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Article

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International films and international markets: the globalisation of Hollywood entertainment, c.1921-1951

The international appeal of Hollywood films through the twentieth century has been a subject of interest to economic and film historians alike. This paper employs some of the methods of the economic historian to evaluate key arguments within the film history literature explaining the global success of American films. Through careful analysis of both existing and newly constructed datasets, the paper examines the extent to which Hollywood's foreign earnings were affected by: film production costs; the extent of global distribution networks; and also the international orientation of the films themselves. The paper finds that these factors influenced foreign earnings in quite distinct ways, and that their relative importance changed over time. The evidence presented here suggests a degree of interaction between the production and distribution arms of the major US film companies in their pursuit of foreign markets that would benefit from further archival-based investigation.

Keywords: Hollywood; international markets; Americanisation; Globalisation; motion picture industry

**International films and international markets: the globalisation of Hollywood entertainment,
c.1921-1951¹**

The widespread international appeal of American filmed entertainment since the 1910s has been the subject of considerable scholarly attention. Historians have highlighted the influence of US films on popular culture in many countries around the world, and the response of national governments to this influence in the form of film policy.² Phrases such as cultural or media imperialism are often used to describe Hollywood's global spread, with film companies regarded among the chief architects of American cultural hegemony.³ As such, Hollywood looms large in histories of national cinema industries, in which the dominant narrative is often one of resistance to, or collaboration with, the interests of major US studios.⁴ Film historians have also documented transnational attempts to challenge American dominance of international film markets.⁵ In many of these accounts, various plausible reasons for American pre-eminence are identified and discussed, though these are seldom subjected to detailed scrutiny or empirical testing. The key premise of this paper is that a number of these arguments are testable, and they deserve to be subjected to more rigorous empirical scrutiny than has previously been the case.

It has been two decades since the publication of articles by Mark Glancy and Richard Jewell which brought to light the ledgers detailing the production costs and rental grosses of MGM, RKO and Warner Bros. films from the 1920s to the early 1950s.⁶ This paper closely examines the published data taken from the ledgers, in conjunction other statistical information drawn from the trade press, as well as a newly constructed index measuring the 'international orientation' of the films themselves. In doing so it explores the factors which determined the relative success of Hollywood films outside their home market. It tests ideas and arguments commonly advanced by film and economic historians to explain the international dominance of Hollywood studios, and evaluates the relative importance of these factors in different time periods.

This paper is not, of course, the first to examine the information contained in the ledgers. Among the many books and scholarly papers that have cited the articles by Glancy and Jewell, we can detect

at least three purposes for which the data has been used to date. The first, and perhaps the most common, is that the ledgers have been an important source of information for many case histories of individual films or groups of films. Some recent examples include investigations of MGM's series of *Andy Hardy* films, and Warner Bros' production of *Captain Horatio Hornblower*.⁷ Richard Jewell also makes extensive use of the C.J. Tevlin ledger in his recent corporate history of RKO.⁸ The ledgers have undoubtedly served as a useful source of information for film scholars writing about particular films. While such studies illuminate our understanding of important social trends and industry practices by drawing together evidence from multiple sources, they have not been designed with the intention of maximising the value of the information that can be drawn from the ledgers.

A second body of work utilising this source of evidence has focussed primarily on the data relating to production costs and profits for each film. John Sedgwick has lead the way in analysing these figures to address questions relating to the economic structure and functioning of the industry. Sedgwick provided comments to two of the papers by Glancy and Jewell in which some preliminary statistical analysis was undertaken.⁹ Along with co-author Mike Pokorny he has subsequently developed this work in articles (published in economic history rather than film or media history journals) which have helped to shed considerable new light on the business strategies employed by the major studios concerned. Their key observation from the data (from the 1930s) is that while rental earnings typically increased as production costs rose, the relationship became much less stable for very high budget pictures. This had major implications for profitability. Whereas medium-budget pictures were a fairly reliable source of modest profits for the studios, high budget film production was much more risky. The top-grossing 'hits' were capable of generating extraordinary profits, but were equally likely to result in significant losses (indeed the majority of high budget films ended up losing money on their initial release). Studios thus developed production strategies based around the construction of film portfolios, in which the risk associated with the production of a small number of big-budget films would be offset by a much larger volume of lower budget (and lower risk) pictures.¹⁰ Shifting patterns of consumption in the 1950s saw this model break down. Audiences

for low and medium budget films were most sensitive to competition from television, and studios became increasingly reliant on the performance of big-budget pictures – as reflected in the size and balance of their film portfolios.¹¹ In the post-studio era economists have thus identified the film industry as one shaped by ‘extreme uncertainty’.¹²

Sedgwick and Pokorny’s studies have focussed heavily on film profitability – which was of course the key arbiter of success or failure as far as studio executives were concerned. Their analysis makes extensive use of the data on production costs and profits, and they have recently gone to some lengths to estimate profit data for Warner Bros. pictures (which is not recorded in the William Schaefer ledger).¹³ This information has been combined with data drawn from other sources, such as the contemporary trade press, to provide a detailed picture of how firms organised their production activities to try to ensure the most profitable outcome.

A third area of work building on the information contained in the ledgers relates to the foreign earnings of Hollywood films. Once again, Sedgwick and Pokorny have been active here, although they have undertaken much less work on the foreign earnings data than those relating to production costs and profitability. They have found that during the 1930s there was a positive relationship between production costs and foreign earnings, and they argue that production cost was a more important factor in determining the international success of Hollywood films than stars or genre.¹⁴ In contrast, Glancy has argued that ‘certain stars (Greta Garbo, Jeanette MacDonald and Nelson Eddy, Ramon Novarro) and genres (costume dramas, period musicals) consistently drew superior foreign earnings.’¹⁵

The question of how Hollywood films have been able to achieve such a strong and lasting position in international markets since the 1920s is one that has exercised film and economic historians alike, yet this is an area where data from the ledgers has arguably been under-utilised. This data, when used in conjunction with information carefully compiled from other sources, allows us to test some of the theories commonly advanced to explain Hollywood’s dominance of international film markets.

To be clear, the quantitative data compiled here are, of necessity, relatively crude measures which cannot hope to capture the subtle or complex meanings that can be read into individual films. The value of a statistical approach is that it captures basic, but directly comparable, information about a very large number of films, in order to identify patterns or trends that apply more generally. As such, this study does not claim to offer the 'last word' on the international reach of Hollywood entertainment. Rather, it seeks to strengthen the foundations upon which future research can be built. Here the focus is on the period from the 1920s to the early 1950s. The aim is not just to identify which factors influenced the international appeal of Hollywood films, but how these influences evolved throughout the period.

The international appeal of Hollywood films: existing explanations

Many explanations have been put forward to explain the extraordinary appeal of American films in international markets. Here I focus primarily on just three. First is the argument that American studios worked with much higher production budgets than film-makers in any other country, and the correspondingly superior production values of US films enabled them to outshine those of rival industries in international markets.¹⁶ Gerben Bakker has argued that rapidly increasing production costs in Hollywood in the 1910s constituted a 'quality race' in which European film producers were unable to compete.¹⁷ By the 1920s, leading US studios not only invested more per film than other national producers, they had also become vertically integrated organisations controlling distribution and exhibition (at least in their domestic market).¹⁸ This gave them considerable control over access to the vast American movie market, which helped to cement the advantage they had built up during the 1910s.¹⁹ When setting production budgets for individual films, only the leading American producers were able to safely assume a widespread release in the world's largest market, producers from other nations typically needed to plan on the basis of their much smaller domestic markets, and cut their cloth accordingly.

