validity of the “Service – Profit Chain” is widely asserted, but has not previously been tested for commercial real estate, because occupier satisfaction data has not been made available to researchers and landlords are reticent about revealing property performance data. This situation is rectified with this research, courtesy of RealService, IPD, and the landlords who permitted access to their data.

This Chapter summarises the findings of this research, by answering each of the Research Questions and highlighting the key findings and implications for the real estate industry. The research limitations are discussed and suggestions for ways in which the research could be extended are proposed.

### **9.1 Answers to Research Questions**

#### **9.1.1 Question 1: What factors affect occupiers’ choice of property?**

This research supports most previous studies in finding that commercial occupiers seek a property with an appropriate specification for their business, in a convenient location, at a fair price. Technological advances have altered the property requirements of businesses markedly since the turn of the century, rendering lease flexibility a key requirement of occupiers of commercial property; in particular shorter leases with break options. The switch in emphasis towards online shopping has meant that retailers now need more logistics buildings and warehouses. Office workers are increasingly able to work from home, or share temporary desk-space. This has enabled businesses to reduce their core office space requirements, but they may require temporary additional space such as short-term serviced office or conference facilities, for which they will pay higher rents, which may be inclusive of service charges. The industrial sector, too, has been affected by changes such as the advent of additive manufacturing, (‘3-D printing’), so that products need not be manufactured at a large central factory.

The financial implications of their rented property are also key considerations for occupiers. This does not necessarily mean wanting to pay the lowest possible rent but rather ensuring their property, as a factor of production, supports their business strategy and maximises its profitability.

This makes it important that the property delivers added value. For retailers, this might be through the right tenant mix attracting shoppers, increasing dwell time in a shopping centre and increasing the trading performance of a store. For office and industrial occupiers, the added value might come from cost reductions through sharing services such as bulk-buying of utilities, installing environmentally-friendly and energy-efficient systems, or through business-to-business interactions with other tenants in a building or on an estate. These are things that the property manager can facilitate.

The terms of the lease are important to occupiers not only for their financial implications. The ability to assign or sublet the property is important, as is the option to cut short the tenancy. Such flexibility is increasingly being demanded by occupiers, and landlords are responding, as is evident from the reduction in lease lengths and the increased inclusion of break clauses in leases during the period of time studied in this research.

The leasing process itself, including the professionalism of the leasing agent, can inspire trust between landlord and occupier. The interviews with property directors revealed the importance of rapport and close liaison with occupiers, an understanding of their needs, integrity, professionalism and fairness. The reputation of a landlord for trustworthiness and social responsibility also matters to occupiers, and may influence their decision to approach a particular landlord – either their existing landlord or another with a good reputation – when seeking to move premises. Nevertheless, the key factors affecting occupiers' choice of property relate mainly to the physical building, its location and the terms of the lease. This research finds the service aspects of property management to be more influential during the later parts of the occupiers' "journey", affecting occupier satisfaction and the behavioural intentions of lease renewal and advocacy of their landlord.

### **9.1.2 Question 2: What are the determinants of occupier satisfaction, loyalty and advocacy?**

Although the precise determinants of occupier satisfaction do differ between the sectors, in fact there is much commonality. Regressions using principal components, and analysis with structural equation modelling, both demonstrate that satisfaction with property management is fundamental to occupiers' overall satisfaction, with 'Empathy', 'Tangibles' and financial aspects all playing an important role.

The 'Empathy' of the property manager, comprising communication and understanding occupiers' needs, is shown in the analysis to be of the utmost importance. Effective communication should take account of occupiers' preferred means and frequency of communication. Meetings, whether one-to-one or at tenant association gatherings, provide a good opportunity for property managers to elicit and discuss occupiers' business needs, and demonstrate the empathy that this research shows to be crucial in occupiers' satisfaction.

'Tangibles' are also important to all occupiers, and include the property itself, its location and its amenities. For retailers, the 'Tangibles' of most importance comprise the quality of the Shopping Centre or Retail Park, its location, signage to and within the Centre or Park, and the tenant mix. For office occupiers, satisfaction with property management and their overall satisfaction depend largely on the specification and image of their building, its location and the amenities provided. For Industrial Occupiers the most important determinants of overall satisfaction are satisfaction with their Unit and their Estate, combined with satisfaction with Estate Management.

The satisfaction of office occupiers is also determined by their property manager's responsiveness to requests, an aspect of property management which appears to matter more for office occupiers than for retailers or industrial occupiers. The reason for this disparity is unclear; perhaps office occupiers have more cause to make requests than industrial occupiers, who may be more autonomous and self-reliant in their unit, whilst requests from retailers may be directed via their head office so that the store managers, who are the subjects of this research, may be less affected by the responsiveness of shopping centre or retail park managers.

The final aspect is a financial one. For Retailers, it is mainly about the Tenant Mix and Marketing of a Shopping Centre or Retail Park, and the trading performance of the store. The retailers interviewed in this research appeared less concerned about the rent and service charge, perhaps because these were dealt with by the store's Head Office in most cases. For Office and Industrial Occupiers, the financial aspect is 'Value' – their perceived value for money for rent and service charge. This reiterates the importance of adding value on the part of landlords and property managers by

facilitating cost savings or delivering services in a more cost-effective, synergistic way than could be achieved by occupiers acting individually.

This analysis has shown that 'Reliability' is the most important determinant of occupiers' satisfaction with Value for Money; in particular the clarity and accuracy of documentation such as service charge budgets, reconciliations and invoices. Since perception of receiving value for money is one of the key determinants of occupiers' overall satisfaction, it is particularly important to ensure that rent and service charge documentation is transparent and easy to understand, to give occupiers a better appreciation of how their money is spent.

For retailers, the reliability and quality of cleaning is also instrumental in determining their perception of receiving value for money. The aspects which offer most scope for improving this perception, according to the Importance – Performance Analysis, are improvements to legal processes include the granting of licenses to make alterations or permission to assign their lease or sub-let, (streamlining these and reducing "customer effort") and improvements to the Shopping Centre or Retail Park itself.

For office occupiers, the main determinants of 'Reliability' are the accuracy and clarity of documentation and the maintenance of their building. The aspects which would have most impact on improving office occupiers' perception of receiving value for money are improvements to the Heating, Ventilation and Air-Conditioning of their building, and improvements in the documentation they receive.

For industrial occupiers, the key determinants of 'Value', in addition to 'Reliability', are satisfaction with the building itself, and with the Estate, and the quality of estate maintenance. Improvements in Estate Security would achieve the greatest improvement in Industrial Occupiers' perception of receiving Value for Money, according to the Importance-Performance Analysis carried out.

### **Determinants of occupier loyalty**

Structural equation modelling using lease renewal intentions as the dependent variable reveals that the main determinants of occupiers' intention to renew their lease are 'Assurance', 'Reliability' and 'Value', with 'Responsiveness' also important from the perspective of Office Occupiers.

The key aspects of 'Assurance' are found to be the professionalism of the property manager and the Corporate Social Responsibility demonstrated by the landlord. The CSR variable in the analysis relates predominantly to respondents' ratings for their landlord's commitment to sustainability. Thus 'green leases' and landlord – tenant collaboration on environmental issues may increase the loyalty of



occupiers. 'Assurance' also included the leasing process, which supports the importance of having a close relationship with occupiers in order to be able to offer mutually attractive lease renewal terms at lease expiry.

The 'Reliability' determinant of loyalty mainly comprises rent and service charge documentation (its clarity, accuracy and timeliness) and the maintenance of the building. For retailers, the cleanliness of the shopping centre was also found to be important.

The 'Value' determinant, and 'Responsiveness' for office occupiers, have already been discussed in answering the second research question. These aspects influence occupiers' overall satisfaction and their lease renewal intentions.

The alternative method of analysis, using logistic regression to complement the SMART-PLS modelling, confirms the importance of Value for Money in lease renewal decisions, but also produced contradictory results in finding 'Empathy' to be important but 'Assurance' unimportant to occupiers' lease renewal decisions. The differences are likely to be due to the respective samples. The sample size for the SMART-PLS analysis was larger, as cases could be included with incomplete data, as the algorithm used pairwise deletion for missing variables, but potentially introducing missing variable bias. Conversely, for the multinomial logistic regression, cases were only included if data was available for all variables i.e. listwise, which might have introduced sample bias.

Overall, the findings emphasize how important it is that landlords deliver value for money, and that occupiers appreciate the value of the property and the service they receive. Additionally, the results indicate that 'Empathy' and 'Assurance' (particularly the professionalism and corporate social responsibility of the landlord) do play a notable role.

#### **Determinants of landlord reputation and occupiers' willingness to recommend their landlord?**

This question covers two facets:

- Advocacy of the landlord by occupiers; and
- The reputation of landlords amongst occupiers.

The first of these should have an impact on the second.

The analysis was conducted in three different ways. Advocacy was assessed using structural equation modelling, with occupiers' willingness to recommend their landlord on a scale of '1' to '5' as dependent variable. An alternative approach was also used to mirror the widely-used 'Net Promoter' concept, in which a rating of '5' was treated as 'yes' while any other rating was treated as 'no' in a logistic regression.

Reputation was assessed using structural equation modelling, with two reflective variables – willingness to recommend ('1' to '5') and occupiers' rating of their landlord's performance ('1' to '5').

The key determinants of the 'Net Promoter' variant of advocacy are found to be 'Empathy' and 'Assurance', although for Industrial occupiers, the 'Tangibles' of the specification of their Unit and the Estate itself are also highly influential in determining whether they would be willing to recommend their landlord to other people. An increase of one unit in respondents' ratings of their property manager's 'Empathy' or 'Assurance' more than doubled the likelihood of giving a score of '5' to their 'willingness to recommend' their landlord<sup>1</sup>. The other method of analysis shows that different factors influence occupiers' advocacy of their landlord according to sector, with 'Tangibles' being important for retailers, and 'Reliability' and 'Value' being important for industrial occupiers. In all sectors 'Empathy' remains of great importance in this analysis.

The key determinants of Landlord Reputation amongst occupiers differ to some extent across sectors. For retailers 'Assurance' and 'Value for Money' are the most important determinants of Landlord Reputation, with 'Empathy' being of some importance. Within these constructs, the main indicators are retailers' perception of the Corporate Social Responsibility of their landlord, including commitment to sustainability, and the professionalism of the property manager; the trading performance of the store and perception of receiving value for money; the initial leasing process; communication with their property manager and the extent to which the manager understands their business needs.

Satisfaction with Property Management has the largest impact on office occupiers' perception of their landlord, whilst 'Assurance' (primarily Professionalism and Corporate Social Responsibility) and 'Responsiveness' are also important. Unlike Retailers and Office Occupiers, for whom 'Assurance' is particularly important in determining Landlord Reputation, for Industrial Occupiers 'Empathy' and 'Estate Management' are of the greatest importance. The importance-performance analysis showed that landlords should focus on improving perception of Value for Money for greatest impact on improving their reputation amongst Industrial Occupiers.

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<sup>1</sup> For example, as shown in the analysis in Chapter 7, for each unit increase in satisfaction with 'Empathy', the odds of a retailer recommending the landlord increase by a factor of 3.85. For each unit increase in satisfaction with 'Assurance', the odds of a retailer recommending the landlord increase by a factor of 2.29. The values for respondents in other sectors are a little lower, apart from 'Assurance' for office occupiers, for which the odds ratio is 4.78.

### **9.1.3 Question 3: Does the difference between the total return achieved by a property and the benchmark return show positive correlation with the satisfaction of occupiers at that property?**

The analysis of the relationship between occupier satisfaction and property returns is indicative of positive correlation, although the relationship is not clear-cut when taking the sample as a whole, regardless of sector. The first approach, using only properties for which financial data was available for at least 8 consecutive years, looked at superior abnormal returns (alpha) and the riskiness of assets (beta) to see if positive alpha for a property is related to occupier satisfaction at that property. A positive correlation is found between the alpha t-statistic (alpha divided by its standard error) and occupier satisfaction at a property. There is also a positive correlation between alpha and the maximum mean occupier satisfaction score for a property<sup>1</sup>. However the correlation between alpha and the average of the annual occupier satisfaction scores is negative, albeit not statistically significant.

The second approach was to examine the relationship between IPD total return benchmark outperformance and contemporaneous occupier satisfaction, over periods of 1, 3 and 5 years. The one-year relationship is given by the correlation coefficient, and is as likely to be negative as positive. However this is partly because the income return component of total return (the rent) is generally fixed by lease terms, and cannot respond instantaneously to occupier satisfaction.

The null hypothesis, that, all else being equal, the total return for properties with highly satisfied customers is no different from that of properties with poor customer satisfaction, is rejected when the dependent variable used is a rolling five-year compounded excess return from 2004 to 2014 but fails to be rejected when the dependent variable is the three-year compounded excess returns for 2004, 2007, 2010 and 2013. Using the five-year compounded excess return as dependent variable, OLS regression shows that for every increase in mean occupier satisfaction of 1 unit (on a scale of 1 – 5) the five-year compounded excess return appears to increase by 7.5% (an annualised increase of 1.46%). The 95% confidence limits are 0.049 and 0.10 i.e. between 5% and 10% for a five-year period. However an increase of 1 unit in mean occupier satisfaction is actually a very large increase, and  $R^2$  is only 0.007 because the data is very volatile.

Thus, taking the sample as a whole gives some support for the premise of this thesis, that treating tenants as valued customers does result in superior returns in the long term. The total returns are net of property management costs, since the income return element comprises rental income minus

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<sup>1</sup> The mean occupier satisfaction score is the average of the ratings given by respondents at a property to their 'Overall Satisfaction'. The maximum mean score is the largest of the annual mean ratings.

costs, so landlords should see a return on investment in customer-focus and property management excellence.

### **The effect of sector and property owner**

Part of the explanation for the weak relationship between occupier satisfaction and property performance when considering the sample as a whole may be the difference in average occupier satisfaction between sectors. There may also be genuine differences arising from the nature of the property manager – occupier relationship in different sectors.

A two-way, between groups ANOVA test demonstrated that differences between sectors do exist, and regressions showed differences in intercept. A test for homogeneity in the regression slopes for each sector also revealed differences, so individual regressions were performed which demonstrated that the relationship between occupier satisfaction and property performance is most significant for the retail sector, certain segments of the office market and for South East Industrial Estates for the landlord with the largest sample in this sector.

The retail sector shows one of the strongest relationships between occupier satisfaction and property performance, with the relationship for shopping centres being particularly convincing. However, this significant relationship between store-managers' satisfaction and shopping centre performance might be attributable to other factors, such as customer footfall and the interdependence of the retailing success of stores and the profitability of shopping centres. On the other hand, since a store manager is unlikely to be the decision-maker in matters relating to property leases, at least in the case of chain stores, the findings from this research may indicate that the impact of occupier satisfaction is sufficiently strong that it is transmitted through an intermediary, the store manager, to the decision-maker.

Findings for offices are mixed in this sample, although certain significant relationships are apparent, for example for offices in the South East of England, but outside London. In London itself, offices generally achieved very high returns over the period 2004 – 2014, and vacancy levels were low, so there was little opportunity to out-perform the IPD benchmark with superior service and satisfied occupiers.

For industrial occupiers, too, the relationship between occupier satisfaction and property performance was found to be mixed, with higher returns at both ends of the range of occupier satisfaction scores. Occupiers of industrial units may have little contact with the estate management team, and their main concern might be the rent and other costs of occupancy. Unless the capital value of a property is very low, low rents give low returns to investors, and low rents do not allow

much expenditure on property management. The reduction in total returns for properties with medium levels of satisfaction could reflect over-investment in trying to achieve occupier satisfaction without sufficient rental income to support the service.

The South East England industrial properties in this sample show interesting results, particularly when split by landlord. For landlord 3 there is a very strong relationship between occupier satisfaction and property performance, with a statistically significant slope coefficient such that a unit increase in mean satisfaction resulted in a greater return of nearly 20% over five years.

Although there are differences in intercept for the four landlords, analysing the data using dummy variables for landlords gives a statistically significant slope coefficient of 0.07 which was confirmed by tests of homogeneity of slope to be insignificantly different for the landlords. This implies that a unit increase in occupier satisfaction results in a 7% increase in total return over five years (1.36% annualised). Thus, the hypothesis that the relationship between occupier satisfaction and property performance is unaffected by property owner and business strategy is not rejected;

#### **The effect of the property cycle and the supply of and demand for commercial property**

The test of the fourth hypothesis made use of the impact of the global financial crisis to investigate whether supply and demand affect the relationship between occupier satisfaction and property performance. The analysis does reject the null hypothesis that the relationship between occupier satisfaction and property performance is unaffected by the property cycle and the supply of and demand for commercial property at the 90% level of confidence for the sample as a whole. The slope coefficient for the 5-year excess total return dependent variable increased during the recession from 0.075 to 0.128; i.e. for every unit increase in occupier satisfaction, outperformance of the IPD Total Return benchmark appears to increase from 1.46% to 2.4% per year. For the individual sectors, too, the relationship between occupier satisfaction and property performance was more highly correlated than over the full period of the study. Although the small sample sizes of the individual sectors means that the results are not statistically significant in all cases, there are certainly indications that satisfying occupiers is more important when there is an excess of property – supply exceeding demand – and when returns generally are low. Superior property management may act as a hedge against falling demand.

## 9.2 Summary of Research Findings

This research has demonstrated that commercial properties in which occupiers are more highly satisfied do appear to achieve greater total returns than those with lower occupier satisfaction. Whether this translates into a positive return on additional investment in customer service depends upon the magnitude of the gap between occupiers' current level of satisfaction and their "optimal" level of satisfaction, and upon whether their current level of satisfaction is such that they are considering moving elsewhere ("defecting") or transmitting their dissatisfaction to others, thereby adversely affecting the reputation of the landlord or property manager.

As has been explained in Part 1 of this thesis, "good service" cannot be objectively measured directly, but must be inferred by the subjective opinions of occupiers. Part 2 of the thesis showed how occupier satisfaction depends upon aspects of the property management service, and can be used as a proxy for service quality. This proxy was used in Part 3 of the thesis, the empirical study into property returns as a function of occupier satisfaction.

The framework used in this research was a variant of the "Service - Profit Chain". Increased profit is hypothesised to accrue from satisfied occupiers renewing their lease and from landlords with a good reputation being able to fill vacant property more swiftly. Both aspects derive from the landlord-tenant relationship being more of an empathetic partnership, resulting in landlords being able to supply properties and services that meet the needs of occupiers.

These "needs" were examined in Chapter 4. Apart from a suitable location, the main considerations for occupiers are the form and function of their property, flexibility of space and lease terms, and value for money. A close working relationship enables landlords and property managers to offer occupiers appropriate accommodation and value-added services. Such a relationship is mutually beneficial because it profits all parties financially. An example of mutual benefit discussed in the chapter was that of investment in the sustainability of a property, reducing energy costs for occupiers and making their working environment more comfortable, whilst reducing vacancy rates and increasing the total return for the landlord. Satisfaction with the leasing process itself was considered as a factor influencing a potential occupier's decision whether to sign a lease. In the quantitative analysis in later chapters, satisfaction with the leasing process was found to be one of the main determinants of occupiers' stated likelihood of lease renewal. The other main determinants were the reliability of the service received and value for money.

In addition to the importance of understanding occupiers' requirements so as to be able to supply suitable properties, this research has demonstrated that the most influential factors in achieving

occupier satisfaction, loyalty and advocacy are **'Empathy'**, **'Assurance'** and delivering **Value for Money**.

The 'Empathy' construct, comprising good communication and an understanding of occupiers' business needs, is crucial to occupiers' satisfaction with property management and willingness to recommend their landlord or property manager. This finding applies to all sectors. In turn, satisfaction with property management was found to be one of the main determinants of overall occupier satisfaction, although "Tangible" aspects such as 'Tenant Mix' for retailers and 'Location' for occupiers of industrial property are also important. This research, together with earlier studies cited in the literature review in Part 1 of the thesis, has found that empathy depends upon property management staff having the necessary skills, attitudes and motivation to develop a close, professional working relationship with occupiers.

'Assurance', too, depends upon the professionalism of the landlord and service provider, and encompasses trust and reassurance. Like 'Empathy', 'Assurance' is particularly influential in occupiers' willingness to recommend their landlord or property manager, and in the reputation of the landlord. It is manifested by demonstrating Corporate Social Responsibility (through ethical behaviour, a commitment to sustainability, or philanthropy, for example) and Company Values that promise and deliver excellent customer service. Within the context of this research, it also includes ensuring properties are safe and secure for occupiers.

Perception of receiving 'Value for Money' is the key determinant of occupiers' loyalty – their stated likelihood of renewing their lease. This was found to depend upon the reliability of the property management service and the transparency of service charge documentation. It also depends upon property managers using their knowledge and buying power to arrange for services to be supplied in a cost-effective way, and using their expertise to offer advice to occupiers to enable the latter to obtain good value from their tenancy. The close working relationship referred to earlier should enable occupiers to have greater input in discussions about expenditure, as well as achieving more amicable rent review and lease renewal negotiations.

The greatest return on investment in customer service for tenants accrues from focusing on aspects of property management which matter greatly to occupiers but which are perceived to be deficient. These are the aspects in the bottom right-hand quarter of the Importance-Performance Matrix, and the actual aspects will vary from property to property and property manager to property manager. Such matrices were produced using the data collected in the 4000+ interviews used in this research, for the three sectors and for the latent constructs "Property Management", "Overall Satisfaction", "Landlord Reputation" and "Value for Money". These represent an aggregate picture of the opinions

of UK occupiers of Commercial Property about the Importance and Performance of the quality of the aspects of service they receive.

The main empirical research described in Part 3 of this thesis tested four hypotheses about the relationship between occupier satisfaction and property returns. The analysis showed that for the sample of 273 properties (shopping centres, retail parks, multi-tenanted offices and industrial estates) the compounded five-year percentage by which the return exceeded the IPD sector average return is greater for properties with highly satisfied customers than for properties with poor customer satisfaction. Thus, taking the sample as a whole gives some support for the premise of this thesis, that treating tenants as valued customers does result in superior returns in the long term. The total returns are net of property management costs, so landlords should see a return on investment in customer-focus and property management excellence. However, the results do appear to be sector specific, with the relationship between occupier satisfaction and property performance being most significant for the retail sector, certain segments of the office market and for South East Industrial Estates for the landlord with the largest sample in this sector. The analysis did not find a statistically significant difference in the relationship between occupier satisfaction and property performance between the landlords in the study.

The fourth hypothesis was tested by examining occupier satisfaction during the global financial crisis to investigate whether supply and demand affect the relationship between occupier satisfaction and property performance. The results showed that although, for these samples, the relationship between occupier satisfaction and property performance is more highly correlated than over the full period of the study, the difference is statistically significant for only some of the Portfolio Allocation Service (PAS) segments. With a larger sample size, a statistically significant result might be obtained for all segments. The analysis does indicate that landlords should pay particular attention to satisfying the needs of occupiers during an economic downturn in order to mitigate the concomitant reductions in market rents and increase in vacancies.

### **9.2.1 Sector-specific Findings**

This research has found that the relationship between occupier satisfaction and property performance is particularly pronounced for the retail sector, but this may be because both depend on mediating factors – shopper footfall and the trading performance of stores. Store managers of successful stores will be more highly satisfied than those of failing stores, and successful stores bring greater financial returns to the owners of shopping centres or retail parks. However, the satisfaction of store managers is not explained fully by the success of their store. Their overall satisfaction is strongly determined by their satisfaction with property management, and their willingness to



recommend their landlord is strongly influenced by their perception of the 'Empathy' and 'Assurance' shown by their property manager or landlord.

The results for offices were perhaps confounded by the very high returns achieved over the period 2004 – 2014, and the low vacancy levels, providing little opportunity to out-perform the IPD benchmark with superior service and satisfied occupiers. Office occupiers' overall satisfaction was found to depend mainly on the tangibles: 'building specification', location', 'amenities' and 'office reception / lobby', and on communication with property management, the manager's understanding of occupiers' business needs, and their responsiveness to occupiers' requests. As with retailers, office occupiers' willingness to recommend their landlord was found to depend primarily on the dimensions of 'Assurance' and 'Empathy', although the order of importance of these two aspects was reversed. In particular, office occupiers seem to place more emphasis on the professionalism of the property manager and the Corporate Social Responsibility of the landlord when deciding whether to advocate their landlord by rating their willingness to recommend '5' on a scale of '1' to '5'.

For industrial units, higher returns occurred at both ends of the range of occupier satisfaction scores. Several possible explanations for this were discussed in the previous chapter, including the suggestion that occupiers of industrial units may have little contact with the estate management team, and their main concern might be the rent and other costs of occupancy rather than a superior property management service. 'Tangibles' appear to be more influential in determining industrial occupiers' overall satisfaction and their willingness to recommend their landlord compared with other sectors. Nevertheless, for one subsample in particular, a unit increase in mean satisfaction resulted in a greater return of nearly 20% over five years. Large industrial units tend to have longer leases than in other sectors, as these give more certainty to both occupier and landlord. These longer leases, and the greater importance which seems to be attached to physical aspects of the property, mean that the industrial sector appears to react differently from other sectors in an economic downturn, and to have a more ambiguous relationship between occupier satisfaction and property performance overall.

### 9.3 Research Limitations

This research, like all research, does suffer from some limitations. Although the sample used for the analysis of the relationship between occupier satisfaction and property performance comprised 7,300,000 m<sup>2</sup> of prime commercial property, this nevertheless constitutes only a tiny proportion of the commercial property stock in the UK. Additionally, the properties belonged to only four landlords, all of whom are highly regarded, being Tier 1 or Tier 2 for corporate social responsibility (Newell, 2009) and EPRA reporting (EPRA & Deloitte, 2014) and so on. Therefore the sample cannot be considered fully representative.

Only 11 years of financial performance data is included, which is unlikely to cover a complete property cycle. Nevertheless many changes have occurred within that period, which have had an impact on the demand for commercial property. The massive increase in internet retailing has reduced demand for physical stores and led to the creation of “dark stores” – vast warehouses from which on-line orders are delivered. Technological advances have also made it easier for employees to work from home and share office accommodation, reducing the space required per employee. These issues, which are discussed in this thesis, create confounding factors which may mask or distort the findings in this quantitative study.

The data itself is appraisal- rather than transaction-based and returns are very volatile because of confounding factors such as major renovations. Additionally, the IPD segments are very broad and encompass differing micro-locations, meaning comparisons with the sector benchmarks may not reveal the full picture. These factors may create additional variance in the dependent variables used in this research.

Ideally, as well as incorporating a larger sample, only standing properties would have been included in the research, so that the data would form a complete panel. However, this could cause survivorship bias because landlords are more likely to sell properties with lower returns. Furthermore, it was not possible to account for obsolescence of properties which would cause depreciation in their capital value. If some properties were more prone to this than others, it could distort the results. On the other hand, obsolescence should be inversely correlated with occupier satisfaction, which would reinforce the findings from this research.

Secondary data was used for occupier satisfaction in the analysis. The respondents to the satisfaction studies were not necessarily the lease-holders themselves, especially in the case of retailers in shopping centres and retail parks, where most stores are multiples, with decisions on leases being made at Head Office by property directors. Various measures were in place to ensure respondents

were competent to give considered and educated responses on behalf of the tenant organisation. Nevertheless there was scope for variability in the quality of the information obtained in each interview.

A further complication with the occupier satisfaction data was that different questions were asked in different satisfaction studies, and required much analysis to render it into a consistent format. The questions asked were not devised with this research in mind, and the fact that some questions were not included in interviews with occupiers in different sectors could bias the results. On the positive side, the existence of this data meant that a far larger sample of data was available than could realistically have been gathered from scratch, and included a longitudinal series of data. Primary data collection would not have been able to obtain this time-series. Even if other landlords had agreed to be included in the study, without historic occupier satisfaction data, only cross-sectional analysis could have been carried out. Much of the value of this research arises from the ability to look at returns compounded over several years, because the volatility of returns means that snapshots are not very meaningful.

As explained earlier, the data for Landlord 4 for was gathered in a different way and occupier satisfaction studies for the other landlords were carried out at varying intervals – in some cases annually in others sporadically. This incomplete panel made rigorous analysis more complicated, and necessitated a certain amount of data mining to determine the optimum approach.

The range of occupier satisfaction scores is very small, in part because the landlords and managing agents for this sample represent the “upper echelons” of property companies. A mean score of 3.3, for example, would be low in this sample, whilst a score of 3.9 would be reasonably high, at least for certain sectors. Ideally occupiers would be asked to give ratings over a wider range. Also, a consistent set of questions for all occupiers would enable a scale of occupier satisfaction to be created, covering specific aspects of tenancy. The score on the scale might be a better discriminant of satisfaction than the mean ratings given by occupiers to a single question on overall satisfaction.

Another limitation was the use of behavioural intentions to investigate occupiers’ loyalty and advocacy: lease renewal intentions rather than actual renewal decisions and willingness to recommend rather than actual recommendations. Although previous research has demonstrated that intentions and actual behaviour are closely connected, they are not synonymous.

## 9.4 Original Contributions of this Research

This research has made original contributions to knowledge about the opinions of occupiers of commercial property, and has demonstrated that there are financial benefits to property owners in treating their tenants as valued customers. The research has also used innovative methods to reach these conclusions.

The occupier satisfaction data is a very large data set which has not previously been analysed as a whole, and this research has been able to shed light on the determinants of occupier satisfaction on a scale which has not previously been attempted. Although missing data may have caused sample bias, every effort was made to compensate for this by using a variety of methods of analysis and of treatment of missing data. Results from the various methods were generally very similar, lending confidence to the findings.

Previous studies of occupier satisfaction such as the Occupier Satisfaction Index research (RealService Ltd & Property Industry Alliance, 2012) and the global study by BOMA & Kingsley Associates (2013a) have not differentiated between sectors of commercial property, and, apart from the use of correlation analysis, have not attempted to analyse determinants of satisfaction. Similarly, previous research into lease renewal intentions, such as that by Kingsley Associates (2013), has also relied on correlation with overall occupier satisfaction scores rather than assessing the impact of individual aspects of satisfaction with the property and property management.

This present research has found similarities and differences between the sectors. It has demonstrated that the empathy of property managers towards their occupiers – their ability to communicate effectively and to appreciate occupiers' business needs – has a large effect on the satisfaction of occupiers in all sectors. Empathy is also fundamental to occupiers' willingness to recommend their landlord or property manager. Perception of receiving value for money for rent and service charge is also critical to the satisfaction of all occupiers, and this is enhanced by delivering a reliable property management service and by clear and transparent documentation that explains occupiers' costs. Value for money is contingent upon the property and service enabling occupiers to derive the maximum benefit from their property, as a factor of production in their business. It does not mean the lowest possible cost to the occupier, and landlords can provide additional services and amenities in mutually beneficial arrangements.

The tangible aspects of occupancy, including the property itself, its form, function and location, as well as amenities and facilities, affect occupier satisfaction in all sectors, although these will have played a large part in the initial decision to rent the property. Tangibles also appear to be more

important in the willingness of industrial occupiers to recommend their landlord to others than for retailers or office occupiers.

Other differences between the sectors include the greater relevance of “Assurance” (professionalism, trustworthiness, corporate social responsibility / commitment to sustainability) in the lease renewal intentions of office and industrial occupiers compared with retailers. Although value for money is crucial in the determining lease renewal for all occupiers, retailers appear to find the reliability of service such as cleaning and maintenance of particular importance.

The relationship between occupier satisfaction and the financial performance of properties also appears to differ between sectors, although for all sectors the relationship is stronger during an economic downturn when the supply of property exceeds demand. This research found the relationship to be particularly strong between retailers’ satisfaction and the performance of shopping centres, and also strong for South-East Offices and Industrial Estates. The research has discussed possible reasons why the relationship might not apply in all situations, including the shortage of City of London offices during the time period investigated by this research, and the concomitant high returns for these offices regardless of occupier satisfaction.

Further insight into the relationship between occupier satisfaction and property performance can be gleaned from the tables showing correlations over time, including those with leads and lags. Occupier Satisfaction appears to change only slowly, whereas benchmark outperformance appears volatile. The relationship between the two does vary markedly from year to year, perhaps because the capital appreciation element of total return is appraisal-based.

The methods of analysis used for this research provide an original variant of methods used in other fields of study or other asset classes. The use of structural equation modelling is reasonably widespread in marketing and psychology, but little-used in other fields. Likewise, the concept of benchmark out-performance and superior management has been employed to analyse returns from equities and fund-manager performance, but has not previously been applied to the assessment of property manager performance.

Principal Components Analysis was used to investigate the latent factor structure of the data in the three sectors. This found that, although the factor structure differed between sectors, perhaps because different questions were asked in interviews with occupiers of the different sectors, a “Relationship” factor was common across the sectors, and in each case was the most influential in determining overall occupier satisfaction when the orthogonalised factors were used in multinomial regressions.

The binary logistic regressions that assessed behavioural intentions were found to provide helpful insight into occupiers' ratings of their willingness to recommend their landlord or property manager, but the multinomial logistic regression that tested ratings of lease renewal intentions was found to work less well, perhaps because of data insufficiency.

### **9.5 Future Directions to extend research**

In order to corroborate the findings, it would be desirable to extend the study to cover a larger sample of properties and a wider variety of landlords. Indeed, many attempts were made to increase the sample size by enlisting the agreement of additional landlords, but landlords are very reluctant to reveal the property performance data to researchers, not least because such information might influence the share price of public real estate companies. As well as the desirability of extending the research to cover a wider sample of landlords and properties, it would also be valuable to examine the impact of tenant satisfaction on returns for residential property. Whilst the private rented sector has formed a sizable proportion of investment property in the U. S., it has only recently become a major investment class in the UK. Assured short-hold tenancies and student accommodation offer scope for monitoring the effect of occupier (dis)satisfaction because lease lengths in these sectors are fairly short compared with Commercial Property lease lengths.

Similarly, it would be instructive to investigate whether the same relationships apply to countries other than the UK. Differing lease structures and institutional arrangements might make the impact of satisfaction with property management more or less important in lease renewal and landlord advocacy by tenants, and it would help investors to understand the effect on property returns.

Ideally the research on factors affecting lease renewal in this thesis would have used actual renewal decisions rather than stated likelihood. It is not straightforward to obtain lease renewal data because of issues such as sub-letting property, and name changes of occupying organisations. However the managing agents and others who have to send documentation to occupiers must collect data about lease renewal, so it should be possible, if somewhat laborious, to collect and analyse such data. It would also be useful to compare actual renewal rates with stated likelihood of lease renewal, to assess the validity of stated likelihood as a proxy in the analysis of the impact of occupier satisfaction on lease renewal.

Further research should be conducted to analyse the components of total return to see whether the relationship between occupier satisfaction and property performance is through rental growth, capital growth, income return etc., and to attempt to infer what yields and capitalisation rates were used to assess capital value. The data supplied by IPD for this research used a combination of

percentage growth figures and absolute values, which precluded decomposing total returns to conduct this analysis, but such data would be available to IPD and to property companies and funds that subscribe to IPD's Portfolio Analysis Service. These yields could then be compared with the IPD benchmark yields as a further check on the riskiness or beta for the assets in the sample, and to control for this in the analysis.

If more data were to be made available for future research, it would benefit landlords if it could be determined whether outsourcing property management or retaining the function in-house affects results. A dummy variable could be included in regressions to indicate which approach is employed at a property, and could shed light on which model achieves higher occupier satisfaction, and / or higher returns. The outcome of such research would help landlords judge the efficacy and cost-effectiveness of outsourcing as opposed to vertical alignment.

This research has looked at financial returns and occupier satisfaction at individual properties. However, some landlords actively encourage tenants to move within the portfolio when their requirements change. Therefore they are interested in lease renewal at the portfolio level as opposed to at the same property. This means that the validity of the service – profit chain needs to be judged at the portfolio level. Thus, another valuable piece of research would be to assess whether the aggregated satisfaction of a property company's tenants overall, and their willingness to recommend the company, affect the property company's overall financial performance. This could apply both to landlords and to managing agencies. Such research would overcome the issue of the volatility of individual property returns, and the many confounding factors that affect them. Although occupier satisfaction data would have to be collected, the financial performance data is in the public domain because it consists of information published in annual reports, such as the value of assets, profit and loss accounts, and various financial ratios, as well as stock market information including share prices.

The research in this thesis has shown that the factors that have most impact on occupier satisfaction, loyalty and advocacy are the 'Empathy' of the property manager, their professionalism and 'Assurance', the value for money of the rent and service charge, and the provision of properties that meet occupiers' needs. In answering the research questions, these factors have been examined and guidance given to landlords and property managers as to how to improve these aspects of service delivery. Nevertheless, additional qualitative research into how property managers can demonstrate empathy and assurance, and provide value for money and suitable properties, would complement the results of this research.

In summary, the original research in this thesis has shed light on the links between aspects of property management and occupier satisfaction, and demonstrated that properties in which occupiers are more highly satisfied do appear to have greater total returns. If landlords treat tenants as valued customers, the improvement in occupier satisfaction should result in increased property performance, particularly at the stage in the property cycle when supply of properties exceeds demand. The determinants of satisfaction, and the impact on property performance, do vary between sectors, but *empathy* and a *close working relationship* are perhaps the most important factors in realising the benefit of the “Service – Profit Chain”.



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## **Appendix A: Landlords, Tenants and Property Performance**

This Appendix summarises relevant aspects of real estate as a business – its role as an investment class and the obligations of property companies to their investors and other stakeholders. Since this research is investigating whether excellent property management affects the financial performance of properties, ways of measuring financial performance are discussed, as well as other factors known to influence that performance, such as property market cycles.

### **Real Estate as an Investment**

Real estate is one of a number of asset classes in which individuals and institutions can invest, alongside bank deposits, government or retail bonds and equities, as well as more esoteric options such as art, antiques or fine wine. There are many types (sectors) of investment property.

Commercial property traditionally encompasses three main market sectors, each with its own characteristics - offices, industrial, and retail. Another growing sector is leisure, including hotels, restaurants and pubs, health clubs and leisure centres. Residential properties may be purchased as a buy-to-let investment, to be used as private rented housing, student housing, holiday accommodation etc., with occupiers paying rent. Real Estate can also be “mixed use”, combining, for example, office with industrial, or residential above a retail unit.

An investment portfolio should be made up of a variety of assets so as to minimise systematic risk (Markowitz, 1952). The riskiness of an asset is assessed from the volatility of its past returns. By combining assets with negative correlation in volatility the riskiness of a portfolio is reduced without compromising the expected returns from each asset. Modern Portfolio theory assumes that assets are perfectly divisible, so that exact percentages of a portfolio can be made up of shares, bonds, deposits and real estate in optimal proportions according to the risk profile desired by the investor. This is the antithesis of unsecuritised real estate<sup>85</sup>, which is a “lumpy” and indivisible asset (M. J. Seiler, Webb, & Myer, 1999).

If an investor were to aim to achieve a balanced portfolio by owning entire properties, this would necessitate the purchase of many properties in various sectors. Yet buying even one commercial property is not generally open to individuals because of the large capital expenditure required - less

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<sup>85</sup> Securitisation of real estate is a way to swap direct investment in property for products that ultimately rely on property but create more liquidity for investors so that they can buy and sell investments more readily without the properties themselves having to be sold. Examples of securitised property investments include mortgage-backed securities and bonds issued by property owners, backed by the properties as security.

than 5% of commercial property is owned by individuals (BPF, n.d.). About half of the commercial property investment in the UK comes from pension funds, insurance companies, property unit trusts and property companies including Real Estate Investment Trusts (REITs)<sup>86</sup>. Individuals wishing to invest in the property sector can purchase shares in REITs or other property companies, or can invest in property funds, which may be direct property investment funds or property investment trusts<sup>87</sup>.

When a property company or an individual wishes to purchase a property or to develop a site by building new properties, they have to assess what they believe it to be worth. Potential buyers and sellers may have different opinions as to the worth of a property i.e. the sum they would be willing to pay or accept for the property. Perception of worth depends upon individual circumstances, such as the differing return requirements (discount rates) of different investors. A developer may be able to achieve a higher rate of return by selling a property and investing the money in a new development, whereas another investor may achieve their business objectives and required returns from rental income from the property. Perception of worth also depends upon opinion about future rental income and occupancy rates, which may be distorted by market inefficiencies such as information asymmetry. For example the seller will typically have more information about the property and its hinterland than the buyer, and may not reveal problems - a situation known as adverse selection - (Ball, Lizieri, & MacGregor, 2001, p. 118)).

Sellers and buyers will enlist the services of a surveyor to obtain advice on the value of a property. Valuations can be carried out for a variety of purposes. As well as providing guidance to their client on the price they should sell for or pay, valuers give advice to mortgage lenders to help the latter avoid excessive loan-to-value ratios which would jeopardise the loan if the borrower were to default. The other main purpose of valuation is to let property investors know how their investment is performing. Such valuations to assess investors' returns may be carried out monthly, quarterly or annually, depending upon the nature of the investment and reporting requirements. These valuations are carried out specifically for the purpose of performance measurement, and are done on a "Market Value" basis.

Surveyors in the UK use the "RICS Valuation – Professional Standards Guide" (also known as the "Red Book") to assess the market value of a property. International Valuation Standards, to which RICS subscribes, define Market Value as "the estimated amount for which an asset or liability should

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<sup>86</sup> REITs are listed property companies that have elected for REIT status and operate in accordance with REIT regulations. For UK REITs, 90% of taxable income has to be distributed as dividends to investors but the companies do not have to pay corporation tax. Investors pay dividend tax at their highest marginal rate.

<sup>87</sup> Non-REIT property investment trusts do pay corporation tax so the tax payable by investors on their dividends is lower than that for REIT dividends, and is the same as for dividends from any normal company

exchange on the valuation date between a willing buyer and a willing seller in an arm's length transaction, after proper marketing and where the parties had each acted knowledgeably, prudently and without compulsion" ("International Valuation Standards Council," n.d.). The appraiser must have regard to the "highest and best use" of the property, i.e. the use which would maximise its value, regardless of its current use.

Market value is affected by the supply of and demand for property, and a valuation will be subject to uncertainty and may not equal the price achieved if the property were actually sold (Ball et al., 2001, p. 283; Mallinson & French, 1999). The appraisal process is subject to a margin of error, and depends upon the skill and experience of the surveyor carrying out the valuation, with reference to recent sales prices of comparable property. Because actual transactions involving comparable property, in terms of location, specification, age and condition, are likely to be few and far between, valuations are subject to a margin of error. Valuers generally rely to a greater or lesser extent on a previous valuation, but commercial property is sold only infrequently, so there are few comparables and little market information to assist with adjustments to previous valuations when carrying out an appraisal.

The over-reliance on previous valuations is known as "anchoring bias" and leads to "stickiness" of valuations and smoothing of appraisal-based returns from property, reducing variance and giving positive skewness to indexes of property returns (Geltner, 1991; McAllister et al., 2003). Such anchoring and smoothing have been found to produce discrepancies of order 10% between valuations and subsequent transaction prices (Adair et al., 1996; Ball, Lizieri, & MacGregor, 2001, p. 285). Cannon & Cole (2011), for example, found that typically appraisal values differed by more than 12% compared with a sale price no more than six months later. However, this discrepancy fell to 4-5% after allowing for capital appreciation during the intervening period. Blundell & Ward (2008) analysed more than 700 property sales made between 1974 and 1990 and found that around 6% of valuations over-estimated the sale price by more than 20% whilst around 9% of the valuations under-estimated the sale price by the same percentage.

As mentioned above, property returns do not follow a normal distribution, but are skewed, (Bond & Patel, 2003; Lizieri & Ward, 2000; Young, Lee, & Devaney, 2006); and this affects the estimate of standard errors when inferring parameters such as mean and variance from a sample. Also whether valuations under- or over-estimate value compared with sale price depends whether property prices generally are increasing or decreasing. Detailed consideration of other factors, including the skewed distribution of returns and local fixed effects, allowed Blundell & Ward (2008) to claim that "valuations are relatively more accurate than might be expected and that valuers are unbiased once market movements and proxy factors covering geographical sub-sectors are taken into account" (p.