A second reason for the success of Hollywood films overseas is attributed to the extensive networks of distribution subsidiaries which the major film companies operated right around the world, which actively promoted their pictures to local exhibitors. As Kristen Thompson has argued 'had the war ended in mid-1916, the American film would have been in a much stronger position than before the war – yet it would not have been guaranteed any long-term hold on world markets. From 1916 on, however, American firms adopted new strategies, dealing directly with more markets, opening more subsidiary offices outside Europe and thereby establishing a control which other producing countries would find difficult to erode during the 1920s.'²⁰ In carefully charting the expansion of American film distribution offices in the late 1910s and 1920s, Thompson shows that investments were by no means solely concentrated in Europe. Australasia and Latin America were prime targets for the likes of Paramount and Fox, whereas Universal initially prioritised Asian markets.²¹ The global presence of these firms helped to ensure that American films were much more likely than other foreign pictures to secure a widespread release in international markets. Thus, from around 1917 onwards Hollywood studios were able to take projected foreign earnings into account when setting film production budgets.²² This served to widen the gulf in production costs between American firms and other national producers, and made it yet more difficult for those who had fallen behind in the 'quality race' to subsequently catch up.

The third explanation that we will explore here is that the films made by American producers were more international in theme and content (and thus more readily exportable) than the products of other national film industries - which tended to be more deeply embedded in national cultural traditions. 'Hollywood', Richard Maltby observes, 'has itself seldom been constrained by any obligation to behave as if it were a national cinema... the "America" of the movies has presented itself to its audiences less as a geographical territory than an imaginative one, which deliberately made itself available for assimilation in a variety of cultural contexts'.²³ Joseph Garncarz's work on the reception of American films in Germany reinforces the point. Stars who 'were modelled on American ideals' such as Harold Lloyd and John Wayne could not easily be assimilated into a German

context and their films remained unpopular with audiences there. In contrast, an actress such as Ingrid Bergman, whose image more closely resembled that of leading German stars, was much more warmly embraced by the film-going public.²⁴ In a similar vein, Mark Glancy has carefully documented how Hollywood studios developed films with themes and characters intended to appeal to British audiences as well as domestic ones.²⁵ The international success of American films, according to this line of argument, must be attributed not just to their superior budgets or production values, nor simply to the extensive marketing and distribution support they received, but also to the content of the films themselves, which were inherently multinational in their appeal. As Ian Jarvie put it: 'the global spread of American popular culture was a cultural matter and a commercial matter at the same time.'²⁶ Hollywood was not just a centre of large scale film production, but something of a cultural 'melting pot' where creative artists from around the world combined their talents to make films with a wide variety of national settings. Here is how Eric Johnson, president of the Motion Picture Association of America, explained Hollywood's global appeal in 1954:

There are a number of reasons why American films enjoy such great popularity abroad. For one thing Hollywood is the Mecca of Moviedom... Great actors and actresses, outstanding directors, technicians and writers, have flocked to our shores from distant lands, drawn to the world's film center by their ambition and aspirations... This cosmopolitan attitude of Hollywood has reinforced the universal appeal of its production. No other picture making country has ranged so far geographically for scene and theme... Our films are designed for consumption everywhere, and for that reason are appreciated everywhere, except, of course, behind the Iron and Bamboo curtains.²⁷

It is important to stress that the internationally themed pictures being produced by the major Hollywood studios were not targeted just at specific national markets, but were designed to appeal to as broad a range of international audiences as possible (including those in the US). Mark Glancy has shown that many did have distinctly British themes (the UK was by far the most valuable of

Hollywood's foreign markets) but these films could also expect a strong reception in other parts of the British Empire. Australia, for example, was one of the most important of Hollywood's foreign markets in the 1930s and 1940s, and for a distributor like United Artists it was the largest national market outside the UK.²⁸ These were films that sought to transcend national boundaries, employing stars, characters and themes with genuinely international appeal. Peter Kramer's analysis of William Wyler's *Roman Holiday* (1953) provides an excellent case study of how such films were conceived, and marketed, with multiple national audiences in mind.²⁹ By the time Paramount released this picture in the early 1950s, the major Hollywood firms had acquired over two decades of experience in the production and distribution of such films.

These three explanations are closely inter-related, and can be seen as complementary rather than competing arguments. They do not constitute a comprehensive list of factors explaining Hollywood's international success (such a list would also include the support of the US State Department and the activities of the Motion Picture Export Association)³⁰, but they are arguments which are central to the film history literature, and which can be tested empirically using data from the studio ledgers and other industry sources. In the following sections, evidence in relation to each of these arguments will be presented and scrutinised.

The data

The studio ledgers uncovered by Glancy and Jewell provide detailed financial information for over 3,000 films, and although their content was not published in its entirety, microfiche supplements to the three papers did place into the public domain data in relation to 1200 pictures. The sample of films listed in the microfiche supplements included the top ten grossing films in each year, along with each season's weakest performers (in terms of revenue and profitability) as well as a handful of other pictures notable for other reasons. These films constituted 40 per cent of all pictures released by the three studios, but accounted for almost 70 per cent of revenues earned. This sample may not be perfectly representative of all films released by the studios concerned, but it contains extremely

valuable information on the most popular pictures produced during the period in question. The 1200 films included in the microfiche supplements provide the basis of the film sample used in this study. A small number of British films (distributed by Warner Bros. in the US) were excluded from the study, although the sample is supplemented by data on 25 films produced by Walter Wanger and distributed by either United Artists or Universal. This brings the total number of films included in the sample to 1219.

The dataset contains information on the total rental income generated by each film (i.e. the amount of money each film earned for its distributor after the exhibitor's share of box office takings was deducted), and this is broken down into foreign and 'domestic' (i.e. US and Canadian) earnings. From this it is a simple matter to calculate the percentage of revenue that each film earned from foreign markets. This measure (foreign as a percentage of total sales), constitutes the 'dependent variable' in our model. This is the figure that the other components of the model try to predict. What, then, are the factors that might help us to predict which films were able to generate relatively high (or low) proportions of revenue from foreign markets?

On the basis of the literature discussed above, three key variables have been identified: first, the production cost associated with each film; second, the number of foreign distribution offices operated by the film's distributor at the time of its international release; third, the extent to which the film drew on international (as opposed to purely domestic) settings, characters and creative talent. These three measures constitute the 'independent variables' in the model, and they have been drawn from different sources.

Production cost figures were the most straight forward information to collect, as these are listed alongside rental income for each film in the studio ledgers (apart from films made by independent producers). Data on the number of foreign distribution offices operated by each company was compiled from the listings published in the *Film Daily Yearbook* from the early 1920s through to the 1950s. This was a well known trade publication which contained a wealth of information about

industry trends and personnel, and which has been used as a key data source in industry studies.³¹ Yearbooks were typically published in January of each year, and contained a comprehensive list of foreign offices belonging to each firm. In the larger national markets, major distributors typically operated several offices, but these were not always listed separately in the yearbook throughout the whole period. To ensure consistency in the data, therefore, the figure used has been the number of countries in which each distributor operated a distribution office in each year. This provides a good measure of the extent of each firm’s international distribution network, though it does not take account of differences in the size of various national markets. (When the data on international offices was adjusted so that a firm’s presence in a national market was weighted according to the market’s size, the results of the analysis were unaffected and so this data is not reported here.) When inserting information on international offices into the dataset, account was taken of the fact that there was typically a lag between the domestic release of a film and its distribution in international markets. For a film released by MGM in, say, the 1934-5 season in the US, therefore, the corresponding figure for distribution offices was the number of countries in which MGM were listed as having a distribution subsidiary in the yearbook of January 1936.

The measure for the ‘international orientation’ of each film is based on a newly constructed dataset which is built around eight separate criteria. The first four of these can be categorised as contributing to a film’s ‘scenario’, with the second four constituting ‘artistic resources’. The criteria, and the method used for scoring each of them, are presented in the table below:

Table 1: Methodology for construction of the ‘international orientation’ score

Criteria	Score = 0	Score = 1	Score = 2
Setting	Primarily in US	Split between US and foreign location; or set in fictional location	Primarily outside US
Character 1	American	Foreign-born American; or character without nationality	Foreign
Character 2	American	Foreign-born American; or character without nationality	Foreign

Source text	American author	Authored by foreign-born American	Foreign author
SCENARIO (score = 0-8)			
Director	American	Foreign-born, but based in US for 10 years	Foreign
Writer (script)	American	Foreign-born, but based in US for 10 years	Foreign
Actor 1	American	Foreign-born, but based in US for 10 years	Foreign
Actor 2	American	Foreign-born, but based in US for 10 years	Foreign
ART RESOURCES (0-8)			

The key source for the above information is the American Film Institute (AFI) Catalogue of Feature Films. Film settings have been identified from the plot summaries provided in the catalogue for each film (US settings have been assumed where no specific information is provided), and the two lead characters / actors are the first two to be named in the catalogue's cast list.³² In cases where more than one writer (or director) was listed in the catalogue, the first entry has been used. The nationality of each actor/writer/director was, in most cases, taken from the internet movie database and where this was not possible other biographical sources were sought out.³³ In the few cases where it was not possible to determine nationality, American origin was assumed.

On the basis of this methodology, it has been possible to construct a measure of each film's 'international orientation' with a score between 0-16. Films based on American settings and characters, and employing American actors, writers and directors receive a low score, whereas those set in distant locations, and featuring foreign characters, stars or creative personnel score more highly. The methodology takes account of the fact that many foreign born nationals worked for a large part of their career in Hollywood, and that their 'foreignness' would likely have diminished over time. It also allows us to differentiate between the international content of a film's scenario, and the extent to which it employed international creative artists. Some examples of how individual films have been scored are provided as an appendix.

Issues to be explored

As well as providing a statistical test of the effect of production costs, foreign distribution offices and the international orientation of films on the relative popularity of Hollywood entertainment outside its home market, the study is also designed to address three other sets of issues.

The first of these relates to change over time. The data cover the period during which the industry made the transition from silent films to talkies, a development which made the cultural specificity of films much more pronounced. As Richard Maltby and Ruth Vasey explained: ‘the new technology caused the motion picture medium to be much less adaptable to diverse cultural contexts than it had been previously.’³⁴ Or in Victoria de Grazia’s pithy phrase ‘sound appeared to have “nationalised the cinema.”’³⁵ The period also encompasses the Second World War, during which many foreign markets were closed off to Hollywood studios,³⁶ and the post-war years during which Europe particularly was flooded with American filmed entertainment.³⁷ Did the factors affecting the foreign earnings of American films change during these periods? To address this, the data will be broken down into five periods: the silent era (1921/2 to 1928/29);³⁸ the early talkies (1929/30 to 1932/33); the 1930s (1933/34 to 1938/39); the Second World War (1939/40 to 1944/45); the post-war period (1945/46 to 1950/51).

Film genre constitutes the second of the supplementary issues addressed in the study. We know that authors such as Mark Glancy have argued that certain genres (such as costume dramas) seemed to generate a high proportion of foreign revenues.³⁹ Others have claimed that Hollywood’s production of action or adventure pictures (as opposed to dialogue-heavy films) help explain the international appeal of its films in the sound era. This was certainly a view commonly expressed by industry executives in the early 1930s.⁴⁰ The primary genre of each film (as recorded in the AFI Catalogue of Feature Films) has therefore been included in the dataset so that we can identify whether any film genres had a significant effect (positive or negative) on the proportion of foreign revenues that films earned.

Finally, the data allow us to examine differences not only between the three studios, but also between films produced 'in house' by the major studios, and those made by independent producers but distributed by one of the major firms. Of the films in the dataset, ninety three were made by independent producers between the mid-1930s and the early 1950s. Were these films any different to those of the major studios in terms of the factors affecting the proportion of foreign revenue they generated?

Foreign and domestic earnings

An implicit assumption in the discussion thus far has been that the proportion of foreign revenues earned by Hollywood films was subject to considerable variability. If this were not the case, then there would be very little for our statistical analysis to explain. But is such an assumption valid? One might claim that a film's ability to earn foreign revenues will be closely related to its domestic popularity. While cultural differences no doubt exist between film audiences, are there not elements of film production which appeal at a more universal level? Films in which the direction, cinematography and acting are successful in portraying stories and characters in an engaging and compelling manner will surely be more likely to succeed than those that do not – whether at home or abroad. Moreover, films with a proven box-office appeal are likely to receive more extensive publicity and a wider (initial) distribution on their international release. As one recent study of Hollywood's international activities by a leading economic geographer puts it: 'films that do well at the box office in the US invariably also do well abroad.'⁴¹ This statement is supported by an analysis of 121 films released in the year 2000, showing a close correlation (0.81) between domestic and foreign earnings.⁴² Similar claims (that 'a picture which is popular in one country will be popular the world over') were made in the 1930s, though film historians have tended to view these with some scepticism.⁴³

The table below shows the results of a simple correlation between the domestic and foreign earnings of the 1126 films produced by the major studios , broken down by time period.

Table 2: Domestic Earnings as a Predictor of Foreign Earnings: Studio Films

	1921/2 – 1928/9	1929/30 – 1932/3	1933/4 – 1938/9	1939/40 – 1944/5	1945/6 – 1950/51
Studio productions					
R Squared	.600	.479	.622	.632	.581
Correlation Coefficient	.775	.692	.789	.795	.762
Significance	.000	.000	.000	.000	.000
No. of Films	172	198	259	272	225

The results show a strong positive relationship between domestic and foreign earnings across the board with correlation coefficients typically above 0.7. The significance scores indicate that in all cases there is less than a 0.1% probability that the relationship could be attributed simply to chance. This data tells us that films that performed well at the US box office also tended to perform well in international markets, but if we look a little more closely, it tells us rather more than just this.