20). Valuers do have a difficult job, though, because if valuations are close to subsequent sale price, valuers are open to accusations of influencing the market, creating a self-fulfilling prophecy (Baum, Crosby, & MacGregor, 1996). Research has also found that valuers can themselves be influenced by client pressure to alter a valuation to suit their purposes, whether to be granted a loan or to persuade investors that the investments are performing well, for example (N. Crosby, Devaney, Lizieri, & McAllister, 2015; N. Crosby, Hughes, & Murdoch, 2004; Gallimore & Wolverton, 2000; Levy & Schuck, 2005; Nwuba, Egwuatu, & Salawu, 2015).

As well as referring to comparable properties to assess value, appraisers can use the DCF (discounted cash flow) technique of obtaining the net present value (NPV) of future rental income and capital costs to assess the value of a property - the "Income Approach" (Baum, Mackmin, & Nunnington, 2011). This is more commonly used to assess investment value rather than market value, and the results depend upon what discount rate is chosen. Another way to obtain a probability distribution of the likely returns from property, and hence its worth to an investor, is to run Monte Carlo simulations using a range of values for the variables (Hoesli, Jani, & Bender, 2006; Meins & Sager, 2015). This method is not widely used in practice, but can support and give confidence to valuations and aid risk assessment. Whichever method is employed, it should be "well researched ... using sound methodology" (Levy & Lee, 2009, p. 100).

A tenet of economics and financial investment theory is that there is a link between the riskiness of an asset and the expected return it should achieve in order for it to be worth taking that risk. The difference between the actual return from an asset and the return expected based on market movements is called the "abnormal" return. A market which exhibits informational efficiency is one in which prices always reflect all available information. If the same information is available to buyers and sellers of an asset, whether property, shares, bonds or cash deposits, it should not be possible to achieve returns which are consistently greater than the expected returns if the risk has been properly assessed i.e. the asset is properly priced.

According to Markowitz (1952 p. 77), "the investor does (or should) maximize the discounted (or capitalized) value of future returns. Since the future is not known with certainty, it must be "expected" or "anticipated" returns which we discount". Thus, when a potential buyer decides whether or not to purchase an investment property, s/he will consider the net present value of the estimated net rental income and of the estimated capital growth. These predictions will incorporate the likely depreciation of the property as it ages and its condition deteriorates (Baum, 1989, 1993). S/he must also account for transaction costs and taxes such as Stamp Duty Land Tax on acquisition, Capital Gains Tax on selling, and taxes on rental income. Also, such an investment is "illiquid",

meaning that it takes time to convert the property to cash i.e. to sell the property, a factor which adds to the riskiness of property as an asset class.

## Measures of Property Performance

As discussed in the previous section, investors need to be able to monitor the performance of their investments. Institutional investors such as pension funds and insurance companies need to ensure their assets will cover their liabilities, for example, and individual investors want to ensure they are achieving optimal risk-adjusted returns. The most widely used measures of the performance of individual properties are capital appreciation, income return and total return.

### Capital Appreciation

**Capital Appreciation or “Capital growth ... [is] the increase in the value of a property or group of properties net of capital expenditure, expressed as a percentage of the capital employed”**  
(MSCI, 2015 p. 52)

The calculation incorporates capital expenditure and receipts over the period (ibid, p. 15):

$$CG_t = \left( \frac{CV_t - CV_{t-1} - CAPEX_t + CAPRpt_t}{CV_{t-1} + CAPEX_t} \right) * 100$$

$CV_t$  represents the capital value at time  $t$ , CAPEX is capital expenditure and CAPRpt means Capital Receipts.

Annual capital appreciation is the percentage increase in capital value over a 1-year period.

### Income Return

Income return is defined as “the net income receivable for a property expressed as a percentage of the capital employed” (MSCI, 2015, p. 54).

$$IncRet_t = \left( \frac{Net\ Income_t}{CV_{t-1} + CAPEX_t} \right) * 100$$

Income Return (IncRet) is calculated “net of all irrecoverable costs incurred by the investor – which will depend upon the terms of the tenant lease contracts in place” (MSCI, 2015 p. 15).

Annual income returns are generally expressed as a percentage of the appraised capital value at the start of the year, although investors can also calculate returns as a percentage of the price paid for the property, which may have been bought several years ago. As mentioned above, the NPV of the predicted stream of rental income is used to determine the worth of a property, but lease durations have reduced in response to occupiers’ demands for flexibility, and rent review clauses are no longer necessarily “upward-only”, so it is harder for property investors to predict the income return that will

be generated. Rent-free periods and other incentives can also make it harder to determine income return from headline rents (Crosby & Devaney, 2013).

### **Total Return**

**Total Return** comprises the **net capital growth** of the property (i.e. increase in market valuation or actual sale price after capital expenditure) and the **net rental income** from the property (rent minus operational expenditure) (IPD, 2014). “Total Return ... is calculated as the percentage value change plus net income accrual, relative to the capital employed” (MSCI, 2015, p. 57).

$$\text{Total Return} = \left( \frac{CV_t - CV_{t-1} - CAPEX_t + \text{Net Income}_t}{CV_{t-1} + CAPEX_t} \right) * 100$$

### **Outperformance over time: Superior Abnormal Returns**

Although in theory it should not be possible to achieve excess returns over time in an efficient market with correct pricing of an asset, “real estate is notorious for its information asymmetries”, potentially enabling investors to “use insider knowledge to generate abnormal profits” (Fuerst & Mercato, 2009, p. 105). An approach that is widely used in investment finance is to see whether a fund manager is able to add value to a fund by achieving superior abnormal returns compared with the benchmark for their sector. Funds that track the market should achieve risk-adjusted returns which equal those of the market on average. Such funds are termed passive trackers, and charge relatively low fund management fees because they require the manager merely to include assets in proportions which mirror the market – a stratified sample of the market. Actively managed funds are supposed to require more skill and effort from a manager who is supposed to seek arbitrage opportunities, predicting when stocks will rise or fall and buy or sell accordingly. In a fully efficient market such opportunities ought not to occur, and consistent outperformance by fund managers should happen no more frequently than would occur by chance alone. However conventional risk and return theory takes account of the fact that an asset with less systematic risk should have sensitivity to movements in the market of less than unity. The coefficient  $\beta$  is conventionally used to describe this sensitivity:

$$\beta = \frac{\text{cov}(R_i, R_M)}{\sigma_M^2}$$

i.e. the covariance between an asset and the market return for that asset class divided by the variance of market returns.

The conventional formula for decomposing returns on assets (Fama, 1970; Jensen, 1968; Lintner, 1966) is:

$$R_{it} = \alpha_{it} + \beta R_{Mt} + \varepsilon_{it}$$

$\beta$  is the systematic risk for that asset by virtue of its asset class, which cannot be neutralised by diversifying an investment portfolio.  $\varepsilon$  is the asset-specific risk.  $\alpha$  is the element of return which is not explained by risk and which should be zero in an efficient market. However if a fund manager has extraordinary skill, s/he may be able to achieve “positive alpha”.

One of the first people to assess fund performance in this way was Jensen (1968) who examined the performance of 115 funds over a 20-year period (1945 – 1964) to assess their riskiness and whether they achieved superior abnormal returns. In his sample, five funds out-performed the market with a statistically significant  $\alpha$  (t-stat > 2) before fund management costs were taken into account, and five funds underperformed. Once management costs were included, only one of the funds outperformed the market, yet two or three of these would have been expected to beat the market by chance alone (Brooks, 2008) implying an inability on the part of fund managers to beat the market, as predicated by the theory of efficient markets. In their study of UK property fund management, Mitchell & Bond (2008) found limited evidence of the ability to generate systematic outperformance and abnormal positive alpha, and only for “a small elite of top performers”.

Although the concepts of outperformance, abnormal returns, alpha and beta are normally associated with investment funds, they can be applied to the performance of individual assets over time. Whereas with funds, outperformance is deemed to occur as a result of astute trading and investment decisions, with individual assets - standing properties in this case - any outperformance must come from the performance of the asset itself. If a property manager has exceptional skill, resulting in highly satisfied occupiers, low vacancy rates and the ability to charge rents which exceed market rents, s/he may be able to outperform the benchmark for property returns. Property sectors can spend a long period of time outperforming the overall property index<sup>88</sup> (Lee, 2012; Young & Graff, 1996; Young, Lee, & Devaney, 2006), and serial persistence in real estate returns has been identified over a run of up to four years for the upper and lower quartiles of performance (Devaney, Lee, & Young, 2007), although part of the explanation may be to do with the valuation process including anchoring returns to previous valuations and undue influence being exerted on the appraiser (ibid, pp. 7 – 8).

### **Benchmarking Property Performance**

If good customer service has a positive effect on property performance, the total return for a property in which occupiers are highly satisfied should be higher than it otherwise would be; this is

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<sup>88</sup> The MSCI IPD Property Index is discussed in the next section

unknowable. However, a benchmark does exist with which property returns can be compared. The most comprehensive source of financial performance data for individual properties is probably that compiled by Investment Property Databank (IPD), which comprises data on more than 62,000 properties in 25 countries (IPD, 2013). IPD produces quarterly and annual indices showing property performance and splits the “All Property Benchmark” into Portfolio Analysis Service (PAS) segments. Individual property returns can be benchmarked against those for the relevant IPD PAS Segment.

Comparing returns with the appropriate PAS benchmark helps to control for some of the heterogeneity of property, since the sector and broad geographical region are incorporated into the benchmark. However, the allocation of properties within segments is not perfect and the categorisation of the segments is broad, and does not take into account micro-locational factors for example. Using multiple discriminant analysis on IPD data for 1219 properties, Devaney & Lizieri (2005) find that only about “35% of buildings are assigned to their prior PAS categories” when analysing their returns, and that “only three segments have a greater than 50% success rate: Retail Warehouses (64%); Rest of UK Offices (62%); and City of London Offices (62%)” (p. 293). Callender et al., (2007, p. 367) also refer to “weak explanatory power of the segmentation in explaining property returns” and demonstrate the low correlation between intra-segment returns, and also between the returns of an individual property and those of its segment. Although attempts have been made to classify properties in other ways, for example by cluster analysis (Byrne, Jackson, & Lee, 2013; Fuerst & Marcato, 2010), the use of PAS segments is currently the best available for the purpose of benchmarking, and does serve to nullify some of the common cyclical elements of property returns which are discussed in the next section.

### **Property Market Cycles: Supply and Demand**

*“The property cycle means the tendency for property demand, supply, prices and returns to fluctuate around their long term trends or averages”, (Baum, 2000, p. 2).*

To be able to attribute superior property performance to aspects of customer service, it is crucial to understand the nature of property market cycles. If a property has capital growth, increased rental income and few voids, is it because of the management of the property or because of supply and demand? If there is a surfeit of properties and few customers, landlords and agents will have to work harder to attract and retain occupiers. Commercial property markets typically undergo cycles comprising demand outstripping supply (a shortage of property), rental increases (as owners are able to charge more), development of new property (as developers and investors deem it worthwhile financially to buy and develop land), reduced demand (as asking rents exceed the amount occupiers would be willing to pay) and excess supply (as newly-developed property comes onto the market)

(Ball et al., 2001; Barras, 1994; RICS, 1994). Development of a large commercial building can take many years, and by the time it is ready for occupation the market situation – rental income, capital growth, demand etc. - which made development seem viable several years earlier may mean that the property is no longer an attractive investment.

Some types of real estate may ride a market downturn better than others; for example, in a market downturn, investors might try to minimise risk by avoiding older properties with short leases whose occupiers' businesses may be more vulnerable to recession. In this scenario, prime property (high quality property in major towns, typically occupied by tenants of good covenant, i.e. successful businesses), might retain its value better than secondary property regardless of property management quality and intervention (McAllister, 2012).

Apart from the general economic cycle, demand for a particular sector may vary for reasons outside the control of a property manager. The desirability of a location may change as a result of infrastructure changes such as new transport links or other initiatives to improve the public realm. The arrival of new businesses nearby can have a positive or negative impact upon an existing business, depending upon whether the newcomer is a direct rival that will compete for a share of the business or an amenity or other attraction that will increase footfall or custom for all.

Property sectors have to respond to changes in technology and business' priorities, so that serviced offices are competing with traditional offices and overall demand for office space may decline as internet connectivity enables more staff to work from home or share office space by "hot-desking". Likewise, retailers may require fewer shops as demand for on-line retailing increases (Jordan, 2012), but may need more warehousing to be able to store and distribute goods. The nature of the industrial units required is also changing, for example, more data-centres may be needed for storing business data ("the cloud" actually needs to be sited on terra firma).

The effects of property market cycles and changing demand for property are factors which the property owner or manager can do little to control, but applying the principles of relationship marketing and customer relationship management should improve rapport with occupiers and increase the proportion of leases which get renewed and the number of positive word-of-mouth recommendations. In particular, the benefits of such an approach might be expected to be more apparent during periods of over-supply of property, in an economic downturn, when occupiers have a wider choice of properties.

## **Appendix B: Explanatory Documents Requesting Access to Data**

### PhD Researching the relationship between occupier satisfaction and property performance

#### **What is the purpose of the research?**

For my PhD, I am investigating whether treating tenants as valued customers benefits the property owner by improving measures such as lease renewal rates, occupancy rates, net rental income and total returns. There is much literature on the “service – profit chain” and the importance of customer relationship management, but very little quantitative research on its applicability to real estate. My research is intended to remedy this gap. Whilst proving “Return on Investment in Customer Service” is notoriously difficult, I have carried out a pilot study on a sample of around 100 properties over a 10-year period, and this does show a positive relationship between total returns (controlling for IPD sector average returns) and occupier satisfaction.

#### **Why am I contacting you?**

For the main part of my PhD I will extend my pilot study to look at several hundred properties. To accomplish this, I need to make use of occupier satisfaction data and to be granted access to occupancy and total returns data for the properties, so that I can conduct statistical analysis to evaluate the impact of occupier satisfaction on property performance. Therefore I would be very grateful if you would give me permission to access and analyse satisfaction and performance data for the properties you own or manage.

#### **When is the data required?**

I would like to obtain the data during the first half of 2014 so that I can carry out the analysis during the remainder of the year and complete my thesis in 2015.

#### **How will the analysis be conducted?**

There are several aspects to the research and various statistical techniques that I intend to use. From occupier satisfaction data I would like to evaluate which aspects of an occupier’s tenancy and their relationship with their landlord and / or managing agent have most impact on satisfaction. This involves regression analysis. Variants of this that I would also like to explore include investigating the probability of lease renewal and the likelihood that an occupier would recommend their landlord / managing agent as a function of aspects of occupier satisfaction. For these investigations I would use a probit model or logistic regression.

The main quantitative study involves analysing correlations between total returns (and lagged returns and three- or five-year compounded total returns) and measures of occupier satisfaction, with tests of statistical significance and effect size. I need a large sample to achieve reliable results and to try to control for heterogeneous characteristics of property such as age and location.

### **How would participants benefit from the research?**

The main benefit should be from the deeper understanding of which aspects of property management matter most to occupiers and make it more likely that they will renew their lease. I would also be happy to give individual feedback to participating organisations and to present and discuss overall key findings at a seminar once the research is complete.

### **How can property owners and managing agents help with access to data?**

Christopher Hedley at IPD has said I can use IPD data, as long as I have permission from the owners and agents concerned. Naturally I will sign whatever confidentiality agreements are required, and guarantee anonymity (although would be happy to acknowledge all assistance and contributions and to publicise positive messages when owners / agents would like!) I would also ensure any files are password-protected and secure.

If you are willing to allow me access to data, please contact me so that we can draw up a non-disclosure agreement and discuss arrangements. Please also let me know if you would like a copy of my literature review and proposal.



## Appendix C: Illustration of Occupier Satisfaction Survey Questions

The questionnaires themselves are confidential and the intellectual property of RealService Ltd. This Appendix gives an idea of the sort of questionnaire that was used for the interviews. Interviews were conducted either face-to-face or by telephone. They were pre-scheduled to suit the interviewee, and lasted around 40 minutes, depending upon how much feedback the interviewee wished to give to the landlord and property manager. The interviewer made notes throughout, and subsequently transcribed the interview. Occasionally telephone interviews were recorded, with the knowledge and permission of the interviewee.

After some preliminary questions to establish whether the respondent had sufficient experience of the property to be able to give informed responses, interviewees were asked questions on many aspects of their occupancy. For all questions, they were asked to give qualitative answers to the question, discussing their feelings about the service, instances of good or bad service and key issues of importance to respondents and their colleagues. Where applicable, these responses were supplemented by a quantitative rating. The system of ratings was explained: respondents were asked to rate their satisfaction, or the quality of service, “on a scale of ‘1’ to ‘5’ where ‘1’ represents ‘very dissatisfied’ or ‘very poor’ and ‘5’ represents ‘very satisfied’ or ‘excellent’”. The rating is done after the qualitative discussion, so that it is a considered score that summarises their opinion in a quantitative way.

As explained in Chapter 5, questionnaires for different properties contained different questions, although most questionnaires covered similar themes. The following are typical of questions that were asked of interviewees:

- ❖ How long have you had personal experience of this building and working with [name of property manager]?
- ❖ What originally attracted your company to this building?
- ❖ How satisfied were you with the way the initial enquiry was handled?
- ❖ How satisfied are you with the building design, in terms of its functionality?
- ❖ How do you rate your overall satisfaction with facilities management?
- ❖ How do you rate your overall satisfaction with the property management team?
- ❖ How do you rate your overall satisfaction with the performance of [name of managing agent] as a managing agent?

- ❖ How do you rate the level and style of communication that you have with [name of landlord]?
- ❖ How do you rate communication with Centre management?
- ❖ What is your preferred method of communication? (Email, telephone, face to face etc.)
- ❖ How satisfied are you with your present contact arrangements with the Management team?
- ❖ What are your views on the effectiveness of tenants' meetings?
- ❖ How do you rate your satisfaction with the Management team's responsiveness to requests?
- ❖ What are your expectations for speed of response - 4 hours, same day, next day etc.?
- ❖ How do you rate the Management team's understanding of your needs as a business?
- ❖ How do you rate the management of security by [name of managing agent]?
- ❖ How do you rate the management of cleaning and waste by [name of managing agent]?
- ❖ How satisfied are you with service charge management and compliance with the Service Charge Code?
- ❖ How do you rate the management of estate maintenance services by [name of managing agent]?
- ❖ How do you rate the parking facilities for customers?
- ❖ How do you rate the signage to the Centre?
- ❖ How would you describe the experience of dealing with lawyers?
- ❖ How satisfied are you with the flexibility of your lease in terms of lease length and the ability to break?
- ❖ How do you rate your satisfaction with Park security?
- ❖ How satisfied are you with the general standard of Park maintenance and landscaping?
- ❖ How well does the management team handle health and safety issues on the Park?
- ❖ How would you rate public transport to the Estate?
- ❖ How do you rate the provision of services/amenities in the building?
- ❖ How would you describe the image of your building? Is it clean and well presented?
- ❖ Does the building project the right image for your business?
- ❖ How well does the space that you occupy meet the needs of your business?
- ❖ How important is sustainability to your organisation?
- ❖ What more could the Management team do with regard to sustainability on the Park?
- ❖ How do you rate the value for money you receive from the Estate?

- ❖ How do you rate the organisation of the events on the Estate?
- ❖ How do you rate facilities and meeting rooms?
- ❖ How do you rate your overall satisfaction with the management team?
- ❖ What top three things should the management team focus on in the next 12 months to improve your satisfaction with the Park?
- ❖ Please rate your satisfaction with estate services for the past 12 months
- ❖ In your opinion, how well does [name of property manager] understand your business needs?
- ❖ What should [name of property manager] be doing in order to get a better understanding of your business needs?
- ❖ How satisfied are you that your current lease contract is right for your business needs?
- ❖ How do you rate the value for money you receive for your rent?
- ❖ How do you rate the value for money you receive for your service charge?
- ❖ How do you rate the transparency of the service charge information that you receive?
- ❖ What are the things that would improve your level of satisfaction?
- ❖ What are your three most important issues?
- ❖ What should [name of property manager] focus on that would have the greatest impact on your satisfaction and likelihood to stay a customer?
- ❖ How satisfied are you with the marketing of the Shopping Centre?
- ❖ How satisfied are you with events held at the Centre?
- ❖ On a scale of '1' to '5', how likely would you be to recommend [name of landlord] as a landlord?
- ❖ Taking into account all the factors we have discussed, how would you rate your overall satisfaction as an occupier at this building?

## Appendix D: PLS Analysis Supplementary Tables (Retailers)

Appendices D – F contain the results of the tests performed on the structural equation models for Retailers, Office Occupiers and Industrial Occupiers respectively to assess the validity of the results (Hair et al., 2014).

From **Table D-1** it can be seen that the Variance Inflation Factor is well below 5 for all formative indicators, so multicollinearity is not a problem in this model of Retailer Satisfaction and Shopping Centre Owner’s Reputation.