The R squared figure indicates what proportion of the variability in foreign earnings can be explained by domestic earnings. For the films produced by the major studios, we can see that domestic performance typically explains around 60% of the variability in foreign earnings. This figure remained remarkably consistent throughout the period, with the exception of the years when the industry was making its transition to sound – when it dropped to less than 50%. While domestic earnings were clearly an important predictor of foreign revenues, therefore, there remained a significant amount of variability in foreign earnings that must have been attributable to something else. If domestic and foreign revenues were perfectly correlated, then the proportion of foreign to total earnings would be the same for each film in the dataset. In fact, although large numbers of films did earn somewhere around 30% of their revenues overseas, there was a substantial amount of variation from this norm (the proportion varied from 5% to 80%). Domestic revenue, then, was a significant predictor of foreign earnings, but not the only one.

The fact that the relationship between domestic and foreign earnings was weakest during the period of the transition to sound is also worth reflecting on. The introduction of talking pictures, as we

know, made the national origins of films more apparent and heightened their cultural specificity. It comes as little surprise, therefore, to find that for early sound films success in the domestic market was a less reliable predictor of foreign sales than had been the case in the silent era. More interesting, perhaps, is how quickly, and effectively, the industry appeared to respond to this situation. By the mid-1930s, for films produced by major studios, domestic earnings were as reliable an indicator of foreign revenues as had been the case in the silent era. The coming of sound may have ‘nationalised the cinema’, but as far as the Hollywood studios were concerned, the process seems to have been temporary rather than permanent.

The relationship between foreign and domestic earnings of independently produced films is presented separately. Whereas studio productions were the output of major, vertically integrated organisations that owned and controlled large cinema chains in the US, as well as extensive international distribution networks, independent producers had no direct control over film exhibition or distribution. The revenues earned by independently produced films in this period, both at home and abroad, were subject to even greater uncertainty than was the case for studio releases.⁴⁴

Table 3: Domestic Earnings as a Predictor of Foreign Earnings: Independent Films

	By period			By distributor	
	1933/4 – 1938/9	1939/40 – 1944/5	1945/6 – 1950/51	UA/Universal	RKO
<i>Independent productions</i>					
R Squared	.991	.244	.608	.466	.563
Correlation Coefficient	.996	.494	.800	.682	.750
Significance	.000	.004	.000	.000	.000
No. of Films	24	32	35	25	66

There are 93 independently produced films in our sample, all but two of which were released after the transition to sound was complete. Given the relatively small number of these films, we need to be cautious in any conclusions that we draw. It appears that the relationship between foreign and

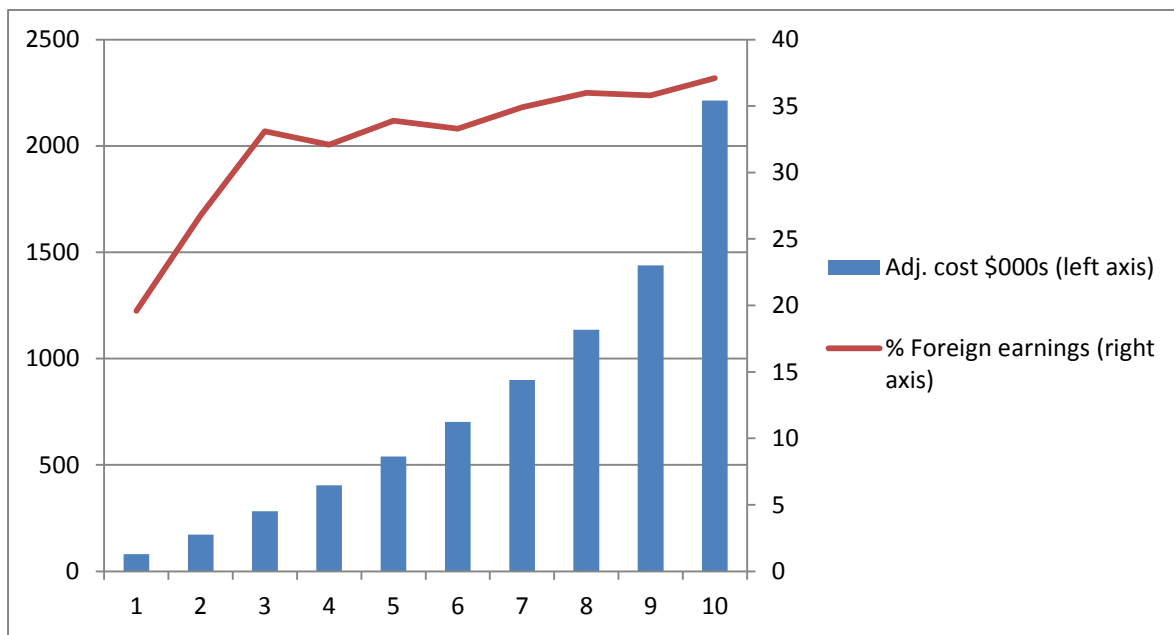
domestic earnings for these films was much stronger in the 1930s than during the Second World War, and that in the post-war years the nature of the relationship was broadly in line with what we find for studio releases. As well as dividing these independent pictures by period, we can also categorise them by type of distributor. About 70% of these independent productions were released through RKO – one of the so-called ‘big five’ companies that owned important cinema chains in the US. The remaining 30% were released through United Artists or Universal, which did not control significant cinema holdings at that time. As we can see, the relationship between foreign and domestic earnings was comparable in each case (and not very different from that of studio pictures).

The evidence from tables 2 and 3 clearly illustrates a statistically significant correlation between foreign and domestic earnings, and that this persisted (with some variation) throughout the period. The evidence also shows, however, that domestic revenues were far from being a perfect predictor of foreign earnings. As such, there remains a considerable amount of variation in the foreign earnings of Hollywood entertainment still to be explained.

Explaining variability in the relative importance of foreign markets

Chart 1, below, illustrates the relationship between production costs and the percentage of revenue that films earned from foreign markets for all of the films in the sample. Here the film sample has been broken down into decile groups based on production costs (converted to 1922 prices to adjust for the effects of inflation / deflation). The bars on the chart represent average production costs in each decile group (measured on the left hand axis), while the percentage of foreign earnings is indicated by the line (and relates to the right hand scale). Average production costs for the lowest ten percent of films stood at \$81,000, while among the top ten percent average costs were \$2,213,000.