**Table D-1: Variance Inflation Factor for Indicator Variables**

Outer VIF Values	VIF
<b>Amenities</b>	1.231
<b>Building</b>	1.145
<b>CSR</b>	1.823
<b>Centre Mgmt</b>	1.147
<b>Cleaning</b>	1.077
<b>Communication</b>	1.470
<b>Documentation</b>	1.026
<b>Entrances</b>	1.181
<b>HVAC</b>	1.078
<b>Landlord Performance</b>	1.018
<b>Lease Renewal</b>	1.112
<b>Leasing</b>	1.096
<b>Legal Processes</b>	1.021
<b>Lifts</b>	1.218
<b>Location</b>	1.148
<b>Maintenance</b>	1.124
<b>Marketing</b>	1.147
<b>Parking</b>	1.131
<b>Professionalism</b>	1.700
<b>Public transport</b>	1.093
<b>Recommend 1-5</b>	1.018
<b>Recycling</b>	1.089
<b>Rent Val</b>	1.560
<b>Responsiveness</b>	1.021
<b>Safety</b>	1.164
<b>Security</b>	1.225
<b>Service Charge Val</b>	1.552
<b>Signage</b>	1.156
<b>Tenant Mix</b>	1.185
<b>Tot Sat</b>	1.112
<b>Trading Performance</b>	1.006
<b>Understanding</b>	1.470

**Table D-2** gives the Outer Weights of the Formative Indicators which shows their relative importance in explaining the latent constructs with which they are associated. Thus, for example, Corporate Social Responsibility, the Leasing Process and Professionalism are of most importance in explaining 'Assurance', whilst safety (Health and Safety) and Security appear less influential. In the occupier satisfaction studies, questions were asked about perception of "Customer Service" and about professional behaviour, and these were all grouped into the category "Professionalism". For 'Empathy', both Communication and Understanding Business Needs are of approximately equal importance, whereas for 'Reliability' the main indicators are the quality of Documentation and Cleaning. The efficiency and efficacy of Legal Processes, such as applications for licenses to make alterations or for advertising banners, apparently has relatively little impact on the 'Responsiveness' construct. This may be because Head Office personnel, such as Property Directors of chain stores, do not devolve responsibility for dealing with legal processes to the store managers who are the respondents to the questionnaires. Tenant Mix, the Shopping Centre itself and its location appear to be the most influential determinants of the 'Tangibles' construct, whilst Trading Performance is of some importance in the 'Value' construct, albeit of less importance than satisfaction with Rent and Service charge.

The statistical significance of all path weights is given in **Table D-3**; those relationships that are statistically significant at the 95% confidence level are shown in Bold. Not all paths are statistically significant. In particular, the following relationships between formative indicators and the 'Tangibles' construct are non-significant: Amenities, Heating, Ventilation and Air-Conditioning (also referred to as Internal Climate in the satisfaction studies), Parking, Public Transport and Lifts. Also the path Safety -> 'Assurance' is not statistically significant. Another non-significant path is that between Trading Performance and 'Value', although the path weight does exceed 0.5 when taking the mean of the bootstrapping results. Interestingly, this path has a large and statistically significant weight of 0.903 in another variant of the model in which the 'Value' construct is deemed not to depend on the SERVQUAL constructs but to be exogenously determined by the three formative indicators.

Following the approach suggested by Hair et al., (2014) to check the loading where a path weight is non-significant, from **Table D-4** it can be seen that these indicators do not appear to be of absolute importance to the target constructs for retailers in shopping centres since the loading is below 0.5 (p.129). **Table D-4**, showing path loadings, is also relevant to the assessment of the reflective indicators in the model. All values are high, of order 0.7 – 1, as can be seen from the path diagram, **Figure 6-2**, meaning that the indicators correlate strongly with the constructs, and all are statistically highly significant (p=0.00).

**Table D-2: Outer Weights showing relative importance of Formative Indicators**

	Assurance	Empathy	Property Mgmt	Reliability	Reputation	Responsive	Tangibles	Tot Sat	Value
<b>Outer Weights</b>									
<b>Amenities</b>							0.075		
<b>Building Spec</b>							0.447		
<b>CSR</b>	0.595								
<b>Centre Mgmt</b>			0.748						
<b>Cleaning</b>				0.697					
<b>Communication</b>		0.539							
<b>Documentation</b>				1.031					
<b>Entrances</b>							0.376		
<b>HVAC</b>							0.080		
<b>Landlord Performance</b>					1.038				
<b>Leasing</b>	0.468								
<b>Legal Processes</b>						0.340			
<b>Lifts</b>							0.012		
<b>Location</b>							0.392		
<b>Maintenance</b>				0.174					
<b>Marketing</b>			0.498						
<b>Parking</b>							0.141		
<b>Professionalism</b>	0.613								
<b>Public transport</b>							0.136		
<b>Recommend 1-5</b>					0.673				
<b>Recycling</b>				0.327					
<b>Renewal</b>								0.658	
<b>Rent Val</b>									0.908
<b>Responsiveness</b>						0.965			
<b>Safety</b>	0.174								
<b>Security</b>	0.247								
<b>Service Charge Val</b>									0.782
<b>Signage</b>							0.323		
<b>Tenant Mix</b>							0.596		
<b>Tot Sat</b>								0.889	
<b>Trading Performance</b>									0.392
<b>Understanding</b>		0.602							

**Table D-3: Outer Weights with bias-corrected confidence intervals, showing relative importance of formative indicators in the measurement model following bootstrapping to determine statistical significance**

Outer Weights	Original Sample (O)	Sample Mean (M)	Standard Error (STERR)	T Statistics (O/STERR)	P Values	Confidence Interval Lower	Confidence Interval Upper
Amenities -> Tangibles	0.075	0.077	0.127	0.593	0.554	-0.166	0.316
<b>Building Spec -&gt; Tangibles</b>	<b>0.447</b>	<b>0.429</b>	<b>0.208</b>	<b>2.151</b>	<b>0.034</b>	<b>0.104</b>	<b>0.874</b>
<b>CSR -&gt; Assurance</b>	<b>0.595</b>	<b>0.571</b>	<b>0.117</b>	<b>5.104</b>	<b>0.000</b>	<b>0.357</b>	<b>0.774</b>
<b>Centre Mgmt &lt;- Property Mgmt</b>	<b>0.748</b>	<b>0.747</b>	<b>0.018</b>	<b>42.355</b>	<b>0.000</b>	<b>0.715</b>	<b>0.778</b>
<b>Cleaning -&gt; Reliability</b>	<b>0.697</b>	<b>0.760</b>	<b>0.151</b>	<b>4.611</b>	<b>0.000</b>	<b>0.421</b>	<b>0.905</b>
<b>Communication -&gt; Empathy</b>	<b>0.539</b>	<b>0.538</b>	<b>0.046</b>	<b>11.681</b>	<b>0.000</b>	<b>0.419</b>	<b>0.605</b>
<b>Documentation -&gt; Reliability</b>	<b>1.031</b>	<b>0.734</b>	<b>0.399</b>	<b>2.585</b>	<b>0.011</b>	<b>0.404</b>	<b>1.453</b>
<b>Entrances -&gt; Tangibles</b>	<b>0.376</b>	<b>0.356</b>	<b>0.097</b>	<b>3.872</b>	<b>0.000</b>	<b>0.180</b>	<b>0.514</b>
HVAC -> Tangibles	0.080	0.078	0.139	0.575	0.566	-0.156	0.397
<b>Landlord Performance &lt;- Reputation</b>	<b>1.038</b>	<b>1.014</b>	<b>0.067</b>	<b>15.429</b>	<b>0.000</b>	<b>0.936</b>	<b>1.115</b>
<b>Leasing -&gt; Assurance</b>	<b>0.468</b>	<b>0.489</b>	<b>0.223</b>	<b>2.099</b>	<b>0.038</b>	<b>0.164</b>	<b>0.991</b>
<b>Legal Processes -&gt; Responsive</b>	<b>0.340</b>	<b>0.321</b>	<b>0.139</b>	<b>2.446</b>	<b>0.016</b>	<b>0.135</b>	<b>0.682</b>
Lifts -> Tangibles	0.012	0.002	0.131	0.091	0.928	-0.286	0.248
<b>Location -&gt; Tangibles</b>	<b>0.392</b>	<b>0.387</b>	<b>0.205</b>	<b>1.912</b>	<b>0.059</b>	<b>0.013</b>	<b>0.768</b>
<b>Maintenance -&gt; Reliability</b>	<b>0.174</b>	<b>0.184</b>	<b>0.081</b>	<b>2.141</b>	<b>0.035</b>	<b>-0.028</b>	<b>0.301</b>
<b>Marketing &lt;- Property Mgmt</b>	<b>0.498</b>	<b>0.498</b>	<b>0.018</b>	<b>28.219</b>	<b>0.000</b>	<b>0.463</b>	<b>0.528</b>
Parking -> Tangibles	0.141	0.129	0.103	1.364	0.176	-0.095	0.305
<b>Professionalism -&gt; Assurance</b>	<b>0.613</b>	<b>0.622</b>	<b>0.193</b>	<b>3.180</b>	<b>0.002</b>	<b>0.378</b>	<b>1.019</b>
Public transport -> Tangibles	0.136	0.117	0.116	1.170	0.245	-0.040	0.372
<b>Recommend 1-5 &lt;- Reputation</b>	<b>0.673</b>	<b>0.700</b>	<b>0.122</b>	<b>5.524</b>	<b>0.000</b>	<b>0.440</b>	<b>0.899</b>
<b>Recycling -&gt; Reliability</b>	<b>0.327</b>	<b>0.337</b>	<b>0.108</b>	<b>3.025</b>	<b>0.003</b>	<b>0.054</b>	<b>0.478</b>
<b>Renewal &lt;- Tot Sat</b>	<b>0.658</b>	<b>0.676</b>	<b>0.080</b>	<b>8.216</b>	<b>0.000</b>	<b>0.503</b>	<b>0.792</b>
<b>Rent Val -&gt; Value</b>	<b>0.908</b>	<b>0.660</b>	<b>0.299</b>	<b>3.034</b>	<b>0.003</b>	<b>0.396</b>	<b>1.273</b>
<b>Responsiveness -&gt; Responsive</b>	<b>0.965</b>	<b>0.963</b>	<b>0.027</b>	<b>35.178</b>	<b>0.000</b>	<b>0.865</b>	<b>0.992</b>
Safety -> Assurance	0.174	0.154	0.127	1.373	0.173	-0.178	0.335
<b>Security -&gt; Assurance</b>	<b>0.247</b>	<b>0.253</b>	<b>0.081</b>	<b>3.073</b>	<b>0.003</b>	<b>0.075</b>	<b>0.380</b>
<b>Service Charge Val -&gt; Value</b>	<b>0.782</b>	<b>0.658</b>	<b>0.187</b>	<b>4.178</b>	<b>0.000</b>	<b>0.450</b>	<b>0.992</b>
<b>Signage -&gt; Tangibles</b>	<b>0.323</b>	<b>0.297</b>	<b>0.086</b>	<b>3.737</b>	<b>0.000</b>	<b>0.188</b>	<b>0.495</b>
<b>Tenant Mix -&gt; Tangibles</b>	<b>0.596</b>	<b>0.579</b>	<b>0.108</b>	<b>5.504</b>	<b>0.000</b>	<b>0.387</b>	<b>0.779</b>
<b>Tot Sat &lt;- Tot Sat</b>	<b>0.889</b>	<b>0.881</b>	<b>0.025</b>	<b>34.916</b>	<b>0.000</b>	<b>0.841</b>	<b>0.930</b>
Trading Performance -> Value	0.392	0.598	0.304	1.288	0.201	-0.014	0.898
<b>Understanding -&gt; Empathy</b>	<b>0.602</b>	<b>0.605</b>	<b>0.044</b>	<b>13.602</b>	<b>0.000</b>	<b>0.528</b>	<b>0.707</b>

Statistically significant ( $p < 0.05$ ) paths are shown in **Bold**.

Table D-4: Outer Loadings showing absolute importance of both formative and reflective indicators in the measurement model following bootstrapping to determine statistical significance

Outer Loadings	Orig Sample (O)	Sample Mean (M)	Standard Error (STERR)	T Statistics ( O/STERR )	P Values	Confidence Interval Lower	Confidence Interval Upper
Amenities -> Tangibles	0.402	0.391	0.119	3.367	0.001	0.210	0.637
Building Spec -> Tangibles	0.395	0.386	0.215	1.838	0.069	0.021	0.843
CSR -> Assurance	0.915	0.886	0.089	10.240	0.000	0.808	0.973
Centre Mgmt <- Property Mgmt	<b>0.903</b>	0.903	0.007	123.771	<b>0.000</b>	0.887	0.915
Cleaning -> Reliability	0.765	0.829	0.150	5.096	0.000	0.475	0.955
Communication -> Empathy	0.875	0.871	0.023	38.671	0.000	0.825	0.908
Documentation -> Reliability	1.076	0.774	0.404	2.665	0.009	0.429	1.468
Entrances -> Tangibles	0.613	0.586	0.092	6.659	0.000	0.462	0.745
HVAC -> Tangibles	0.264	0.262	0.136	1.943	0.055	0.062	0.596
Landlord Performance <- Reputation	<b>1.063</b>	1.041	0.061	17.302	<b>0.000</b>	0.933	1.136
Leasing -> Assurance	0.556	0.552	0.231	2.412	0.018	0.262	0.980
Legal Processes -> Responsive	0.478	0.461	0.147	3.259	0.002	0.258	0.836
Lifts -> Tangibles	0.327	0.299	0.124	2.628	0.010	0.056	0.525
Location -> Tangibles	0.650	0.622	0.204	3.194	0.002	0.280	1.004
Maintenance -> Reliability	0.462	0.463	0.082	5.654	0.000	0.287	0.614
Marketing <- Property Mgmt	<b>0.764</b>	0.764	0.023	33.659	<b>0.000</b>	0.714	0.799
Parking -> Tangibles	0.259	0.237	0.092	2.799	0.006	0.081	0.414
Professionalism -> Assurance	1.059	1.040	0.208	5.100	0.000	0.948	1.288
Public transport -> Tangibles	0.260	0.232	0.125	2.074	0.041	0.066	0.470
Recommend 1-5 <- Reputation	<b>0.726</b>	0.754	0.121	6.018	<b>0.000</b>	0.518	0.916
Recycling -> Reliability	0.497	0.516	0.113	4.397	0.000	0.254	0.670
Renewal <- Tot Sat	<b>0.941</b>	0.956	0.095	9.891	<b>0.000</b>	0.730	1.088
Rent Val -> Value	1.390	1.073	0.343	4.051	0.000	0.777	1.608
Responsiveness -> Responsive	0.981	0.980	0.019	51.137	0.000	0.902	0.999
Safety -> Assurance	0.411	0.385	0.118	3.473	0.001	0.091	0.549
Security -> Assurance	0.590	0.579	0.094	6.294	0.000	0.488	0.697
Service Charge Val -> Value	1.208	0.973	0.265	4.557	0.000	0.706	1.334
Signage -> Tangibles	0.598	0.565	0.074	8.050	0.000	0.485	0.714
Tenant Mix -> Tangibles	0.805	0.780	0.074	10.947	0.000	0.692	0.944
Tot Sat <- Tot Sat	<b>0.943</b>	0.939	0.015	64.042	<b>0.000</b>	0.911	0.965
Trading Performance -> Value	0.419	<b>0.618</b>	0.296	1.417	0.160	0.060	<b>0.899</b>
Understanding -> Empathy	0.903	0.901	0.020	45.858	0.000	0.863	0.937



The composite validity of the model is questionable. Using the conventional measure of Cronbach's Alpha, it can be seen from **Table D-5** that the values are below the accepted values of 0.7. However using the version of the test employed by SMART-PLS which takes account of the indicator loadings on a construct, the values are on the high side. As mentioned earlier, values of 0.7 – 0.9 are desirable, and higher values suggest the reflector variables associated with a construct may be measuring the same thing, and could be thought of as synonyms. For the purposes of this research, composite validity is not of great importance, as the data is not being used for scale development<sup>89</sup>.

Convergent Validity is confirmed by the high values of AVE (Average Variance Explained), (shown in Bold in **Table D-6**), so the constructs explain a high proportion of the variability of their indicators. Discriminant Validity would appear to hold when using the Fornell-Larcker Criterion, since the Average Variance Explained for each construct exceeds its squared correlation with other constructs. However, another method of testing discriminant validity, the HTMT Ratio (see **Table D-7**) does not lend support to the uniqueness of the latent constructs, since the ratios for the relationship between 'Property Management' and 'Total Satisfaction', between 'Property Management' and 'Reputation', and between 'Reputation' and 'Total Satisfaction' exceed the suggested values of 0.85 or 0.9 (Henseler et al., 2014). This implies that occupiers' satisfaction with property management cannot be isolated from their total satisfaction and the reputation of landlords – the three constructs are not completely distinct.

By contrast, the third approach to testing discriminant validity, the use of cross-loadings (see **Table D-8**), does lend support to the idea that the constructs are distinct to the extent that all of the manifest variables do load more strongly onto the constructs with which they are conceptually linked in the model (shown in **Bold**). Thus the various tests for discriminant validity give conflicting findings. Therefore alternative model specifications are assessed in this research; the robustness of the results arising from variants of the model enables the determinants of occupier satisfaction, loyalty and advocacy to be asserted with more confidence.

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<sup>89</sup> Cronbach's Alpha is typically used in psychology and psychometric testing when developing a scale to measure characteristics or ability. The statistic checks whether individual items in a test are closely related to each other and to the underlying construct being measured.

**Table D-5: Composite Reliability**

	Cronbach's Alpha	SMART-PLS test for Composite Validity	Sample Mean (M) following bootstrapping	Standard Error (STERR)	T Statistics ( O/STERR )	P Values
<b>Property Mgmt</b>	0.528	0.822	0.822	0.010	78.708	0.000
<b>Reputation</b>	0.233	0.903	0.906	0.024	38.446	0.000
<b>Tot Sat</b>	0.482	0.940	0.946	0.044	21.508	0.000

**Table D-6: Test of Discriminant Validity using Fornell-Larcker Criterion**

Fornell-Larcker Criterion	Assurance	Empathy	Property Mgmt	Reliability	Reputation	Responsive	Tangibles	Tot Sat	Value
<b>Assurance</b>									
<b>Empathy</b>	0.578								
<b>Property Mgmt</b>	0.575	0.690	<b>0.836</b>						
<b>Reliability</b>	0.417	0.321	0.373						
<b>Reputation</b>	0.395	0.343	0.324	0.261	<b>0.910</b>				
<b>Responsiveness</b>	0.469	0.569	0.496	0.347	0.292				
<b>Tangibles</b>	0.408	0.237	0.345	0.300	0.223	0.146			
<b>Tot Sat</b>	0.455	0.503	0.567	0.286	0.336	0.303	0.448	<b>0.942</b>	
<b>Value</b>	0.235	0.143	0.166	0.464	0.306	0.193	0.224	0.237	

**Table D-7: HTMT Ratio for testing Discriminant Validity**

Heterotrait-Monotrait Ratio (HTMT)	Original Sample (O)	Sample Mean (M)	Standard Error (STERR)	T Statistics (O/STERR)	P Values	Confidence Interval Lower	Confidence Interval Upper
<b>Reputation -&gt; Property Mgmt</b>	1.184	1.227	0.217	5.465	0.000	0.934	1.736
<b>Tot Sat -&gt; Property Mgmt</b>	1.091	1.110	0.100	10.922	0.000	0.838	1.260
<b>Tot Sat -&gt; Reputation</b>	1.101	1.163	0.233	4.718	0.000	0.667	1.584

Table D-8: Cross Loadings of Indicators on Latent Constructs

Cross Loadings	Assurance	Empathy	Property Mgmt	Reliability	Reputation	Responsive	Tangibles	Tot Sat	Value
Amenities	0.347	0.232	0.255	0.218	0.147	0.175	<b>0.402</b>	0.209	0.010
Building Spec	0.190	0.111	-0.019	-0.049	0.128	-0.098	<b>0.395</b>	0.265	0.025
CSR	<b>0.915</b>	0.566	0.569	0.394	0.366	0.482	0.312	0.427	0.193
Centre Mgmt	0.566	0.695	<b>0.903</b>	0.330	0.320	0.501	0.262	0.532	0.118
Cleaning	0.435	0.393	0.441	<b>0.765</b>	0.190	0.309	0.359	0.342	0.115
Communication	0.527	<b>0.875</b>	0.625	0.285	0.278	0.527	0.192	0.427	0.092
Documentation	0.102	0.000	0.052	<b>1.076</b>	0.256	0.212	0.003	0.001	0.828
Entrances	0.311	0.209	0.244	0.241	0.075	0.142	<b>0.613</b>	0.271	0.144
HVAC	0.195	0.096	0.085	0.127	0.118	0.098	<b>0.264</b>	0.137	-0.014
Landlord Performance	0.431	0.287	0.284	0.311	<b>1.063</b>	0.278	0.205	0.305	0.368
Leasing	<b>0.556</b>	0.158	0.208	0.323	0.252	0.107	0.238	0.296	0.138
Legal Processes	0.166	0.149	0.138	0.394	0.121	<b>0.478</b>	0.033	0.055	0.398
Lifts	0.297	0.134	0.201	0.149	0.014	0.146	<b>0.327</b>	0.179	0.123
Location	0.212	0.127	0.177	0.189	0.141	0.076	<b>0.650</b>	0.353	0.131
Maintenance	0.335	0.198	0.248	<b>0.462</b>	0.073	0.352	0.164	0.120	0.221
Marketing	0.357	0.400	<b>0.764</b>	0.294	0.207	0.280	0.356	0.382	0.176
Parking	0.025	-0.032	0.088	0.013	0.068	0.025	<b>0.259</b>	0.048	0.087
Professionalism	<b>1.059</b>	0.516	0.480	0.337	0.325	0.423	0.308	0.395	0.260
Public transport	0.128	0.093	0.080	0.122	0.090	0.118	<b>0.260</b>	0.088	0.119
Recommend 1-5	0.263	0.411	0.362	0.105	<b>0.726</b>	0.268	0.093	0.352	0.073
Recycling	0.396	0.288	0.247	<b>0.497</b>	0.079	0.227	0.144	0.245	0.127
Renewal	0.420	0.328	0.332	0.325	0.209	0.246	0.242	<b>0.941</b>	0.319
Rent Val	0.228	0.112	0.106	0.686	0.328	0.250	0.121	0.165	<b>1.390</b>
Responsiveness	0.468	0.573	0.497	0.310	0.284	<b>0.981</b>	0.146	0.308	0.141
Safety	<b>0.411</b>	0.248	0.305	0.199	0.174	0.156	0.217	0.212	0.062
Security	<b>0.590</b>	0.380	0.345	0.292	0.182	0.263	0.209	0.296	0.106
Service Charge Val	0.322	0.156	0.197	0.649	0.337	0.263	0.159	0.134	<b>1.208</b>
Signage	0.295	0.174	0.278	0.235	0.099	0.112	<b>0.598</b>	0.243	0.134
Tenant Mix	0.256	0.138	0.236	0.188	0.194	0.061	<b>0.805</b>	0.359	0.166
Tot Sat	0.430	0.503	0.574	0.256	0.324	0.293	0.418	<b>0.943</b>	0.192
Trading Performance	0.146	0.149	0.171	0.068	0.110	0.061	0.249	0.364	<b>0.419</b>
Understanding	0.502	<b>0.903</b>	0.603	0.284	0.331	0.482	0.227	0.461	0.158

**Assessment of the Structural Model**

**Table D-9** shows which paths have most effect on retailers’ satisfaction with property management, their advocacy or opinion of their landlord, their overall satisfaction and their satisfaction with value for money according to this model. The table shows Total Effects, which combines the direct paths (**Table D-10**) and Indirect Effects (**Table D-11**). Thus ‘Empathy’ can be seen to be of most importance in determining retailers’ satisfaction with the target construct ‘Property Management’; ‘Assurance’ and perception of ‘Value’ have most impact on the ‘Reputation’ construct; ‘Empathy’, ‘Property Management’ and ‘Tangibles’ are all important determinants of ‘Overall Satisfaction’; whilst ‘Reliability’ has most impact on perception of ‘Value for Money’. This illustrates the concept of direct and indirect effects: ‘Empathy’ has a strong effect on ‘Total Satisfaction’ directly and also through the mediating construct, ‘Property Management’.