Chart 1: Relationship between production costs and the % of foreign revenue earned



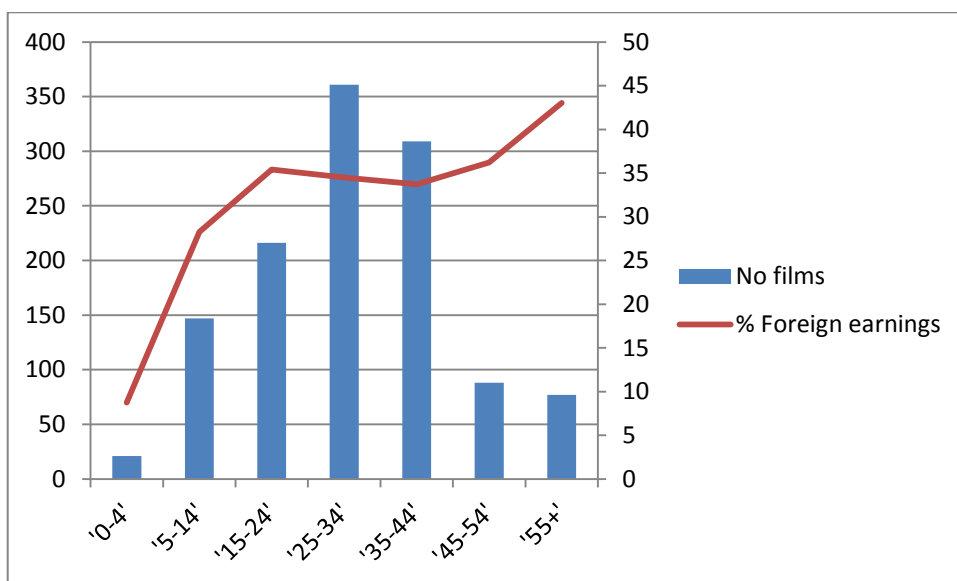
As we can see, the proportion of foreign revenue earned by films did rise as production costs increased, though the relationship does not appear to be a perfectly linear one. We see quite a steep increase in the percentage of foreign income earned as we move from the first to the third decile group, but thereafter the relationship flattens out. On this evidence, a figure of around \$250,000 (at 1922 prices) seems to have been an important threshold. Films produced for this amount or more were typically able to generate over 30% of revenues from foreign markets, films costing much less than this were more heavily reliant on the domestic market. While the proportion of revenues from foreign markets did continue to increase slightly as we move from medium to big budget pictures, the difference between the 3rd and the 10th decile groups was much less pronounced than that between the 1st and the 3rd.

We need to be very careful in interpreting this evidence however. Our sample of 1219 films contains a preponderance of the most high-profile big budget releases and is not perfectly representative of all films released in the period. Medium and low budget films are under-represented, and we therefore need to recognise that films with production budgets in the middle decile groups in chart 1, might actually be positioned among the upper decile groups if all film releases were accounted

for. While our evidence allows us to say with some confidence that there was a positive relationship between production costs and the proportion of foreign revenue earned, and also that some kind of budget threshold would have existed, below which films struggled to appeal to reach international audiences, we cannot say with certainty what that threshold was. Sedgwick and Pokorny's work in this area, focusing just on the 1930s, finds that medium and low budget pictures attracted broadly similar proportions of foreign revenue (usually between 20-30 per cent), while only the big budget releases were able to generate much more than this.⁴⁵

Turning to distribution networks, chart 2 shows the relationship between the number of foreign offices operated by each film's distributor at the time of its international release, and the proportion of revenue it generated from international markets. This time the data is not broken down into decile groups, but instead the bars of the chart indicate the number of films in each category. Thus, we can see that 21 films were released by distributors which (at the time) controlled offices in fewer than five countries, while 361 films were released through distributors with offices in 25-34 countries.

Chart 2: Relationship between distribution networks and the % of foreign revenue earned

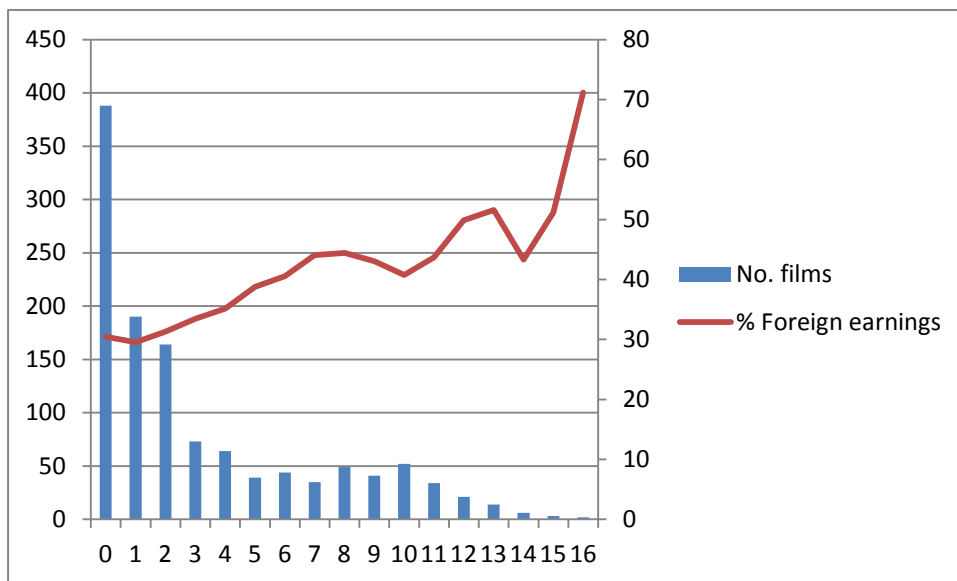


Once again we see a positive, but not perfectly linear, relationship. Films did earn a higher proportion of revenues from international markets if they were supported by more extensive

distribution networks, but the strength of this relationship seems to have been variable. Up to a threshold of about 20 international offices we see a strong link. Films released by distributors with only a minimal international presence earned a correspondingly small proportion of revenues from foreign markets. Above this threshold level, up to a figure of around 50 international offices, the proportion of foreign revenues earned by each film remains relatively stable. It is only when we get to the films released by distributors with offices in 55 or more countries that we see a further noticeable increase. The picture presented here would seem to indicate that distributors needed a physical presence in the major international markets in order to reliably secure foreign earnings of around one-third of total earnings but, above a threshold level of approximately 20, adding more offices in smaller national markets made little difference to the proportion of foreign revenue earned. One reason for the increase in foreign revenues earned by distributors with offices in 55 or more countries might be related to the age and international experience of the distributor, rather than the number of markets in which they operated *per se*. Many of the Hollywood majors grew their number of international distribution offices very rapidly, and may have been relatively new to foreign distribution, even while operating branches in 30 countries. Only distributors that had developed considerable experience in foreign markets tended to run offices in many more than 50 countries.

The relationship between the international orientation of each film, and the proportion of foreign revenues it generated is presented in chart 3. Once again the bars in the chart represent the number of films in each category as measured their score (between 0-16) on the international orientation index, while the line indicates the proportion of foreign revenues earned by each of these groups of films. It is immediately apparent that the majority of films in the sample were predominantly based around American settings and characters and employed mainly American talent. Nearly a third of all films in the sample (388) scored zero on the international orientation measure, and 60 percent of them (742) scored no higher than 2.

Chart 3: Relationship between international orientation and % of foreign revenue earned



While the more internationally oriented films may have been in a minority, they were a minority that did generate a relatively high percentage of revenues from foreign markets – with the proportion steadily increasing as international orientation rose. The 742 films with an international orientation score of two or less earned, on average, 30.4% of revenues from foreign markets. For the 255 films with an international orientation score between three and seven, the proportion of foreign earnings was 37.6%, while this figure increased to 44.4% among the 222 films scoring 8 or higher on the scale. A list of the 25 films with the highest international orientation score is provided in appendix 3. They include silent pictures such as *The Student Prince* (MGM: Ernst Lubitsch, 1927) and *Kis Me Again* (WB: Ernst Lubitsch, 1925), as well as, for example, *Tovarich* (WB: Anatole Litvak, 1937), *Joan of Paris* (RKO: Robert Stevenson, 1942) and *Stromboli* (RKO: Roberto Rossellini, 1950).