**Table D-9: Paths in the Structural Model for Retailers**

Total Effects	Property Mgmt	Reputation	Tot Sat	Value
Assurance	0.166	0.224	0.111	0.033
Empathy	0.484	0.129	0.361	-0.064
Property Mgmt		0.048	0.318	
Reliability	0.078	0.081	0.035	0.425
Responsiveness	0.097	0.076	-0.012	0.054
Tangibles	0.125	0.065	0.308	0.090
Value		0.218	0.109	

**Table D-10: Direct Path Coefficients**

Path Coefficients	Property Mgmt	Reputation	Tot Sat	Value
Assurance	0.166	0.209	0.054	0.033
Empathy	0.484	0.120	0.215	-0.064
Property Mgmt		0.048	0.318	
Reliability	0.078	-0.016	-0.035	0.425
Responsiveness	0.097	0.059	-0.049	0.054
Tangibles	0.125	0.040	0.259	0.090
Value		0.218	0.109	

**Table D-11: Indirect Effects**

Indirect Effects	Property Mgmt	Reputation	Tot Sat	Value
Assurance		0.015	0.056	
Empathy		0.009	0.147	
Reliability		0.097	0.071	
Responsiveness		0.016	0.037	
Tangibles		0.026	0.049	

Most, but not all, of the path coefficients in the structural model are statistically significant (**Table D-12**). For example, the paths between ‘Assurance’ and ‘Value’ and between ‘Empathy’ and ‘Value’ are non-significant.

Relationships of particular interest include the paths from ‘Property Management’ to ‘Reputation’ and to ‘Total Satisfaction’. The former is small and non-significant, while the latter path is of much greater weight and significance, although whether this is invalidated by the possible lack of discriminant validity found using the HTMT Ratio is unclear. The relationship between ‘Empathy’ and ‘Property Management’ is clearly a strong one, and this can also be seen in **Figure D-1** which shows the effect size to be between ‘moderate’ and ‘large’ according to Cohen's (1988) criteria<sup>90</sup> ( $f^2 = 0.287$ ). Other notable relationships are between ‘Reliability’ and ‘Value’, ‘Property Management’ and ‘Total Satisfaction’, ‘Assurance’ and ‘Property Management’, ‘Assurance’ and ‘Reputation’, and ‘Tangibles’ and ‘Total Satisfaction’, the effect size being ‘small’ to ‘moderate’ in each case.

The coefficients of determination for the constructs in the structural model are shown below.

	<b>R Square</b>
Property Mgmt	<b>0.550</b>
Reputation	<b>0.228</b>
Tot Sat	<b>0.430</b>
Value	<b>0.226</b>

The values for ‘Property Management’ and ‘Total Satisfaction’ are ‘moderate’ according to Hair’s suggested criteria mentioned earlier, whilst  $R^2$  for ‘Reputation’ and ‘Value’ are ‘weak’.

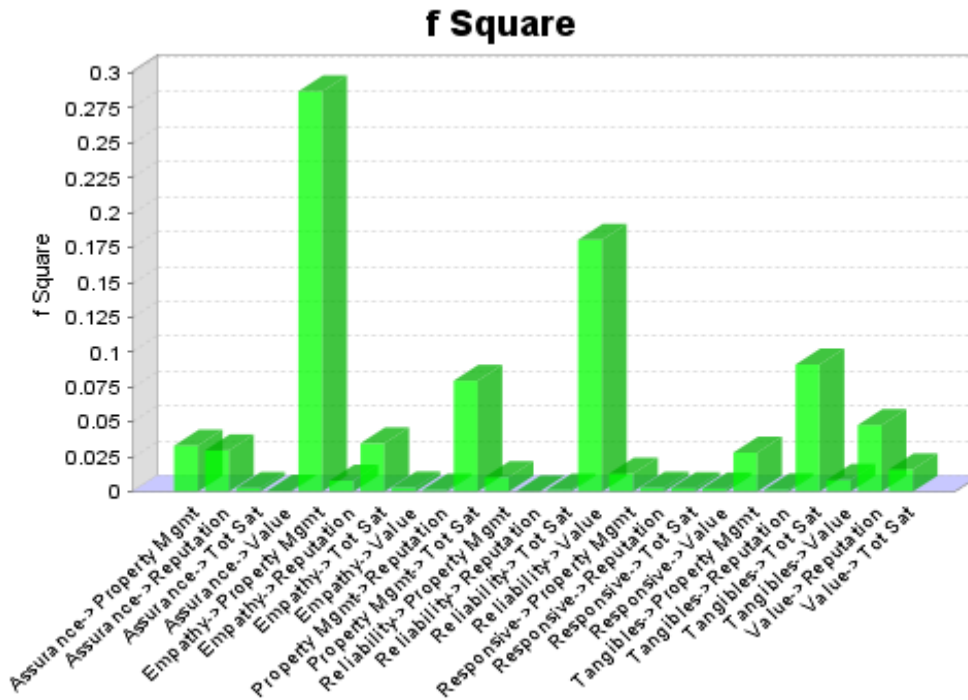
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<sup>90</sup> Cohen’s criteria for  $f^2$ , discussed earlier, are that values of 0.02, 0.15 and 0.35 represent small, medium and large effects respectively

**Table D-12: Statistical Significance of Structural Model**

<b>Paths</b>	<b>Original Sample (O)</b>	<b>Sample Mean (M)</b>	<b>Std Error</b>	<b>T Stats (O/STERR)</b>	<b>P Values</b>	<b>Confidence Interval Lower</b>	<b>Confidence Interval Upper</b>
<b>Assurance -&gt; Property Mgmt</b>	0.166	0.163	0.045	3.692	0.000	0.034	0.218
<b>Assurance -&gt; Reputation</b>	0.224	0.224	0.058	3.884	0.000	0.129	0.327
<b>Assurance -&gt; Tot Sat</b>	0.111	0.106	0.038	2.926	0.004	0.044	0.166
Assurance -> Value	0.033	0.054	0.052	0.632	0.529	-0.103	0.126
<b>Empathy -&gt; Property Mgmt</b>	0.484	0.483	0.035	14.028	0.000	0.439	0.562
<b>Empathy -&gt; Reputation</b>	0.129	0.138	0.052	2.462	0.016	0.028	0.232
<b>Empathy -&gt; Tot Sat</b>	0.361	0.358	0.033	10.838	0.000	0.286	0.410
Empathy -> Value	-0.064	-0.018	0.073	0.881	0.380	-0.187	0.077
Property Mgmt -> Reputation	0.048	0.045	0.048	0.995	0.322	-0.036	0.142
<b>Property Mgmt -&gt; Tot Sat</b>	0.318	0.303	0.044	7.270	0.000	0.242	0.378
<b>Reliability -&gt; Property Mgmt</b>	0.078	0.088	0.033	2.379	0.019	0.012	0.129
Reliability -> Reputation	0.081	0.045	0.068	1.193	0.236	-0.034	0.173
Reliability -> Tot Sat	0.035	0.047	0.036	0.985	0.327	-0.059	0.103
<b>Reliability -&gt; Value</b>	0.425	0.261	0.206	2.061	0.042	0.076	0.635
<b>Responsive -&gt; Property Mgmt</b>	0.097	0.097	0.025	3.830	0.000	0.039	0.137
<b>Responsive -&gt; Reputation</b>	0.076	0.090	0.031	2.472	0.015	0.028	0.123
Responsive -> Tot Sat	-0.012	-0.011	0.033	0.364	0.717	-0.077	0.037
Responsive -> Value	0.054	0.051	0.049	1.104	0.272	-0.027	0.136
<b>Tangibles -&gt; Property Mgmt</b>	0.125	0.118	0.038	3.290	0.001	0.052	0.196
Tangibles -> Reputation	0.065	0.075	0.049	1.325	0.188	-0.038	0.144
<b>Tangibles -&gt; Tot Sat</b>	0.308	0.312	0.043	7.206	0.000	0.212	0.390
Tangibles -> Value	0.090	0.162	0.099	0.912	0.364	-0.044	0.248
<b>Value -&gt; Reputation</b>	0.218	0.177	0.060	3.643	0.000	0.128	0.293
Value -> Tot Sat	0.109	0.148	0.069	1.579	0.118	0.010	0.210

Figure D 1: Effect Size for Relationships in the Structural Model for Retailers



f Square	Property Mgmt	Reputation	Tot Sat	Value
Assurance	0.033	0.030	0.003	0.001
Empathy	0.287	0.008	0.035	0.003
Property Mgmt		0.001	0.079	
Reliability	0.010	0.000	0.001	0.180
Responsive	0.013	0.003	0.003	0.002
Tangibles	0.028	0.002	0.091	0.008
Value		0.048	0.016	

Blindfolding was carried out using an Omission Distance of 7 and sample size of 1689 to check the predictive relevance of the model.  $Q^2$  for each of the constructs is given in **Table D-13**. The positive values of 0.257 for Total Satisfaction, 0.384 for 'Property Management', 0.133 for 'Reputation' and 0.060 for 'Value' demonstrate that all four constructs have predictive relevance, although the  $Q^2$  for the 'Value' construct is small. When the construct 'Property Management' is removed from the model and  $Q^2$  is re-calculated for the other three constructs, the revised values are 0.250 for 'Total Satisfaction', 0.123 for 'Reputation' and -0.123 for 'Value'.

The effect size of the construct 'Property Management' on the prediction of the other two constructs is calculated using the formula:

$$\frac{Q_{incl}^2 - Q_{excl}^2}{1 - Q_{incl}^2}$$

The numerator represents the difference between the values with and without the 'Property Management' construct, i.e. 0.07 for 'Total Satisfaction' and 0.010 for 'Reputation'. Once divided by the denominator in each case, the effect size of predicting 'Total Satisfaction' from the 'Property Management' construct becomes 0.094. Similarly for 'Reputation', the effect size for prediction of 'Reputation' from 'Property Management' is 0.012. This implies that the effect of 'Property Management' on predicting the other two constructs is very small. The predictive relevance of 'Property Management' on the 'Value' construct is larger, at 0.163, a 'moderate' effect size. The predictive relevance of the individual reflective variables is given in **Table D-14**. Thus the inclusion of Trading Performance in the model adds very little to its accuracy.



**Table D-13: Calculation of Predictive Relevance Q<sup>2</sup>**

Construct Cross-validated Redundancy	SSO	SSE	1-SSE/SSO (Q <sup>2</sup> ) <sup>91</sup>
<b>Assurance</b>	5,482.000	5,482.000	
<b>Empathy</b>	3,410.000	3,410.000	
<b>Property Management</b>	3,139.000	1,934.946	0.384
<b>Reliability</b>	3,834.000	3,834.000	
<b>Reputation</b>	1,515.000	1,313.416	0.133
<b>Responsive</b>	2,277.000	2,277.000	
<b>Tangibles</b>	6,176.000	6,176.000	
<b>Tot Sat</b>	2,065.000	1,533.853	0.257
<b>Value</b>	2,360.000	2,219.419	0.060

**Table D-14: Predictive relevance of Indicators**

Indicator Cross-validated Redundancy	SSO	SSE	1-SSE/SSO
<b>Centre Mgmt</b>	1,674.000	807.006	0.518
<b>Landlord Performance</b>	877.000	768.467	0.124
<b>Lease Renewal</b>	428.000	381.179	0.109
<b>Marketing</b>	1,465.000	1,127.940	0.230
<b>Recommend 1-5</b>	638.000	544.949	0.146
<b>Tot Sat</b>	1,637.000	1,152.674	0.296
<b>Rent Val</b>	480.000	423.917	0.117
<b>Service Charge Val</b>	609.000	528.075	0.133
<b>Trading Performance</b>	1,271.000	1,267.427	0.003

<sup>91</sup> As mentioned in the introduction to the use of SMART PLS, SSE is the sum of the squared prediction errors and SSO is the sum of the squared observations

## Appendix E: PLS Analysis Supplementary Tables (Office Occupiers)

From **Table E-1** it can be seen that the Variance Inflation Factor is well below 5 for all formative indicators, so multicollinearity is not a problem in this model of Office Occupier Satisfaction and Owner's Reputation.

**Table E-1: Variance Inflation Factor for Indicator Variables**

Indicator	Outer VIF Values
Amenities & Services	1.267
Building Spec	1.145
CSR	1.421
Cleaning	1.225
Communication	1.622
Documentation	1.062
HVAC	1.120
Landlord Performance	1.202
Leasing	1.284
Legal Processes	1.157
Lifts	1.102
Location	1.045
Maintenance	1.256
Overall Sat	1.000
Parking	1.132
Professionalism	1.491
Property Mgmt	1.000
Recommend	1.202
Reception	1.276
Recycling	1.120
Rent Val	1.243
Responsive	1.157
Security	1.156
Service Charge Val	1.243
Understanding Needs	1.622

**Table E-2** contains the Outer Weights of the indicator variables, giving the relative importance of the Formative Indicators in explaining the latent constructs with which they are associated. For office occupiers, the leasing process and the professionalism of the landlord or managing agency staff are the most important in explaining the 'Assurance' construct.

The statistical significance of all path weights is given in **Table E-3**, from which it can be seen that not all relationships are statistically significant at the 95% confidence level. In particular, several of the indicators associated with the 'Reliability' construct are non-significant, as is the coefficient linking Reception to 'Tangibles'. For Offices, the Reception indicator encompasses more than the physical appearance of the entrance lobby as most of the multi-tenanted offices whose occupants were

interviewed for this study have Receptionists or Security Guards staffing desks at Reception, and the fact that this indicator is closely associated with other constructs is confirmed in **Table E-7**.

From **Table E-4**, it can be seen that although the path weight for Cleaning to 'Reliability' was not statistically significant, nevertheless its loading exceeds 0.5 and is significant. The same applies to HVAC and Lifts, but not to Recycling, which cross-loads strongly onto the 'Assurance' construct, being closely allied to environmental responsibility, which is a major facet of corporate social responsibility (CSR). Reception, too, is of absolute importance although not of relative importance, using the criteria referred to earlier from Hair et al. (2014). This table is also relevant to the assessment of the reflective indicators in the model. The loading for the Property Management path is not shown since it has only one reflective indicator so by definition has a path loading of unity. This was not the case for the Retailer satisfaction model, because that had an additional reflective indicator Satisfaction with Marketing [of a shopping centre or retail park], an aspect not applicable to offices. The path loadings for the four other reflective indicators (two for 'Overall Satisfaction' and two for 'Reputation' values are all high, (0.75 – 1), which can also be seen from the path diagram, **Figure 6-24**, and all are statistically significant.

As with the model for Retailers, the tests of Composite Reliability for this model are also inconclusive. **Table E-5** shows that the Composite validity for the 'Reputation' construct is on the low side, using Cronbach's Alpha, but using the version of the test employed by SMART-PLS which takes account of the indicator loadings on a construct, the value is on the high side. The Composite Reliability of the indicators for 'Overall Satisfaction' is optimal using the SMART-PLS test, but very low according to Cronbach's Alpha.

Discriminant Validity would appear to hold when using the Fornell-Larcker Criterion, **Table E-6**, since the Square root of the Average Variance Explained for each construct (shown in Bold) exceeds its correlation with other constructs. When using cross-loadings, too, **Table E-7**, it can be seen that all of the manifest variables do load more strongly onto the constructs with which they are conceptually linked in the model, apart from Reception which cross-loads strongly with 'Assurance' and also with 'Reliability', as mentioned earlier.

The third method of testing discriminant validity, the HTMT Ratio, **Table E-8**, does find the construct 'Property Management' to be distinct from 'Total Satisfaction' and 'Reputation', with HTMT Ratios of 0.830 and 0.713 respectively, although the 95% upper confidence interval for the former is rather high. The constructs 'Reputation' and 'Total Satisfaction' are not found to be distinct using the HTMT Ratio.

**Table E-2: Outer Weights showing relative importance of Formative Indicators**

Outer Weights	Assurance	Empathy	Property Mgmt	Reliability	Reputation	Responsiveness	Tangibles	Tot Sat	Value
Amenities							0.694		
Building Spec							0.506		
CSR	0.429								
Cleaning				0.238					
Communication		0.660							
Documentation				0.728					
HVAC				0.323					
Landlord Performance					0.766				
Lease Renewal								0.590	
Leasing process	0.670								
Legal Processes						0.458			
Lifts				0.194					
Location							0.498		
Maintenance				0.549					
Overall Sat								0.908	
Parking							0.342		
Professionalism	0.571								
Property Mgmt			1.000						
Reception							0.164		
Recommend 1-5					0.944				
Recycling				0.113					
RentVal									0.672
Responsive						0.935			
Security	0.345								
ServChargeVal									0.531
Understanding		0.560							

**Table E-3: Outer Weights following bootstrapping to determine statistical significance**

Outer Weights	Original Sample (O)	Sample Mean (M)	Standard Error (STERR)	T Stats O/STERR	P Values	Confidence Interval Lower	Confidence Interval Upper
<b>Amenities -&gt; Tangibles</b>	0.694	0.688	0.121	5.740	0.000	0.484	0.897
<b>Building Spec -&gt; Tangibles</b>	0.506	0.496	0.113	4.463	0.000	0.266	0.695
<b>CSR -&gt; Assurance</b>	0.429	0.420	0.141	3.055	0.003	0.140	0.665
Cleaning -> Reliability	0.238	0.247	0.360	0.661	<b>0.510</b>	-0.616	0.825
<b>Communication -&gt; Empathy</b>	0.660	0.660	0.053	12.393	0.000	0.544	0.757
<b>Documentation -&gt; Reliability</b>	0.728	0.640	0.219	3.331	0.001	0.431	0.962
HVAC -> Reliability	0.323	0.301	0.300	1.076	<b>0.285</b>	-0.380	0.844
<b>Landlord Performance &lt;- Reputation</b>	0.766	0.740	0.154	4.974	0.000	0.528	0.934
<b>Lease Renewal &lt;- Tot Sat</b>	0.590	0.600	0.157	3.767	0.000	0.299	0.852
<b>Leasing process -&gt; Assurance</b>	0.670	0.670	0.143	4.701	0.000	0.423	0.993
<b>Legal Processes -&gt; Responsiveness</b>	0.458	0.461	0.089	5.160	0.000	0.288	0.627
Lifts -> Reliability	0.194	0.161	0.159	1.217	<b>0.227</b>	-0.104	0.478
<b>Location -&gt; Tangibles</b>	0.498	0.482	0.115	4.319	0.000	0.254	0.718
<b>Maintenance -&gt; Reliability</b>	0.549	0.477	0.169	3.256	0.002	0.346	0.703
<b>Overall Sat &lt;- Tot Sat</b>	0.908	0.902	0.048	18.999	0.000	0.787	0.957
<b>Parking -&gt; Tangibles</b>	0.342	0.358	0.127	2.699	0.008	-0.011	0.531
<b>Professionalism -&gt; Assurance</b>	0.571	0.571	0.102	5.622	0.000	0.361	0.786
<b>Property Mgmt &lt;- Property Mgmt</b>	1.000	1.000	0.000			1.000	1.000
Reception -> Tangibles	0.164	0.141	0.177	0.928	<b>0.356</b>	-0.136	0.504
<b>Recommend 1-5 &lt;- Reputation</b>	0.944	0.950	0.114	8.295	0.000	0.707	1.146
Recycling -> Reliability	0.113	0.096	0.522	0.215	<b>0.830</b>	-1.056	1.149
<b>RentVal -&gt; Value</b>	0.672	0.695	0.153	4.397	0.000	0.177	0.947
<b>Responsive -&gt; Responsiveness</b>	0.935	0.930	0.028	33.901	0.000	0.884	0.975
<b>Security -&gt; Assurance</b>	0.345	0.335	0.082	4.230	0.000	0.213	0.542
<b>ServChargeVal -&gt; Value</b>	0.531	0.497	0.156	3.410	0.001	0.220	0.764
<b>Understanding -&gt; Empathy</b>	0.560	0.559	0.063	8.877	0.000	0.442	0.675

**Table E-4: Outer Loadings showing absolute importance of formative indicators in the measurement model following bootstrapping to determine statistical significance**

Outer Loadings	Original Sample (O)	Sample Mean (M)	Standard Error (STERR)	T Statistics (O/STERR)	P Values	Confidence Interval Lower	Confidence Interval Upper
Amenities -> Tangibles	0.907	0.894	0.079	11.501	0.000	0.788	1.059
Building Spec-> Tangibles	0.773	0.763	0.085	9.056	0.000	0.613	0.939
CSR -> Assurance	0.945	0.934	0.101	9.404	0.000	0.776	1.124
Cleaning -> Reliability	0.652	0.615	0.243	2.682	0.009	-0.096	0.920
Communication-> Empathy	0.892	0.891	0.029	30.323	0.000	0.824	0.936
Documentation -> Reliability	0.874	0.776	0.199	4.399	0.000	0.657	1.011
HVAC -> Reliability	0.692	0.630	0.219	3.164	0.002	0.222	0.979
Landlord Performance <- Reputation	<b>0.893</b>	0.871	0.138	6.460	0.000	0.709	1.046
Lease Renewal <- Tot Sat	<b>0.755</b>	0.755	0.174	4.349	0.000	0.433	1.078
Leasing process -> Assurance	0.970	0.961	0.117	8.313	0.000	0.765	1.208
Legal Procs-> Responsiveness	0.617	0.631	0.100	6.193	0.000	0.396	0.786
Lifts -> Reliability	0.506	0.445	0.157	3.224	0.002	0.268	0.829
Location -> Tangibles	0.611	0.595	0.114	5.360	0.000	0.405	0.830
Maintenance -> Reliability	0.744	0.668	0.167	4.444	0.000	0.466	0.875
Overall Sat <- Tot Sat	<b>0.943</b>	0.937	0.034	27.450	0.000	0.850	0.983
Parking -> Tangibles	0.591	0.602	0.101	5.836	0.000	0.398	0.763
Professionalism-> Assurance	0.882	0.876	0.072	12.268	0.000	0.736	0.985
Reception -> Tangibles	0.603	0.581	0.124	4.853	0.000	0.367	0.817
Recommend1-5 <-Reputation	<b>1.073</b>	1.078	0.091	11.820	0.000	0.850	1.226
Recycling -> Reliability	0.345	0.310	0.357	0.968	<b>0.335</b>	-0.411	0.971
Rent Val -> Value	0.996	0.998	0.058	17.049	0.000	0.874	1.087
Responsive -> Responsiveness	0.967	0.965	0.018	52.363	0.000	0.921	0.993
Security -> Assurance	0.600	0.586	0.063	9.463	0.000	0.508	0.727
ServCharge Val -> Value	0.899	0.877	0.072	12.423	0.000	0.750	0.994
Understanding -> Empathy	0.873	0.871	0.036	24.114	0.000	0.801	0.938

**Table E-5: Composite Reliability**

	<b>Cronbach's Alpha</b>	<b>SMART-PLS test for Composite Validity</b>
Property Mgmt	1.000	1.000
Reputation	0.638	0.987
Tot Sat	0.309	0.842

**Table E-6: Test of Discriminant Validity using Fornell-Larcker Criterion**

	<b>Assurance</b>	<b>Empathy</b>	<b>Property Mgmt</b>	<b>Reliability</b>	<b>Reputation</b>	<b>Responsiveness</b>	<b>Tangibles</b>	<b>Tot Sat</b>	<b>Value</b>
<b>Fornell-Larcker Criterion</b>									
<b>Assurance</b>									
<b>Empathy</b>	0.553								
<b>Property Mgmt</b>	0.449	0.604	<b>1.000</b>						
<b>Reliability</b>	0.536	0.402	0.389						
<b>Reputation</b>	0.492	0.485	0.559	0.257	<b>0.987</b>				
<b>Responsiveness</b>	0.550	0.673	0.585	0.397	0.497				
<b>Tangibles</b>	0.567	0.455	0.625	0.585	0.314	0.441			
<b>Tot Sat</b>	0.485	0.515	0.508	0.452	0.439	0.487	0.563	<b>0.854</b>	
<b>Value</b>	0.457	0.289	0.270	0.506	0.312	0.337	0.462	0.422	

Table E-7: Cross Loadings of Indicators on Latent Constructs

Cross Loadings	Assurance	Empathy	Property Mgmt	Reliability	Reputation	Responsiveness	Tangibles	Tot Sat	Value
Amenities	0.575	0.317	0.420	0.516	0.241	0.303	<b>0.907</b>	0.431	0.364
Building Spec	0.401	0.405	0.568	0.384	0.202	0.369	<b>0.773</b>	0.467	0.242
CSR	<b>0.945</b>	0.534	0.534	0.423	0.477	0.533	0.367	0.403	0.305
Cleaning	0.499	0.348	0.316	<b>0.652</b>	0.183	0.332	0.570	0.340	0.342
Communication	0.504	<b>0.892</b>	0.612	0.320	0.436	0.638	0.423	0.447	0.202
Documentation	0.351	0.220	0.228	<b>0.874</b>	0.168	0.253	0.235	0.275	0.443
HVAC	0.386	0.268	0.272	<b>0.692</b>	0.165	0.189	0.367	0.331	0.256
Landlord Performance	0.618	0.381	0.455	0.308	<b>0.893</b>	0.484	0.345	0.477	0.342
Lease Renewal	0.394	0.114	0.167	0.366	0.241	0.191	0.288	<b>0.755</b>	0.459
Leasing process	<b>0.970</b>	0.382	0.286	0.630	0.347	0.406	0.409	0.392	0.527
Legal Processes	0.474	0.170	0.320	0.325	0.268	<b>0.617</b>	0.240	0.280	0.283
Lifts	0.329	0.141	0.107	<b>0.506</b>	0.155	0.179	0.351	0.267	0.114
Location	0.255	0.215	0.424	0.229	0.183	0.288	<b>0.611</b>	0.229	0.189
Maintenance	0.424	0.373	0.413	<b>0.744</b>	0.227	0.362	0.429	0.354	0.223
Overall Sat	0.450	0.544	0.541	0.420	0.425	0.496	0.523	<b>0.943</b>	0.335
Parking	0.180	0.224	0.306	0.364	0.107	0.219	<b>0.591</b>	0.270	0.230
Professionalism	<b>0.882</b>	0.525	0.494	0.378	0.501	0.559	0.429	0.423	0.315
Property Mgmt	0.449	0.604	<b>1.000</b>	0.389	0.559	0.585	0.625	0.508	0.270
Reception	<b>0.659</b>	0.414	0.374	<b>0.572</b>	0.320	0.294	<b>0.603</b>	0.455	0.319
Recommend 1-5	0.335	0.583	0.521	0.201	<b>1.073</b>	0.493	0.162	0.474	0.225
Recycling	0.405	0.220	0.157	0.345	0.101	0.171	<b>0.509</b>	0.182	0.187
RentVal	0.463	0.285	0.252	0.457	0.289	0.313	0.448	0.401	<b>0.996</b>
Responsive	0.503	0.688	0.583	0.362	0.485	<b>0.967</b>	0.409	0.467	0.293
Security	<b>0.600</b>	0.350	0.414	0.365	0.249	0.248	0.428	0.293	0.133
ServChargeVal	0.399	0.262	0.288	0.505	0.298	0.325	0.370	0.374	<b>0.899</b>
Understanding	0.468	<b>0.873</b>	0.400	0.405	0.423	0.533	0.421	0.469	0.306

Table E-8: HTMT Ratio for testing Discriminant Validity

Heterotrait-Monotrait Ratio (HTMT)	Original Sample (O)	Sample Mean (M)	Standard Error (STERR)	T Statistics (O/STERR)	P Values	Confidence Interval Lower	Confidence Interval Upper
Reputation -> Property Mgmt	0.713	0.715	0.070	10.193	0.000	0.560	0.832
Tot Sat -> Property Mgmt	0.830	0.882	0.166	4.995	0.000	0.554	1.148
Tot Sat -> Reputation	1.152	1.187	0.245	4.696	0.000	0.771	1.649



### Assessment of the Structural Model

The coefficients of determination for the constructs in the structural model are shown below. The values for 'Property Management', 'Total Satisfaction' and 'Reputation' are all 'Moderate', while that for 'Value' is 'Weak'.

	<b>R Square</b>
<b>Property Mgmt</b>	0.553
<b>Reputation</b>	0.443
<b>Tot Sat</b>	0.443
<b>Value</b>	0.326

Only about half of the paths in the structural model are statistically significant (see **Table E-9**). The construct 'Assurance' is most closely linked with the 'Reputation' construct, and the relationship is statistically significant ( $p=0.000$ ). 'Empathy' is most closely linked with satisfaction with 'Property Management', but also has strong, statistically significant links with 'Total Satisfaction' and 'Reputation'. Surprisingly, the paths linking 'Property Management' with 'Total Satisfaction' and 'Reputation' are not statistically significant, suggesting the construct can be dispensed with for office occupiers, and the links made directly from the SERVQUAL and Value constructs. This idea is tested in the robustness checks using variants of the model discussed in Chapter 6. The 'Tangibles' construct is most closely associated with 'Property Management' and 'Total Satisfaction', whilst 'Value' is associated with 'Total Satisfaction'.

Removing the link between the SERVQUAL constructs and 'Value' has no effect on the significant relationships, although the absolute magnitude of the path weights changes a little (see **Table 6-5**). The size of these effects is shown in **Figure E-1**, from which it can be seen that the only really 'large' effect is between 'Tangibles' and 'Property Management', with the link between 'Property Management' and 'Reputation' being 'moderately strong'. Several other paths do exhibit a 'weak' to 'moderate' effect, using Cohen's (1988) criteria<sup>92</sup>. The relationship between 'Tangibles' and 'Reputation', via 'Property Management' is actually quite surprising, as logistic regressions using occupiers' willingness to recommend their landlord as dependent variable (See Chapter 7) find 'Empathy' and 'Assurance' to be better predictors of occupiers' willingness to recommend than 'Tangibles'. However 'Willingness to Recommend' does not fully encompass 'Reputation' in this PLS model, which may account for the disparity.

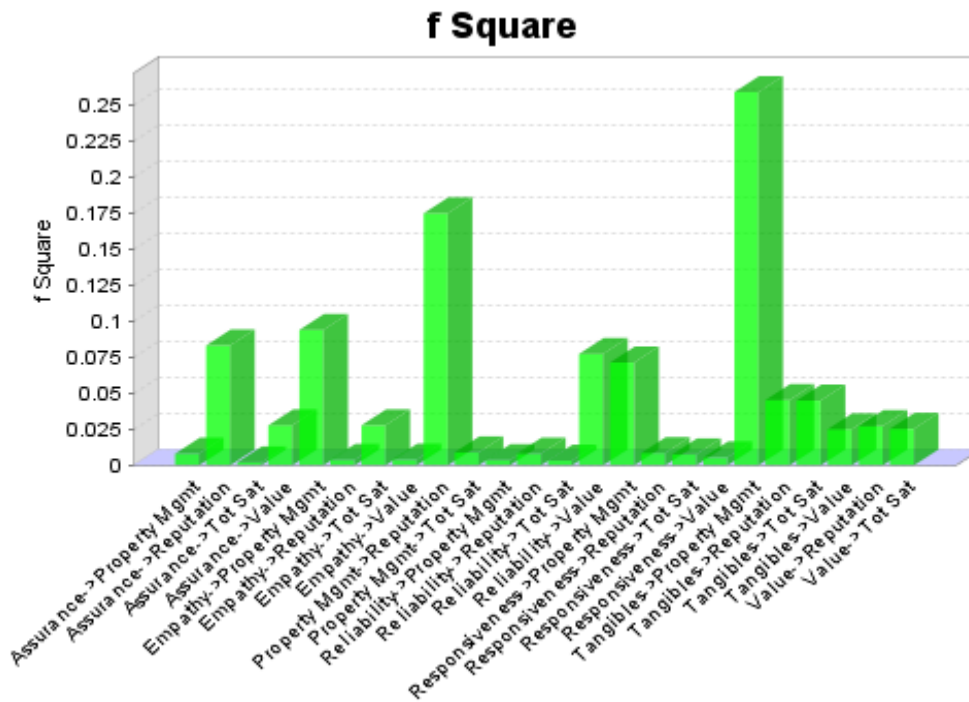
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<sup>92</sup> To remind the reader, Cohen's criteria for  $f^2$ , discussed earlier, are that values of 0.02, 0.15 and 0.35 represent small, medium and large effects respectively

**Table E-9: Statistical Significance of Structural Model**

	Original Sample (O)	Sample Mean (M)	Standard Error (STERR)	T Stats O/STERR	P Values	Confidence Interval Lower	Confidence Interval Upper
Assurance -> Property Mgmt	-0.084	-0.072	0.069	1.225	<b>0.224</b>	-0.285	0.006
<b>Assurance -&gt; Reputation</b>	0.296	0.283	0.061	4.823	0.000	0.205	0.410
Assurance -> Tot Sat	0.066	0.072	0.058	1.133	<b>0.260</b>	-0.171	0.154
<b>Assurance -&gt; Value</b>	0.192	0.215	0.076	2.528	0.013	0.081	0.329
<b>Empathy -&gt; Property Mgmt</b>	0.292	0.289	0.069	4.237	0.000	0.157	0.424
<b>Empathy -&gt; Reputation</b>	0.194	0.189	0.089	2.183	0.031	0.037	0.296
<b>Empathy -&gt; Tot Sat</b>	0.206	0.206	0.066	3.102	0.002	0.107	0.309
Empathy -> Value	-0.073	-0.069	0.068	1.072	<b>0.286</b>	-0.252	0.026
Property Mgmt -> Reputation	0.468	0.345	1.684	0.278	<b>0.782</b>	0.241	1.053
Property Mgmt -> Tot Sat	0.106	0.132	0.277	0.383	<b>0.702</b>	-0.283	0.358
Reliability -> Property Mgmt	-0.052	-0.050	0.083	0.620	<b>0.536</b>	-0.196	0.114
Reliability -> Reputation	-0.071	-0.061	0.041	1.726	<b>0.088</b>	-0.163	0.007
<b>Reliability -&gt; Tot Sat</b>	0.095	0.077	0.047	1.998	0.048	0.018	0.178
<b>Reliability -&gt; Value</b>	0.296	0.243	0.112	2.646	0.009	0.117	0.447
<b>Responsiveness -&gt; Property Mgmt</b>	0.253	0.251	0.059	4.298	0.000	0.103	0.348
<b>Responsiveness -&gt; Reputation</b>	0.233	0.231	0.062	3.764	0.000	0.157	0.323
<b>Responsiveness -&gt; Tot Sat</b>	0.135	0.124	0.051	2.655	0.009	0.053	0.210
Responsiveness -> Value	0.086	0.074	0.080	1.077	<b>0.284</b>	-0.055	0.234
<b>Tangibles -&gt; Property Mgmt</b>	0.458	0.452	0.145	3.150	0.002	0.175	0.671
Tangibles -> Reputation	-0.003	-0.001	0.071	0.045	<b>0.964</b>	-0.101	0.142
<b>Tangibles -&gt; Tot Sat</b>	0.317	0.328	0.096	3.314	0.001	0.192	0.444
Tangibles -> Value	0.175	0.217	0.102	1.719	<b>0.089</b>	-0.005	0.348
Value -> Reputation	0.150	0.157	0.095	1.577	<b>0.118</b>	0.055	0.293
<b>Value -&gt; Tot Sat</b>	0.145	0.136	0.071	2.054	0.043	-0.012	0.254

Figure E-1: Effect Size for Relationships in the Structural Model for Office Occupiers



F <sup>2</sup>	Property Mgmt	Reputation	Tot Sat	Value
Assurance	0.010	0.090	0.003	0.027
Empathy	0.103	0.002	0.029	0.005
Property Mgmt		0.218	0.007	
Reliability	0.010	0.005	0.003	0.075
Responsiveness	0.069	0.006	0.007	0.005
Tangibles	0.404	0.087	0.043	0.031
Value		0.034	0.023	

Blindfolding was carried out using an Omission Distance of 7 and sample size of 1334 to check the predictive relevance of the model. Q<sup>2</sup> for each of the constructs is given in **Table E-10**. The positive values of 0.281 for ‘Total Satisfaction’, 0.347 for ‘Property Management’, 0.324 for ‘Reputation’ and 0.178 for ‘Value’ demonstrate that all four constructs have predictive relevance. When the construct ‘Property Management’ is removed from the model and Q<sup>2</sup> is re-calculated for the other three constructs, the revised values are 0.259 for ‘Total Satisfaction’, 0.313 for ‘Reputation’ and 0.184 for ‘Value’.

As before, the effect size of the construct ‘Property Management’ on the prediction of the other two constructs is calculated using the formula:

$$\frac{Q_{incl}^2 - Q_{excl}^2}{1 - Q_{incl}^2}$$

Thus the effect size of predicting 'Total Satisfaction' from the 'Property Management' construct becomes 0.031. Similarly, the effect size for prediction of 'Reputation' from 'Property Management' is 0.016. This implies that the effect of 'Property Management' on predicting the other two constructs is small. The predictive relevance of the 'Value' construct appears almost unchanged by the removal of the 'Property Management' construct from the model, confirming the decision not to link the two constructs directly in the model. The predictive relevance of the individual variables associated with the constructs is given in **Table E-11**; the positive values show that all the reflective indicators contribute to the model.

**Table E-10: Calculation of Predictive Relevance Q<sup>2</sup>**

Construct Cross-validated Redundancy	SSO	SSE	1-SSE/SSO
Assurance	2,890.000	2,890.000	
Empathy	2,041.000	2,041.000	
Prop Mgmt	653.000	426.544	0.347
Reliability	3,683.000	3,683.000	
Reputation	1,130.000	763.811	0.324
Responsiveness	1,541.000	1,541.000	
Tangibles	2,183.000	2,183.000	
Tot Sat	1,325.000	952.617	0.281
Value	1,414.000	1,162.502	0.178

**Table E-11: Predictive Relevance of Indicators**

Indicator Cross-validated Redundancy	SSO	SSE	1-SSE/SSO
Landlord Performance	628.000	471.522	0.249
Lease Renewal	326.000	289.948	0.111
Overall Sat	999.000	662.668	0.337
Property Management	653.000	426.544	0.347
Recommend 1-5	502.000	292.289	0.418
RentVal	669.000	565.490	0.155
ServChargeVal	745.000	597.012	0.199

## Appendix F: PLS Analysis Supplementary Tables (Industrial Occupiers)

From **Table F-1** it can be seen that the Variance Inflation Factor is well below 5 for all formative indicators, so multicollinearity is not a problem in this model of Industrial Occupier Satisfaction and Landlord Reputation.

**Table F-1: Variance Inflation Factor for Indicator Variables**

Indicator	Outer VIF Values
Amenities	1.18
Building Spec	1.22
Communication	1.49
Customer Service / Professionalism	1.14
Documentation	1.08
Estate	1.41
Landlord Performance	1.68
Lease Renewal	1.08
Leasing	1.13
Legal Processes	1.10
Location	1.11
Maintenance	1.08
Overall Sat	1.08
Property Management	1.00
Recommend1to5	1.68
Rent Val	1.26
Responsiveness	1.10
Security	1.04
Service Charge Val	1.26
Signage	1.14
Understanding Needs	1.49

**Table F-2** shows the Outer Weights of the indicator variables, giving the relative importance of the Formative Indicators in explaining the latent constructs with which they are associated. For industrial occupiers, the leasing process and the professionalism of the landlord or managing agency staff are the most important in explaining the 'Assurance' construct. This is similar to the finding for office occupiers, whereas for retailers the model incorporated additional formative indicators which reduced the relative contribution of each. For retailers, CSR was found to be slightly more important than the leasing process or professionalism, perhaps partly accounted for by the fact that most of the store managers would not have had direct experience of the leasing process.

For 'Empathy', the two formative indicators, Communication and Understanding Business Needs are of similar importance. For 'Reliability' and 'Value' too, the two indicators in each case are of comparable weight. Legal Processes are of less importance in the 'Responsiveness' construct than

occupiers' ratings of the quality of responsiveness to their general requests. For the 'Tangibles' construct, the variance is shared amongst a number of formative indicators, but the main determinants of the construct are the building (unit on the Estate), the Estate itself and the amenities and services provided.

The table also gives the statistical significance of all path weights. It can be seen that all relationships are statistically significant at the 95% confidence level<sup>93</sup> apart from Location ->'Tangibles' and Signage -> 'Tangibles'. The absence of a relationship for location seems counter-intuitive, but a possible explanation is that occupiers participating in these studies discount 'location' when discussing their satisfaction with property management and their landlord because, having made the decision to locate their business, they consider the choice of location to be their responsibility and either do not want to admit to mistakes in their decision or do not hold the landlord responsible. Another likely factor is that the mean satisfaction rating amongst industrial occupiers for location is high, at 4.14, and if it shows little variability, it will not be able to account for variance in a dependent variable – in this case 'Tangibles'. Location actually shows a small but roughly equal loading on all the constructs, as shown in **Table F-5**.

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<sup>93</sup> In fact almost all paths are significant at the 99% level.

**Table F-2: Path Weights and Statistical Significance for the Model for Industrial Occupiers**

Outer Weights	Original Sample (O)	Sample Mean (M)	Std Error (STERR)	T Stats (O/STERR)	P Values	Confidence Interval Lower	Confidence Interval Upper
Amenities -> TANGIBLES	0.433	0.443	0.089	4.850	0.000	0.299	0.633
Building Specification -> TANGIBLES	0.759	0.745	0.072	10.483	0.000	0.569	0.855
Communication -> EMPATHY	0.482	0.477	0.041	11.811	0.000	0.381	0.546
Customer Service / Professionalism -> ASSURANCE	1.061	1.040	0.340	3.122	0.002	0.287	1.687
Documentation -> RELIABILITY	0.884	0.881	0.073	12.083	0.000	0.716	1.005
Estate Satisfaction -> TANGIBLES	0.595	0.590	0.162	3.683	0.000	0.281	0.883
Landlord Performance <- REPUTATION	0.690	0.690	0.019	36.126	0.000	0.653	0.727
Lease Renewal <- TOT_SAT	0.392	0.406	0.130	3.014	0.003	0.167	0.706
Leasing process -> ASSURANCE	1.075	1.055	0.248	4.332	0.000	0.582	1.464
Legal Processes -> RESPONSIVENESS	0.264	0.267	0.104	2.542	0.011	0.069	0.474
Location -> TANGIBLES	-0.125	-0.134	0.092	1.358	0.175	-0.322	-0.006
Maintenance -> RELIABILITY	0.668	0.665	0.096	6.981	0.000	0.486	0.858
Overall satisfaction <- TOT_SAT	0.963	0.958	0.023	41.861	0.000	0.895	0.991
Property Management <- PROP_MGMT	1.000	1.000	0.000			1.000	1.000
Recommend1to5 <- REPUTATION	0.623	0.622	0.018	35.355	0.000	0.588	0.654
RentVal -> VALUE	0.614	0.612	0.080	7.643	0.000	0.450	0.760
Responsiveness -> RESPONSIVENESS	0.984	0.983	0.012	79.343	0.000	0.958	1.006
Security -> ASSURANCE	0.443	0.421	0.170	2.607	0.009	0.059	0.705
ServChargeVal -> VALUE	0.623	0.621	0.087	7.194	0.000	0.439	0.777
Signage -> TANGIBLES	0.044	0.087	0.065	0.675	0.500	0.023	0.316
Understanding Needs -> EMPATHY	0.676	0.680	0.039	17.482	0.000	0.612	0.760

As occurred with the models for Retailers and Office occupiers, the tests of Composite Reliability for this model give conflicting results. **Table F-3** shows that the Composite validity for the 'Total Satisfaction' construct is rather low when relying on Cronbach's Alpha, whereas the value is optimal when using the version of the test employed by SMART-PLS that takes account of the indicator loadings on a construct. The Composite Reliability of the indicators for 'Reputation' is optimal using Cronbach's Alpha but rather high according to the SMART-PLS test. The value for 'Property Management' is 1 by definition, since it is measured by only one reflective indicator.