Looking at the data as a whole, we know that a large number of films earned somewhere close to 30% of revenues from foreign markets (hence the strong relationship between domestic and foreign grosses). The results presented in this section provide explanations as to why some films earned considerably less than this and others very much more. With regard to both production costs and foreign distribution offices, there appears to have been a threshold level of investment required for films to be able to generate as much as 30% of revenues from abroad. Films made on very small

budgets, or which were released by distributors with a very limited international presence, typically fell short of this 30% figure. Production costs and international offices, however, are less helpful in explaining which films earned the highest proportion of revenues from foreign markets. Films benefiting from the highest levels of investment in these areas did earn more in international markets, but not very much more. The international orientation measure, on the other hand, does little to explain why some films earned below average revenues from foreign markets, but it proves extremely useful in helping us identify those films which were relatively more successful overseas. The higher a film scored on this measure, the more likely it was to generate above average revenues from foreign markets.

Changes over time

Between them, the three factors under examination here appear to do a good job of explaining the variability in the amount of foreign revenue generated by different films, though the analysis thus far has been informal. Table 4 presents the results of a multiple regression analysis in which data on production costs, distribution offices and international orientation (along with film genres) are formally modelled to predict the proportion of revenues each film generated from foreign markets. The results not only tell us which factors are statistically significant predictors, but also allow us to compare different time periods, as well as differences between films made by major studios and independent producers.

Table 4: Multiple regression analysis with % of foreign to total revenues as the dependent variable

	1921/2 – 1928/9	1929/30 – 1932/3	1933/4 – 1938/9	1939/40 – 1944/5	1945/6 – 1950/51
<i>Studio productions</i>					
Prod. Cost	.201**	.101	.182**	.184**	.065
Int'l offices	.589***	.427***	.211***	.056	.295***
Int'l orientation	.141*	.200**	.498***	.460***	.385***
Scenario	.120*	.178*	.328***	.220**	.249***
Art_Res	.034	.050	.231***	.312***	.203**
Adventure	.145**	.134*	.048	-.080	.035
Comedy	-.017	-.049	-.087	.002	-.257***

Drama	-.092				
Fantasy		.051	-.163**	-.099	.024
Melodrama		.038	-.059	.031	-.040
Musical	-.035	.111	-.010	.059	-.150*
Romance	.024	.004	.062	.028	-.203**
Western	.072	.017	-.029	-.051	-.045
Other	.054	.126*	-.062	-.074	-.021
R Squared	.570	.321	.488	.309	.352
No. of Films	172	198	259	272	225
<i>Independent productions</i>					
Int'l offices			.146	-.305	-.055
Int'l orientation			.885***	.727***	.394*
Scenario			.605**	.390*	.376*
Art_Res			.475*	.460**	.076
Adventure				.186	.249
Comedy			-.329	.028	-.005
Drama			-.683	.148	-.124
Fantasy				-.074	-.227
Musical			-.472	.217	-.122
Romance			-.442	-.025	-.155
Western					-.410*
Other			-.288	.111	
R Squared			.620	.610	.668
No. of Films			24	32	35

*** Less than 0.1% likelihood that relationship could be due to chance ($p < .001$).

** Less than 1% likelihood that relationship could be due to chance ($p < .01$).

*Less than 5% likelihood that relationship could be due to chance ($p < .05$).

The figures provided in the table above (unless otherwise stated) represent correlation coefficients, indicating the strength of the relationship between the factor concerned and the proportion of foreign revenue earned. All figures are in the range -1 to +1. A score of either +1 or -1 would indicate a perfect direct relationship (with the +/- sign indicating whether the relationship is positive or negative). Scores close to zero indicate a relatively weak relationship. The presence of an asterisk indicates that the relationship is statistically significant (i.e. unlikely to be attributable to chance), with the number of asterisks denoting the level of significance.

Taking the silent period first, we see that the factor which does most to explain the variability in foreign earnings is the number of international offices operated by the film's distributor. This was a period when studios were rapidly expanding their international distribution networks. Warner Bros, in particular, increased the number of countries in which it ran offices (outside the US and Canada)

from zero to 17, and this was matched by a significant rise in the proportion of foreign revenue earned by its films. Production costs are also a statistically significant predictor of foreign earnings, but the relationship is weaker than with distribution offices. The international orientation of films also correlates with the foreign earnings ratio, but here the relationship is weaker still. Within the international orientation measure, we can see that it is the film's scenario (i.e. the foreignness of its setting, original text and leading characters) that correlates with foreign earnings, not the nationality of the creative talent employed in their production. The influx of European directors, writers and actors into Hollywood in the 1920s may have been significant for a number of reasons, but it seems to have had little effect on the relative popularity of American films in foreign markets.⁴⁶ This would seem to be consistent with the findings of recent scholarship on European film actors in Hollywood. Tim Bergfelder, for example, argues that studio executives may have had an eye towards central European markets when recruiting talent from Germany in the 1920s, but other motives were probably more important, such as the desire to gain access to exceptional personnel with the potential to raise the profile of American films while simultaneously weakening the rival German film industry.⁴⁷ Similarly, Richard Abel stresses that French recruits to Hollywood in the silent era were expected to become 'partly American', and needed to appeal primarily to American audiences. Only in the 1930s would they be celebrated more for their 'Frenchness'.⁴⁸ As for film genres, none seemed to have any effect on foreign earnings apart from adventure films – where a positive relationship existed.

Moving into the early sound period, we see that foreign distribution offices, once again, are the major factor explaining variations in the ratio of foreign revenue earned by films. The contrast between MGM, which had offices in 55 countries by the end of this period, Warner Bros. (with 31) and RKO (just seven), would seem to explain this. MGM's films earned, on average, 36% of their revenues from foreign markets in this period; for Warner Bros. the figure was 29%, and just 23% for RKO. Production costs, on the other hand, did not correlate significantly with foreign earnings ratios in this period. As the industry made its transition to sound, the studios faced a major challenge in

figuring out how best to appeal to foreign audiences (remember this was the period when the relationship between foreign and domestic earnings of US films was at its weakest). Simply throwing more money at production budgets was clearly not the answer. The production of films with an international theme, however, did seem to help. The international orientation measure was a slightly stronger predictor of relative foreign earnings than it had been in the silent era (though still not as significant as foreign distribution offices). As with the silent period, we see that it was the scenario score that was the significant element here, not the use of foreign creative talent. In terms of film genres, once again adventure films were, relatively speaking, more popular with foreign audiences though, perhaps surprisingly, this relationship was actually slightly weaker than it had been in the silent period.

By the mid-1930s with the transition to sound complete, we find that the international orientation measure provides the most powerful explanation of the ratio of foreign revenues earned by studio films. Furthermore, within this we see that both the scenario and the artistic resources scores are significant predictors. Unlike in the silent or early sound periods, the use of foreign actors or directors did add to the relative popularity of films with international audiences. One explanation for this might be that in the silent period film was a more inherently international medium. As Richard Maltby and Ruth Vasey have put it: 'silent movies were peculiarly well-suited to consumption in a range of different cultural contexts... [due] to the fact that they were amenable to a wide range of different interpretations.' But as they went on to say: 'if the technical and semantic malleability of the silent medium contributed to the success of American movies abroad, the question then arises as to how Hollywood managed to retain its grip on its overseas markets after the introduction of sound at the end of the twenties.'⁴⁹ The effective use of international settings, characters and creative personnel would seem to provide at least part of the answer. It seems to have taken the studios a few years to learn how to do this consistently, but by the mid-1930s they were able to make films with foreign stars or settings that international audiences could more easily identify with. Some prominent examples included *Queen Christina* (Rouben Mamoulian, 1933), *A Tale of Two*

Cities (Jack Conway, 1935), *Anna Karenina* (Clarence Brown, 1935), *The Charge of the Light Brigade* (Michael Curtiz, 1936), and *Captain Blood* (Michael Curtiz, 1935). For a studio like MGM, this process often involved finding appropriate roles for its existing European stars from the silent era, such as Greta Garbo, while Paramount set out to recruit fresh talent explicitly for the purpose of appealing to international audiences.⁵⁰ Production costs and distribution offices continued to correlate significantly with the foreign earnings ratio during this period, but in both cases the relationship was weaker than it had been in the silent era.

During the period of the Second World War a very similar pattern can be observed. Once again, the international orientation measure appears to be the key factor explaining the proportion of foreign revenue earned by films, and once again, we see that both the scenario and the artistic resources measures were significant predictors. The effect of production costs remained virtually unchanged from the preceding period, while the distribution offices ceased to be significant factor (the closure of large numbers of offices during the war had a limited effect on foreign earnings due to the growth UK, Australian and Latin American markets). In the post-war years the picture in relation to the international orientation of films remained much the same - it continued to be the most reliable predictor of the foreign earnings ratio. Distribution offices were also a significant factor, but production costs, curiously, were not. One clue to why production costs may not have aided the international appeal of Hollywood films in this period is provided by the results relating to film genres. In most periods, we find that genre had very little effect on the relative popularity of films with international audiences, but in the post-war years we find a number of negative relationships here. American comedy and romance films, most notably, were significantly less popular with international audiences than domestic ones. Perhaps the image of the American GI as 'over paid, over sexed and over here' made Hollywood films of this type less appealing to audiences in many countries recovering from the war?⁵¹ Musicals also appear not to have travelled well in this period.

In assessing the results in relation to the films of independent producers we need to be mindful that the number of films released in each period was relatively small. Our data do not allow us to comment on the silent or early sound periods, nor do we have any information on the production costs of these films. It is also worth remembering that during the 1930s there was a very strong relationship between foreign and domestic earnings for these independent productions, and so there was not much variability in the proportion of foreign revenue earned by these films. What variability there was can be explained mostly by the international orientation of the films themselves, with the film scenario being a more important factor than the nationality of the creative talent employed.

A very similar pattern emerges in both the wartime and post-war periods, with the international orientation of these films being the most powerful predictor of their foreign earnings ratio. Perhaps the most notable finding to emerge from this analysis of independent productions, however, is the statistically insignificant impact of international distribution offices. For studio releases, this factor was an important predictor of the foreign earnings ratio in the 1930s and in the post-war periods, yet this was apparently not so for independent films (perhaps indicating that major distributors may have put more effort into promoting their 'in-house' product in overseas markets than films they handled on behalf of independent producers). We do need to be careful in how we interpret this finding, however. From the mid-1930s all of the independent films in our sample were distributed by organisations with a relatively well developed international distribution network. There is no evidence here to suggest that independent producers were able to achieve international success without relying on some form of distribution infrastructure. The scale of that global distribution network, however, seems to have been much less important in determining the relative international success of independent films, than the nature of their themes, settings and characters. This, no doubt, helps explain why fourteen of the seventeen feature films released by Disney between the 1930s and the mid-1960s were based on European source material.⁵²

Conclusions

Scholars of the international film industry have long known that for the major Hollywood studios there has been a strong relationship between the earnings that films generated in domestic and foreign markets. Such a relationship did not seem to exist for other national film industries. The most successful films made by British, German or Japanese producers, have rarely able to attract large audiences outside their domestic market.⁵³ Film historians have proposed several reasons why the US industry has been uniquely well placed to sell its films around the world. This paper has tested some of these arguments by conducting an empirical analysis of a large sample of Hollywood films from the studio era. The approach has been to focus on the variability in the proportion of foreign revenue earned by American films. By identifying those factors which help to explain why some Hollywood films earned relatively small (or large) proportions of their revenue from foreign markets, we can better understand the reasons for Hollywood's remarkable global success.

At one level, the paper confirms what we already knew. It finds that production costs, the existence of foreign distribution networks and the international orientation of the films themselves all correlate positively with the proportion of revenues from foreign markets. But closer inspection of the data reveals much more than this. We find that production costs and international distribution offices are particularly important in explaining why some films earned only a small proportion of revenues from abroad. A threshold level of investment was required for films to reliably generate around one-third of revenues from foreign markets. Low budget films, and those released by distributors with a limited international presence, tended to be very heavily reliant on the domestic US market. As production costs and the number of international distribution offices extended beyond these threshold levels, the share of foreign revenue earned by films did continue to increase – but only very gradually. The identification of these threshold levels of investment in production and distribution help to explain why other national film industries were unable to compete with Hollywood in the global market. While there are examples of production companies outside the US

which invested in relatively high budget production, no firms were able to make the sustained investments in both production and foreign distribution that would have enabled a (relatively) reliable stream of foreign earnings.

As far as production costs and distribution networks are concerned, the results of this analysis are broadly consistent with a media imperialism critique of Hollywood's global reach. The sheer scale of resource invested in the making and marketing of US films, appears to have been critical in opening up access to foreign markets. The effect of a film's international orientation on foreign earnings, on the other hand, would suggest that there was more to Hollywood's global appeal than the media imperialism thesis would allow. The economic (and political) strength of the major studios no doubt helped them to establish a foothold in foreign markets, but the international appeal of Hollywood entertainment was at its strongest when the content of the films was least obviously American. The challenge for the major Hollywood producers, in other words, was not simply one of selling America to the world, but also of learning to develop content which was global, rather than national, in design and composition.

The number of films with a strong international orientation was relatively small, but these were, to a large extent, the films that earned the highest share of revenues from international markets. The major studios typically produced just a few of these films each year, usually with at least one foreign-born star playing a lead character in a foreign setting. These included the films identified by Glancy as Hollywood 'British' pictures, but many others had European, Asian or Latin American themes. Such films needed to appeal to domestic as well as international audiences, and often featured familiar American stars and/or character-types in foreign settings. Thus, while the international orientation score correlated strongly with the proportion of foreign revenue earned by each film, there was no significant relationship with total earnings. The value of these films for the major studios was not that they earned more revenue in themselves (if they had, many more such films would no doubt have been made), but that they could be relied upon to lead the 'slate' of

pictures released each year in key foreign markets. By developing annual production portfolios containing some pictures that could be expected to appeal strongly to major foreign markets, the major studios provided their foreign distribution subsidiaries with a stronger hand when negotiating with local cinema chains. As distributor of Abel Gance's *Napoleon* in 1927, for example, MGM was able to exploit the strong appeal of this film in France by using it to block book 10-15 of its own pictures with exhibitors there.⁵⁴ Armed with such a body of product, US distributors around the world were better placed to overcome what scholars of international business refer to as a 'liability of foreignness'.⁵⁵ A more detailed analysis showing how Hollywood's international films were released, and received, in individual national markets would be a valuable topic for further research.