Discriminant Validity would appear to hold when using the Fornell-Larcker Criterion, **Table F-4**, since the Square root of the Average Variance Explained for each construct (shown in Bold) exceeds its correlation with other constructs. When using cross-loadings, too, **Table F-5**, it can be seen that all the manifest variables do load more strongly onto the constructs with which they are conceptually linked in the model, although the loading for 'location' is small, as discussed earlier.

The third method of testing discriminant validity, the HTMT Ratio, **Table F-6**, does find the construct 'Property Management' to be distinct from 'Total Satisfaction' and 'Reputation', with HTMT Ratios of 0.685 and 0.607 respectively, with the Upper 95% Confidence interval clearly below the more conservative of Henseler, Ringle, & Sarstedt's (2014) suggestions of 0.85 as the upper limit for two constructs to be considered distinct. However, the constructs 'Reputation' and 'Total Satisfaction' are probably not distinct since the HTMT Ratio of 0.908 marginally exceeds the less conservative suggested value of 0.90 as the upper limit.



Table F-3: Composite Reliability

	Cronbach's Alpha	SMART-PLS test for Composite Validity
Property Mgmt	1.000	1.000
Reputation	0.777	0.968
Tot Sat	0.430	0.812

Table F-4: Test of Discriminant Validity using Fornell-Larcker Criterion

	Assurance	Empathy	Property Mgmt	Reliability	Reputation	Responsiveness	Tangibles	Tot Sat
Fornell-Larcker Criterion								
<b>ASSURANCE</b>								
<b>EMPATHY</b>	0.413							
<b>PROP_MGMT</b>	0.260	0.715	<b>1.000</b>					
<b>RELIABILITY</b>	0.298	0.293	0.357					
<b>REPUTATION</b>	0.338	0.620	0.598	0.383	<b>0.969</b>			
<b>RESPONSIVENESS</b>	0.318	0.624	0.617	0.227	0.472			
<b>TANGIBLES</b>	0.464	0.378	0.343	0.265	0.449	0.286		
<b>TOT_SAT</b>	0.419	0.545	0.550	0.388	0.608	0.463	0.531	<b>0.836</b>
<b>VALUE</b>	0.323	0.360	0.326	0.339	0.478	0.258	0.368	0.422

**Table F-5: Cross Loadings of Indicators on Latent Constructs**

Cross Loadings	Assurance	Empathy	Property Mgmt	Reliability	Reputation	Responsiveness	Tangibles	TotSat	Value
Amenities	0.276	0.274	0.303	0.183	0.346	0.228	<b>0.700</b>	0.342	0.254
Building Spec	0.370	0.307	0.271	0.186	0.396	0.230	<b>0.856</b>	0.475	0.320
Communication	0.312	<b>0.856</b>	0.663	0.246	0.510	0.624	0.301	0.457	0.264
Customer Service / Professionalism	<b>1.280</b>	0.369	0.338	0.285	0.319	0.346	0.501	0.495	0.360
Documentation	0.228	0.266	0.302	<b>0.941</b>	0.373	0.196	0.153	0.326	0.360
Estate	0.464	0.268	0.313	0.422	0.289	0.191	<b>1.013</b>	0.529	0.273
Landlord Performance	0.450	0.600	0.599	0.350	<b>0.940</b>	0.482	0.466	0.619	0.422
Lease Renewal	0.361	0.262	0.069	0.021	0.188	0.165	0.192	<b>0.643</b>	0.316
Leasing	<b>1.136</b>	0.475	0.234	0.297	0.434	0.332	0.645	0.504	0.348
Legal Processes	0.395	0.284	0.343	0.180	0.242	<b>0.506</b>	0.359	0.365	0.189
Location	0.041	0.037	0.108	0.199	0.024	0.068	<b>0.244</b>	0.169	0.057
Maintenance	0.289	0.290	0.308	<b>0.864</b>	0.302	0.237	0.378	0.391	0.236
Overall Sat	0.386	0.544	0.566	0.406	0.617	0.467	0.531	<b>0.986</b>	0.411
Property Management	0.273	0.718	<b>1.000</b>	0.356	0.598	0.617	0.354	0.551	0.325
Recommend1to5	0.220	0.544	0.494	0.382	<b>0.997</b>	0.373	0.351	0.535	0.486
RentVal	0.247	0.325	0.278	0.198	0.430	0.189	0.355	0.370	<b>0.875</b>
Responsiveness	0.283	0.631	0.617	0.223	0.473	<b>1.002</b>	0.286	0.457	0.253
Security	<b>0.608</b>	0.237	0.229	0.342	0.214	0.165	0.379	0.236	0.120
ServChargVal	0.309	0.302	0.291	0.376	0.406	0.268	0.268	0.368	<b>0.876</b>
Signage	0.346	0.310	0.282	0.231	0.192	0.216	<b>0.605</b>	0.245	0.020
Understanding Needs	0.416	<b>0.939</b>	0.630	0.281	0.591	0.513	0.386	0.518	0.370

**Table F-6: HTMT Ratio for testing Discriminant Validity**

Heterotrait-Monotrait Ratio (HTMT)	Original Sample (O)	Sample Mean (M)	Std Error	T Statistics (O/STERR)	P Values	Confidence Interval Lower	Confidence Interval Upper
Reputation -> Property Mgmt	<b>0.685</b>	<b>0.687</b>	<b>0.033</b>	<b>20.986</b>	<b>0.000</b>	<b>0.621</b>	<b>0.747</b>
TotSat -> Property Mgmt	<b>0.607</b>	<b>0.613</b>	<b>0.083</b>	<b>7.303</b>	<b>0.000</b>	<b>0.490</b>	<b>0.785</b>
TotSat -> Reputation	<b>0.908</b>	<b>0.918</b>	<b>0.116</b>	<b>7.820</b>	<b>0.000</b>	<b>0.734</b>	<b>1.149</b>

**Assessment of the Structural Model**

The path coefficients in the structural model are given in **Table F-7**, which highlights the importance of ‘Empathy’ in occupiers’ satisfaction with ‘Property Management’. The coefficients of determination for the constructs in the structural model are shown below; R<sup>2</sup> for the ‘Value’ construct is ‘Weak’, whilst R<sup>2</sup> for ‘Property Management’, ‘Reputation’ and ‘Total Satisfaction’ can be considered ‘Moderate’, at around 0.5 – 0.6. These values change by less than 0.5% in the variant of the model in which ‘Value’ does not depend on the SERVQUAL constructs, re-enforcing the implication that perception of ‘Value for Money’ is determined exogenously.

**Table F-7: Path Coefficients for Structural Model for Industrial Occupiers**

Path Coefficients	Property Mgmt	Reputation	TotSat	Value
Assurance	-0.131	-0.024	0.083	0.092
Empathy	<b>0.518</b>	<b>0.280</b>	0.121	<b>0.179</b>
Property Mgmt		<b>0.211</b>	<b>0.207</b>	
Reliability	0.158	0.107	0.118	<b>0.205</b>
Responsiveness	<b>0.272</b>	0.050	0.098	0.016
Tangibles	0.092	<b>0.162</b>	<b>0.267</b>	<b>0.191</b>
Value		<b>0.208</b>	0.122	

	R Square
Property Mgmt	0.593
Reputation	0.479
Tot Sat	0.587
Value	0.237

All of the paths in the structural model are statistically significant apart from those from the ‘Assurance’ and ‘Responsiveness’ constructs, (see **Table F-8**). This may be explained by the fact that property management of Industrial Estates is more “arm’s length” than for other sectors. With less contact with property managers, the relationship will be more distant, and occupiers may know less about their landlord’s organisation. As mentioned earlier, few industrial occupiers were asked about their landlord’s corporate social responsibility, for example, so this isn’t included in the model.

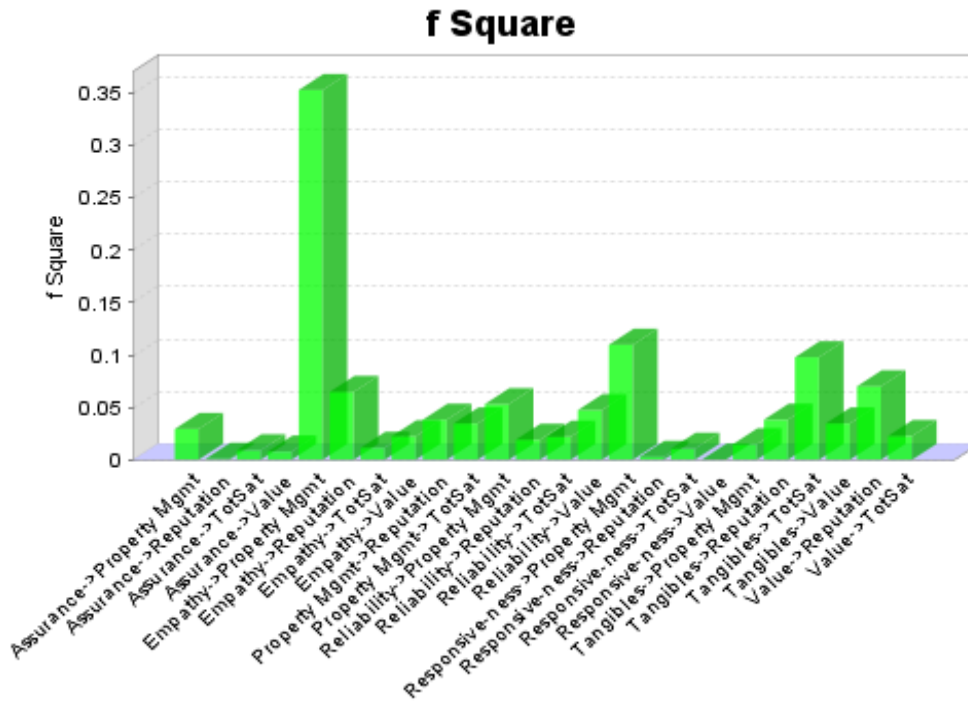
Having said that, as mentioned above, the only really ‘large’ effect is between ‘Empathy’ and ‘Property Management’, with the link between ‘Responsiveness’ and ‘Property Management’ being ‘small’ to ‘moderate’ according to Cohen’s criteria. The paths: ‘Empathy’ -> ‘Reputation’, ‘Value’ ->

'Reputation', 'Responsiveness' -> 'Property Management' and 'Tangibles' -> 'Total Satisfaction' all have a 'small' effect (see **Figure F-1**).

**Table F-8: Statistical Significance of Structural Model**

Total Effects	Original Sample (O)	Sample Mean (M)	Standard Error (STERR)	T Statistics (O/STERR)	P Values	Confidence Interval Lower	Confidence Interval Upper
<b>ASSURANCE -&gt; PROP_MGMT</b>	-0.131	-0.124	0.067	1.961	0.050	-0.242	-0.006
ASSURANCE -> REPUTATION	-0.023	-0.048	0.036	0.641	0.522	-0.223	-0.014
ASSURANCE -> TOT_SAT	0.090	0.102	0.067	1.350	0.178	0.005	0.240
ASSURANCE -> VALUE	0.092	0.105	0.066	1.404	0.161	0.008	0.255
<b>EMPATHY -&gt; PROP_MGMT</b>	0.518	0.520	0.040	12.801	0.000	0.444	0.608
EMPATHY -> REPUTATION	0.266	0.261	0.043	6.120	0.000	0.159	0.329
EMPATHY -> TOT_SAT	0.131	0.125	0.049	2.695	0.007	0.012	0.201
EMPATHY -> VALUE	0.179	0.179	0.043	4.127	0.000	0.086	0.259
<b>PROP_MGMT -&gt; REPUTATION</b>	0.201	0.206	0.053	3.806	0.000	0.115	0.315
<b>PROP_MGMT -&gt; TOT_SAT</b>	0.224	0.226	0.058	3.896	0.000	0.117	0.340
<b>RELIABILITY -&gt; PROP_MGMT</b>	0.158	0.154	0.035	4.501	0.000	0.084	0.212
RELIABILITY -> REPUTATION	0.102	0.101	0.035	2.865	0.004	0.025	0.164
RELIABILITY -> TOT_SAT	0.128	0.123	0.038	3.360	0.001	0.040	0.184
RELIABILITY -> VALUE	0.205	0.207	0.042	4.849	0.000	0.134	0.297
<b>RESPONSIVENESS -&gt; PROP_MGMT</b>	0.272	0.270	0.037	7.283	0.000	0.186	0.335
RESPONSIVENESS -> REPUTATION	0.048	0.053	0.034	1.407	0.160	0.004	0.126
<b>RESPONSIVENESS -&gt; TOT_SAT</b>	0.106	0.101	0.043	2.485	0.013	0.011	0.174
RESPONSIVENESS -> VALUE	0.016	0.034	0.026	0.608	0.543	0.011	0.123
<b>TANGIBLES -&gt; PROP_MGMT</b>	0.092	0.085	0.035	2.605	0.009	0.009	0.140

Figure F-1: Effect Size for Relationships in the Structural Model for Industrial Occupiers



f Square	PROP_MGMT	REPUTATION	TOT_SAT	VALUE
<b>ASSURANCE</b>	0.029	0.001	0.009	0.008
<b>EMPATHY</b>	<b>0.353</b>	0.065	0.011	0.022
<b>PROP_MGMT</b>		0.038	0.035	
<b>RELIABILITY</b>	0.053	0.019	0.022	0.047
<b>RESPONSIVENESS</b>	0.110	0.003	0.010	0.000
<b>TANGIBLES</b>	0.015	0.038	0.098	0.035
<b>VALUE</b>		0.070	0.023	

Blindfolding was carried out using an Omission Distance of 7 and sample size of 1293 to check the predictive relevance of the model.  $Q^2$  for each of the constructs is given in **Table F-9**. The positive values of 0.377 for 'Total Satisfaction', 0.521 for 'Property Management', 0.426 for 'Reputation' and 0.152 for 'Value' demonstrate that all four constructs have predictive relevance. When the construct 'Property Management' is removed from the model and  $Q^2$  is re-calculated for the other three constructs, the revised values are 0.363 for 'Total Satisfaction', 0.409 for 'Reputation' and 0.154 for 'Value'. Thus 'Value' is unaffected by the 'Property Management' construct. The effect size of the construct 'Property Management' on the prediction of the other two constructs is 0.016 for Total Satisfaction and 0.030 for Reputation. This implies that the effect of 'Property Management' on

predicting these two constructs is small. The predictive relevance of the individual reflective variables is given in **Table F-10**. ‘Likelihood of Lease Renewal’ has a negative sign, implying it does not help with predicting ‘Total Satisfaction’. This may be because exogenous factors affect lease renewal, such as whether business needs have changed, necessitating more or less space.

**Table F-9: Calculation of Predictive Relevance  $Q^2$  Value Endogenous with SERVQUAL constructs**

Construct Cross-validated Redundancy	SSO	SSE	1-SSE/SSO
Assurance	913.000	913.000	
Empathy	2,227.000	2,227.000	
Property Management	1,122.000	537.899	0.521
Reliability	1,372.000	1,372.000	
Reputation	1,870.000	1,073.606	0.426
Responsiveness	1,331.000	1,331.000	
Tangibles	2,930.000	2,930.000	
TotSat	1,528.000	952.182	0.377
Value	2,025.000	1,717.669	0.152

**Table F-10: Predictive relevance of Reflective Indicators**

Indicator Cross-validated Redundancy	SSO	SSE	1-SSE/SSO
Landlord Performance	1,074.000	575.795	0.464
Lease Renewal	259.000	260.729	-0.007
Overall Sat	1,269.000	691.453	0.455
Property Management	1,122.000	537.899	0.521
Recommend1to5	796.000	497.811	0.375
RentVal	1,075.000	924.481	0.140
ServChargeVal	950.000	793.188	0.165

## Appendix G: Logistic Regression Supplementary Tables

**Table G-1: Parameter Estimates for Retailers in Shopping Centres (N = 162)**

IntLeaseRenew		B	Std. Error	Wald	Sig.	Exp(B)
2.00	Intercept	2.579	7.638	.114	.736	
	SQ_Assurance	-.736	2.199	.112	.738	.479
	SQ_Empathy	1.790	1.867	.918	.338	5.988
	SQ_Reliability	-4.628	3.170	2.131	.144	.010
	SQ_Responsiveness	1.680	1.716	.958	.328	5.363
	SQ_Tangibles	.144	2.115	.005	.946	1.154
	RentValueforMoney	1.445	1.257	1.321	.250	4.241
	ServiceChargeValueforMoney	.977	1.456	.451	.502	2.657
3.00	Intercept	-2.878	7.116	.164	.686	
	SQ_Assurance	.483	1.728	.078	.780	1.621
	SQ_Empathy	.695	1.481	.220	.639	2.004
	SQ_Reliability	-4.188	2.940	2.030	.154	.015
	SQ_Responsiveness	2.122	1.558	1.854	.173	8.348
	SQ_Tangibles	2.331	1.744	1.786	.181	10.286
	RentValueforMoney	-.657	1.135	.335	.563	.519
	ServiceChargeValueforMoney	1.427	1.374	1.078	.299	4.166
4.00	Intercept	-3.928	6.858	.328	.567	
	SQ_Assurance	.284	1.751	.026	.871	1.328
	SQ_Empathy	2.084	1.463	2.028	.154	8.035
	SQ_Reliability	-4.679	2.898	2.608	.106	.009
	SQ_Responsiveness	.887	1.482	.358	.550	2.427
	SQ_Tangibles	2.466	1.718	2.059	.151	11.772
	RentValueforMoney	.481	1.107	.189	.664	1.618
	ServiceChargeValueforMoney	1.838	1.347	1.862	.172	6.286
5.00	Intercept	-6.213	6.946	.800	.371	
	SQ_Assurance	.343	1.763	.038	.846	1.410
	SQ_Empathy	2.142	1.468	2.130	.144	8.516
	SQ_Reliability	-4.669	2.902	2.589	.108	.009
	SQ_Responsiveness	.806	1.481	.296	.586	2.238
	SQ_Tangibles	2.598	1.734	2.244	.134	13.430
	RentValueforMoney	.674	1.109	.369	.544	1.961
	ServiceChargeValueforMoney	2.265	1.352	2.807	.094	9.632

**Table G-2: Parameter Estimates for Office Occupiers (N = 224)**

IntLeaseRenew		B	Std. Error	Wald	Sig.	Exp(B)
2.00	Intercept	12.831	3.142	16.672	.000	
	SQ_Assurance	-1.339	.984	1.854	.173	.262
	SQ_Empathy	-.508	.828	.377	.539	.602
	SQ_Reliability	-1.708	.758	5.080	.024	.181
	SQ_Responsiveness	.291	.604	.232	.630	1.338
	SQ_Tangibles	-.231	.728	.101	.751	.794
	RentValueforMoney	-.767	.557	1.891	.169	.465
	ServiceChargeValueforMoney	.832	.598	1.936	.164	2.297
3.00	Intercept	7.989	2.694	8.792	.003	
	SQ_Assurance	-1.022	.887	1.330	.249	.360
	SQ_Empathy	-1.161	.772	2.262	.133	.313
	SQ_Reliability	-.717	.656	1.192	.275	.488
	SQ_Responsiveness	.716	.558	1.648	.199	2.047
	SQ_Tangibles	-.037	.660	.003	.956	.964
	RentValueforMoney	.943	.524	3.241	.072	2.567
	ServiceChargeValueforMoney	-.510	.504	1.027	.311	.600
4.00	Intercept	4.005	2.556	2.455	.117	
	SQ_Assurance	-.550	.866	.403	.525	.577
	SQ_Empathy	-1.084	.761	2.029	.154	.338
	SQ_Reliability	-.819	.640	1.636	.201	.441
	SQ_Responsiveness	.486	.543	.802	.371	1.627
	SQ_Tangibles	.511	.653	.613	.434	1.667
	RentValueforMoney	<b>1.420</b>	.514	7.618	<b>.006</b>	4.136
	ServiceChargeValueforMoney	-.475	.490	.940	.332	.622
5.00	Intercept	-.538	2.901	.034	.853	
	SQ_Assurance	-.104	.954	.012	.913	.901
	SQ_Empathy	-1.565	.833	3.527	.060	.209
	SQ_Reliability	-.919	.725	1.608	.205	.399
	SQ_Responsiveness	.183	.615	.088	.766	1.201
	SQ_Tangibles	.309	.749	.170	.680	1.362
	RentValueforMoney	<b>2.614</b>	.603	18.815	<b>.000</b>	13.649
	ServiceChargeValueforMoney	.010	.561	.000	.986	1.010



**Table G-3: Parameter Estimates for Industrial Occupiers (N = 144)**

IntLeaseRenew		B	Std. Error	Wald	Sig.	Exp(B)
2.00	Intercept	-3.103	4.246	.534	.465	
	SQ_Assurance	.829	.706	1.380	.240	2.292
	SQ_Empathy	-.133	.832	.026	.872	.875
	SQ_Reliability	.401	1.018	.155	.694	1.493
	SQ_Responsiveness	.085	.624	.019	.892	1.089
	SQ_Tangibles	-.709	1.259	.317	.573	.492
	RentValueforMoney	<b>1.616</b>	.732	4.871	<b>.027</b>	5.031
	ServiceChargeValueforMoney	-.931	.652	2.042	.153	.394
3.00	Intercept	1.461	3.675	.158	.691	
	SQ_Assurance	-.114	.610	.035	.851	.892
	SQ_Empathy	.930	.800	1.353	.245	2.535
	SQ_Reliability	-1.980	.855	5.367	<b>.021</b>	.138
	SQ_Responsiveness	.634	.596	1.133	.287	1.885
	SQ_Tangibles	.193	1.071	.033	.857	1.213
	RentValueforMoney	.521	.649	.645	.422	1.684
	ServiceChargeValueforMoney	-.028	.573	.002	.960	.972
4.00	Intercept	-4.226	3.752	1.269	.260	
	SQ_Assurance	.258	.596	.186	.666	1.294
	SQ_Empathy	<b>1.591</b>	.769	4.283	<b>.038</b>	4.910
	SQ_Reliability	-1.307	.844	2.399	.121	.271
	SQ_Responsiveness	.103	.559	.034	.853	1.109
	SQ_Tangibles	-.058	1.073	.003	.957	.944
	RentValueforMoney	<b>1.479</b>	.650	5.172	<b>.023</b>	4.390
	ServiceChargeValueforMoney	.063	.574	.012	.912	1.065
5.00	Intercept	-5.764	3.824	2.272	.132	
	SQ_Assurance	.148	.603	.060	.806	1.160
	SQ_Empathy	1.450	.776	3.490	.062	4.263
	SQ_Reliability	-1.898	.858	4.892	<b>.027</b>	.150
	SQ_Responsiveness	.922	.593	2.414	.120	2.514
	SQ_Tangibles	.017	1.079	.000	.987	1.017
	RentValueforMoney	<b>2.192</b>	.674	10.567	<b>.001</b>	8.954
	ServiceChargeValueforMoney	-.194	.583	.110	.740	.824

**Table G-4: Parameter Estimates for Retailers in Shopping Centres using only SERVQUAL Predictors**

(N = 322)

IntLeaseRenew		B	Std. Error	Wald	Sig.	Exp(B)
2.00	Intercept	-1.149	5.179	.049	.824	
	SQ_Assurance	-.364	1.101	.109	.741	.695
	SQ_Empathy	<b>2.111</b>	1.041	4.116	<b>.042</b>	8.260
	SQ_Reliability	-1.319	1.501	.772	.380	.267
	SQ_Responsiveness	.334	.801	.174	.676	1.397
	SQ_Tangibles	.034	1.467	.001	.982	1.034
3.00	Intercept	-5.230	4.644	1.268	.260	
	SQ_Assurance	-.315	.948	.111	.739	.730
	SQ_Empathy	1.439	.778	3.424	<b>.064</b>	4.218
	SQ_Reliability	-.885	1.353	.427	.513	.413
	SQ_Responsiveness	-.037	.624	.004	.953	.964
	SQ_Tangibles	2.241	1.305	2.950	.086	9.407
4.00	Intercept	-4.674	4.462	1.097	.295	
	SQ_Assurance	-.159	.914	.030	.862	.853
	SQ_Empathy	<b>1.825</b>	.746	5.979	<b>.014</b>	6.200
	SQ_Reliability	-.826	1.318	.393	.531	.438
	SQ_Responsiveness	-.018	.596	.001	.975	.982
	SQ_Tangibles	1.686	1.256	1.802	.179	5.399
5.00	Intercept	-5.398	4.450	1.471	.225	
	SQ_Assurance	.020	.911	.000	.982	1.020
	SQ_Empathy	<b>1.997</b>	.745	7.185	<b>.007</b>	7.366
	SQ_Reliability	-.916	1.313	.487	.485	.400
	SQ_Responsiveness	-.068	.594	.013	.908	.934
	SQ_Tangibles	1.764	1.252	1.985	.159	5.834

**Table G-5: Parameter Estimates for Retail Warehouse Managers using only SERVQUAL Predictors**

(N = 110)

IntLeaseRenew		B	Std. Error	Wald	Sig.	Exp(B)
3.00	Intercept	11.775	9.401	1.569	.210	
	SQ_Assurance	1.117	1.381	.654	.419	3.056
	SQ_Empathy	2.110	1.444	2.137	.144	8.249
	SQ_Reliability	-1.547	1.883	.675	.411	.213
	SQ_Responsiveness	-2.577	2.487	1.073	.300	.076
	SQ_Tangibles	-1.078	1.958	.303	.582	.340
4.00	Intercept	8.740	9.193	.904	.342	
	SQ_Assurance	1.102	1.344	.672	.412	3.009
	SQ_Empathy	2.452	1.417	2.996	.083	11.616
	SQ_Reliability	-.366	1.821	.040	.841	.694
	SQ_Responsiveness	-3.005	2.468	1.482	.223	.050
	SQ_Tangibles	-.977	1.884	.269	.604	.376
5.00	Intercept	7.162	9.279	.596	.440	
	SQ_Assurance	1.479	1.367	1.169	.280	4.386
	SQ_Empathy	2.549	1.436	3.152	.076	12.792
	SQ_Reliability	-1.298	1.857	.489	.484	.273
	SQ_Responsiveness	-2.975	2.477	1.443	.230	.051
	SQ_Tangibles	-.152	1.915	.006	.937	.859

**Table G-6: Parameter Estimates for Office Occupiers using only SERVQUAL Predictors (N = 288)**

IntLeaseRenew		B	Std. Error	Wald	Sig.	Exp(B)
2.00	Intercept	8.412	2.360	12.702	.000	
	SQ_Assurance	-.968	.707	1.875	.171	.380
	SQ_Empathy	-.554	.629	.777	.378	.575
	SQ_Reliability	-.441	.602	.536	.464	.643
	SQ_Responsiveness	.167	.505	.110	.740	1.182
	SQ_Tangibles	-.340	.582	.341	.559	.712
3.00	Intercept	6.752	2.166	9.716	.002	
	SQ_Assurance	-.872	.670	1.693	.193	.418
	SQ_Empathy	-.697	.599	1.356	.244	.498
	SQ_Reliability	-.496	.564	.773	.379	.609
	SQ_Responsiveness	.544	.486	1.255	.263	1.724
	SQ_Tangibles	.016	.555	.001	.977	1.016
4.00	Intercept	3.711	2.025	3.360	.067	
	SQ_Assurance	-.220	.653	.113	.736	.803
	SQ_Empathy	-.577	.585	.972	.324	.561
	SQ_Reliability	-.272	.541	.253	.615	.762
	SQ_Responsiveness	.252	.471	.287	.592	1.287
	SQ_Tangibles	.285	.537	.281	.596	1.329
5.00	Intercept	2.927	2.190	1.787	.181	
	SQ_Assurance	-.291	.690	.178	.673	.748
	SQ_Empathy	-.684	.614	1.238	.266	.505
	SQ_Reliability	-.508	.574	.783	.376	.602
	SQ_Responsiveness	.141	.492	.082	.774	1.152
	SQ_Tangibles	.877	.590	2.209	.137	2.403

**Table G-7: Parameter Estimates for Industrial Occupiers using only SERVQUAL Predictors (N = 188)**

IntLeaseRenew		B	Std. Error	Wald	Sig.	Exp(B)
2.00	Intercept	-1.614	3.200	.254	.614	
	SQ_Assurance	.369	.561	.432	.511	1.446
	SQ_Empathy	.342	.675	.257	.612	1.408
	SQ_Reliability	-.004	.797	.000	.996	.996
	SQ_Responsiveness	.112	.516	.047	.828	1.119
	SQ_Tangibles	-.170	1.042	.027	.870	.843
3.00	Intercept	1.111	2.811	.156	.693	
	SQ_Assurance	-.038	.495	.006	.939	.963
	SQ_Empathy	<b>1.268</b>	.633	4.006	<b>.045</b>	3.552
	SQ_Reliability	-1.587	.708	5.021	<b>.025</b>	.205
	SQ_Responsiveness	.454	.485	.876	.349	1.574
	SQ_Tangibles	.102	.929	.012	.913	1.107
4.00	Intercept	-2.136	2.808	.578	.447	
	SQ_Assurance	.377	.488	.596	.440	1.457
	SQ_Empathy	<b>1.700</b>	.617	7.582	<b>.006</b>	5.473
	SQ_Reliability	-1.280	.688	3.464	.063	.278
	SQ_Responsiveness	.148	.455	.105	.746	1.159
	SQ_Tangibles	.359	.911	.155	.694	1.432
5.00	Intercept	-3.008	2.836	1.125	.289	
	SQ_Assurance	.077	.484	.025	.874	1.080
	SQ_Empathy	<b>1.549</b>	.611	6.418	<b>.011</b>	4.706
	SQ_Reliability	-1.260	.687	3.365	.067	.284
	SQ_Responsiveness	.616	.464	1.764	.184	1.851
	SQ_Tangibles	.547	.910	.362	.548	1.728

## Appendix H: Supplementary analysis of the relationship between Occupier Satisfaction and Property Performance

The following tables show correlations between occupier satisfaction and total return benchmark out-performance compounded over 5 years. **Table H-1** shows the relationship where the five-year compounded return starts in the year of the occupier satisfaction survey concerned. **Table H-2** gives results where the return is lagged one year after the occupier satisfaction survey. **Table H-3** gives correlations using occupier satisfaction data for the middle of a five-year period. In each case, the correlations are generally positive, but not statistically significant. (The one instance of statistical significance, for which  $p=0.039$ , is no more than would be expected to occur by chance using a 95% confidence interval). The absence of statistical significance can be attributed to the volatility of the data, the small sample sizes, and the fact that these correlations are using the sample as a whole, and not taking PAS Segment into account.

**Table H-1: Correlations between Occupier Satisfaction and the compounded excess return achieved for the year of the survey and the subsequent four years**

Year	Correlation	Sig	N
2004	.063	.656	53
2005	.040	.751	65
2006	.188	.103	76
2007	.157	.192	71
2008	.031	.796	72
2009	-.041	.761	41
2010	.199	.130	59
2011 <sup>1</sup>	-.002	.990	63
2012 <sup>2</sup>	.045	.748	53
2013 <sup>3</sup>	.102	.506	45

<sup>1</sup> Excess returns compounded over 4 years

<sup>2</sup> Excess returns compounded over 3 years

<sup>3</sup> Excess returns compounded over 2 years

**Table H-2: Correlations between Occupier Satisfaction and the compounded excess return achieved for the year after the survey and the subsequent four years**

Occ-Sat Year	Start of 5-yr return	Correlation	Sig	N
2003	2004	.132	.472	32
2004	2005	-.003	.985	50
2005	2006	.239	.055	65
2006	2007	.069	.553	76
2007	2008	.086	.468	73
2008	2009	.130	.285	70
2009	2010	-.112	.487	41
2010	2011 <sup>1</sup>	.115	.387	59

<sup>1</sup> Excess returns compounded over 4 years

**Table H-3: Correlations between Occupier Satisfaction and the compounded excess return achieved for the five years encompassing the year of the survey**

Occ-Sat Year	Start of 5-yr return	Correlation	Sig	N
2006	2004	.069	.561	73
2007	2005	-.023	.847	71
2008	2006	.078	.521	70
2009	2007	.192	.235	40
2010	2008	.265*	.039	61
2011	2009	.218	.086	63
2012	2010	.145	.291	55
2013	2011	.081	.591	47

### Robustness Testing of Methodology using Three-Year Periods and Rent and size control variables

For this analysis, the independent variable is the average of the mean occupier satisfaction scores over a three year period and the dependent variable is the three-year compounded excess return for the end of the three year period. The periods used for occupier satisfaction were 2002-2004, 2005-2007, 2008-2010, 2011-1013, and the three year compounded returns were for 2004, 2007, 2010 and 2013. To obtain a three-year return for 2013 involved extrapolation into the future by assuming zero excess return for 2015 – in effect making the 2013 returns a two-year rather than three year value. Therefore graphs of results are shown both with and without the 2013 data.

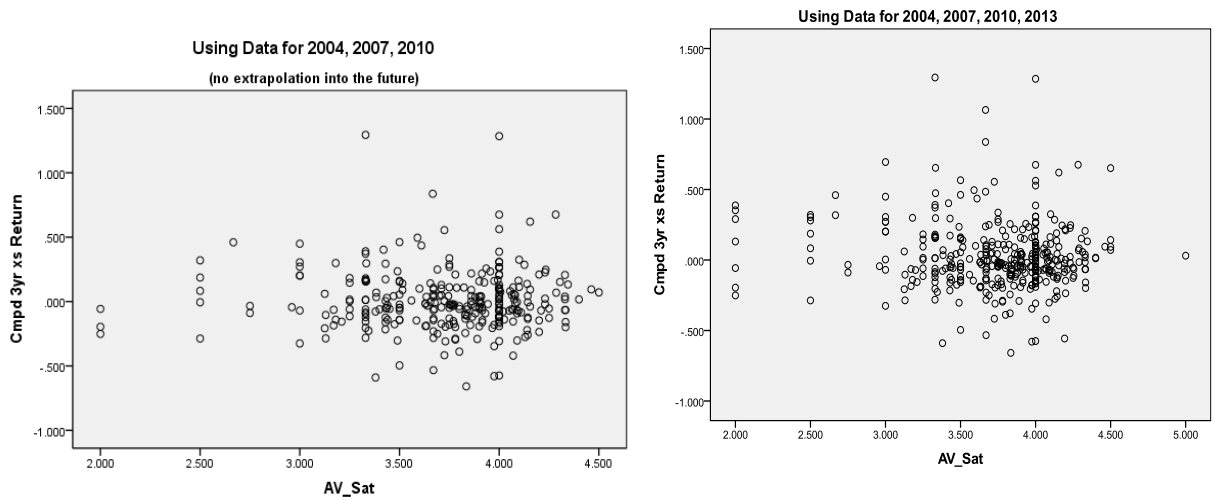
**Table H-4: Three-Year Compounded Excess Return – descriptive statistics**

		Statistic	Std. Error	
Cmpd 3yr xs Return	Mean	-.007	.008	
	95% Confidence Interval for Mean	Lower Bound	-.022	
		Upper Bound	.009	
	5% Trimmed Mean	-.015		
	Median	-.027		
	Variance	.048		
	Std. Deviation	.219		
	Minimum	-.952		
	Maximum	1.294		
	Range	2.246		
	Interquartile Range	.225		
	Skewness	1.014	.089	
	Kurtosis	5.156	.177	

For the sample as a whole, there is no clear-cut relationship between the three-year returns and occupier satisfaction (**Figure H-1**). The dependent variable in these graphs is the three-year compounded excess total return for the years concerned: 2004, 2007, 2010, and, for the second graph, 2013, which, as explained above, involves extrapolating into the future, using the assumption that future excess returns are zero, i.e. that the total returns equal the IPD benchmark for the sector concerned. Apart from a single additional outlier, with a 3-year compounded excess return greater than 100%, including results for 2013 appears to make little difference. In both analyses, any relationship between total return and overall occupier satisfaction, taken at three year intervals, is not apparent when the different sectors are considered together.



**Figure H-1: Scatter Graphs showing the relationship between 3-Year Compound Excess Return and Occupier Satisfaction for the sample as a whole**



The data was stacked to form a pooled panel, and a regression of three-year compounded excess return on the occupier satisfaction variable was carried out. AV\_Sat is the average occupier satisfaction at a property over the three year interval prior to the three-year compounded return (2002-2004, 2005-2007, 2008-2010, and 2011-2013).

Descriptive Statistics			
	Mean	Std. Deviation	N
Cmpd 3yr xs Return	.020	.227	440
AV_Sat	3.737	.459	440

**Table H-5 Coefficients for Regression using Three-Year Compounded Excess Returns**

Model		Unstandardized Coefficients			Sig.
		B	Std. Error	t	
1	(Constant)	.123	.079	1.551	.122
	AV_Sat	-.034	.021	-1.628	.104

From **Table H-5** it can be seen that this regression results in a small but non-significant negative coefficient for occupier satisfaction. In order to assess the effect of including rent and lot size variables as controls, this regression was re-run with additional variables being added step-wise: Rent

per square m, passing rent and property lot size<sup>94</sup>. From **Table H-6** it can be seen that the inclusion of these control variables increases R<sup>2</sup> only marginally, but reduces the adjusted R<sup>2</sup>. It is the latter which is of more relevance as it takes account of the increased number of explanatory variables. More importantly, from the perspective of this research, the coefficient on AV\_Sat is unchanged by the addition of the rent and size variables (**Table H-7**).

**Table H-6: Coefficients of Determination for Step-wise Regression with Control Variables**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.086 <sup>a</sup>	.007	.005	.183
2	.099 <sup>b</sup>	.010	.004	.183
3	.100 <sup>c</sup>	.010	.002	.184
4	.100 <sup>d</sup>	.010	-.001	.184

a. Predictors: (Constant), AV\_Sat

b. Predictors: (Constant), AV\_Sat, RentPSM

c. Predictors: (Constant), AV\_Sat, RentPSM, RentPassing

d. Predictors: (Constant), AV\_Sat, RentPSM, RentPassing, AverageFloorSpace

**Table H-7: Coefficients for Step-wise Regression with Rent and Size Controls**

Model		Unstandardized Coefficients		t	Sig.
		B	Std. Error		
1	(Constant)	.123	.079	1.551	.122
	AV_Sat	<b>-.034</b>	.021	-1.628	.104
2	(Constant)	.116	.080	1.460	.145
	AV_Sat	<b>-.034</b>	.021	-1.632	.104
	RentPSM	4.828E-005	.000	.962	.337
3	(Constant)	.115	.081	1.422	.156
	AV_Sat	<b>-.034</b>	.021	-1.582	.115
	RentPSM	5.114E-005	.000	.955	.340
	RentPassing	-2.454E-010	.000	-.155	.877
4	(Constant)	.116	.081	1.431	.153
	AV_Sat	<b>-.034</b>	.021	-1.578	.116
	RentPSM	4.642E-005	.000	.802	.423
	RentPassing	1.858E-011	.000	.009	.993
	AverageFloorSpace	-4.603E-008	.000	-.218	.827

<sup>94</sup> There will be some multicollinearity between these control variables, although they do test slightly different aspects of a property, and the coefficients on the controls do change as additional controls are added, whilst the coefficient on the occupier satisfaction variable is unchanged.

**An examination of returns for the quartiles of Occupier Satisfaction: Analysis of Variance within and between PAS segments**

A two-way, between groups ANOVA test was carried out in order to explore the individual and joint effects of occupier satisfaction and sector on total returns,. The data was organised into quartiles of satisfaction, with the quartile values taking account of sector. Quartile 1 contained those properties in which occupier satisfaction was lowest; quartile 2 contained those properties for which occupier satisfaction was between the 25<sup>th</sup> percentile and the median for that sector, and so on. The numbers of properties in each quartile are not exactly equal however, for two reasons:

- they were grouped according to broader sector (i.e. all offices were considered together when ranking occupier satisfaction); and
- occupier satisfaction was truncated to 2 decimal places, with many properties having the same mean satisfaction score, and properties with the same score were not split between two quartiles

**Table H-8** shows that there is a significant interaction effect between sector and quartile. The effect size<sup>95</sup> (Partial Eta Squared) for sector is “medium” according to Cohen’s criterion (Cohen, 1988; Pallant, 2010, p. 270), whilst that for quartile appears negligible. **Table H-9** gives the descriptive statistics for the data used in this part of the research. Levene’s test of equality of variance gives a significant result, meaning that the variance of the 5-year compounded excess return is not equal across the groups.

**Table H-8: ANOVA Tests of Between Subjects Effects**

Dependent Variable:cmpdxs5yrRetyr

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	84.227 <sup>a</sup>	31	2.717	29.965	.000	.129
Intercept	.005	1	.005	.051	.821	.000
PAS segment	40.124	7	5.732	63.218	.000	.066
Quartile	.552	3	.184	2.030	.107	.001
PAS segment * Quartile	20.544	21	.978	10.789	.000	.035
Error	568.144	6266	.091			
Total	655.228	6298				
Corrected Total	652.370	6297				

a. R Squared = .129 (Adjusted R Squared = .125)

<sup>95</sup> Eta squared =  $t^2 / (t^2 + N1 + N2 - 2)$  A value of 0.01 is considered a small effect whilst 0.06 is a moderate effect (p 243. Pallant, 2010)

**Table H-9: Descriptive Statistics for ANOVA analysis: Dependent Variable: cmpdxs5yrRetyr**

PAS segment	Quartile	Mean	Std. Deviation	N
2	1	-.063	.158	33
	2	-.136	.094	18
	3	-.157	.074	14
	4	-.123	.095	15
	Total	-.107	.126	80
3	1	-.064	.265	561
	2	-.004	.318	640
	3	-.008	.356	623
	4	.086	.318	574
	Total	.003	.321	2398
4	1	-.062	.186	174
	2	-.041	.157	190
	3	-.004	.142	174
	4	-.042	.174	208
	Total	-.037	.167	746
5	1	.150	.350	127
	2	.244	.234	46
	3	.284	.611	107
	4	.098	.204	43
	Total	.201	.435	323
6	1	-.064	.202	275
	2	-.118	.236	105
	3	-.102	.200	179
	4	.001	.194	173
	Total	-.066	.209	732
7	1	.073	.301	301
	2	.271	.439	327
	3	-.048	.209	187
	4	.320	.545	289
	Total	.176	.432	1104
9	1	-.046	.200	223
	2	-.027	.189	190
	3	-.068	.182	253
	4	-.023	.184	141
	Total	-.045	.189	807
10	1	.082	.135	15
	2	-.139	.183	38
	3	-.095	.089	25
	4	-.122	.252	30
	Total	-.094	.195	108
Total	1	-.020	.262	1709
	2	.041	.336	1554
	3	-.016	.318	1562
	4	.087	.358	1473
	Total	.021	.322	6298