Analysing the data over time we see that the influence of different factors varied from one period to the next. In the 1920s and early 1930s, as major companies started building their networks of distribution subsidiaries at different times and at different rates, we find that the size of the foreign distribution network supporting each film at the time of its international release was the major factor influencing its share of foreign earnings. This factor diminished in importance as all major distributors established offices in more than 20 countries. Production costs were a significant (though not the most important) predictor of foreign earnings ratios through most of the period, though this relationship broke down during the transition to sound and the immediate post-war years.

The effect of a film's international orientation on the proportion of foreign earnings it generated was considerably more pronounced after the industry had made its transition to sound. In the silent era film was arguably an inherently more international medium, and pictures were much less likely to be identified as 'foreign' as they crossed national borders. The creation of pictures with international settings, characters and stars made little or no difference to their appeal in foreign markets in the 1920s, but from the mid-1930s a film's international orientation was the major factor explaining the share of foreign income it earned. By developing stories with international settings and characters,

and by employing creative personnel from around the world as directors, actors or writers, Hollywood studios were able to produce a body of films that were (slightly) less obviously identifiable as 'American' and which could more easily be embraced and adopted by audiences across the globe. It took time, however, for the Hollywood studios to learn how to do this effectively, and some studios appeared to learn faster in this regard than others. The studios with the greatest international experience (as measured by their foreign distribution offices) adapted most rapidly to the change. Though the results of a studio-by-studio analysis have not been presented in detail here, they show that for MGM (which had maintained offices in well over 30 countries since 1927) a relatively strong relationship existed between the international orientation of its films and their share of foreign earnings by the early 1930s. For Warner Bros. (which expanded the number of countries in which it ran offices from six in the mid-1920s to 18 by 1930), the relationship was also significant in the early 1930s, but weaker than for MGM films. The films of RKO on the other hand (just 6 foreign offices in the early 1930s) showed no relationship between these measures until much later in the decade, when their numbers of foreign offices expanded significantly. The production of international films for international audiences appears to have been an effective strategy by which US film companies were able to retain their position in foreign markets after the coming of sound, but the success of this strategy was closely bound up with the activities of their foreign distribution subsidiaries. Without a strong network of distribution offices, the global appeal of Hollywood's most internationally oriented films could not be effectively exploited; for the distribution offices themselves, the task of selling American films in foreign markets was greatly aided by the availability of these internationally-oriented pictures.

¹ Earlier versions of this paper have been presented at seminars or conferences at the Universities of York and Liverpool in the UK and at Lingnan University in Hong Kong. I am grateful for all comments received at these events, and in particular to feedback provided by Andrew Higson, John Sedgwick and Joseph Garncarz. All errors, of course, are the author's own.

- ² Richards, *Age of the Dream Palace*; Dickinson and Street, *Cinema and State*; Saunders, *Hollywood in Berlin*; Hay, *Popular Film Culture in Fascist Italy*; Ulff-Moller, "The Origin of the French Film Quota Policy"; Itatsu, "Japan's Hollywood Boycott Movement."
- ³ For example, de Grazia, *Irresistible Empire*.
- ⁴ See various chapters in Ellwood and Kroes, *Hollywood in Europe*; Miskell, "The film industry in twentieth century Britain."
- ⁵ Higson and Maltby, 'Film Europe' and 'Film America.'
- ⁶ Glancy, "MGM Film Grosses"; Jewell, "RKO Film Grosses"; Glancy, "Warner Bros Film Grosses."
- ⁷ For example, Stubbs, "'Blocked' currency"; Eldridge, "Britain Finds Andy Hardy."
- ⁸ Jewell, *RKO Radio Pictures*.
- ⁹ Sedgwick, "Richard B. Jewell's RKO Film Grosses"; Sedgwick, "The Warner Ledgers: a comment."
- ¹⁰ Sedgwick and Pokorny, "The Risk Environment of Film Making"; Sedgwick and Pokorny, "The Film Business in the United States and Britain."
- ¹¹ Sedgwick, "Product Differentiation."
- ¹² de Vany, *Hollywood Economics*.
- ¹³ Pokorny and Sedgwick, "Profitability trends in Hollywood."
- ¹⁴ Sedgwick and Pokorny, "Hollywood's foreign earnings."
- ¹⁵ Glancy, "MGM Film Grosses."
- ¹⁶ Sedgwick and Pokorny, "Hollywood's foreign earnings."
- ¹⁷ Bakker, *Entertainment Industrialised*.
- ¹⁸ See, for example, Gomery, *The Hollywood Studio System*.
- ¹⁹ For a more detailed account of the way in which the major 'studios' controlled film distribution/exhibition within the US see Sedgwick and Pokorny, "The Film Business in the United States and Britain."
- ²⁰ Thompson, *Exporting Entertainment*.
- ²¹ Ibid. pp. 72-3.
- ²² Ibid. p. 73. See also Vasey, *The World According to Hollywood*.
- ²³ Maltby, "Introduction."
- ²⁴ Garncarz, "Hollywood in Germany."
- ²⁵ Glancy, *When Hollywood Loved Britain*.
- ²⁶ Jarvie, *Hollywood's Overseas Campaign*.
- ²⁷ Eric Johnson speech to Omaha Chamber of Commerce, 24 May 1954. Academy of Motion Picture Arts and Sciences, Margaret Herrick Library, Dept of Special Collections (MHL, Special Collections hereafter). Association of Motion Picture and TV Producers Records, File 262 'Eric Johnson Speeches, 1946-1959'.
- ²⁸ Sedgwick *et al*, "Hollywood in the World Market."
- ²⁹ Kramer, "Faith in relations between people."
- ³⁰ Trumbour, *Selling Hollywood to the World*.
- ³¹ For example, Perretti and Negro, "Filling Empty Seats."
- ³² The Warner Bros. ledger lists the names of the two lead stars in each film. In cases where these did not correspond to the first two names on the AFI Catalogue cast list, the information in the ledgers was used.
- ³³ The screen credits of lesser known foreign born actors or writers on the IMDb were also useful in determining when they began their Hollywood careers.
- ³⁴ Maltby and Vasey, "The International Language Problem"; see also Vasey, *The World According to Hollywood*.
- ³⁵ de Grazia, "Mass Culture and Sovereignty."
- ³⁶ See for example, Segrave, *American Films Abroad*.
- ³⁷ Guback, *The International Film Industry*.
- ³⁸ The 1928/29 season may be regarded as one when the industry made its transition to sound, it is included within the silent era here for two reasons. First, many of the sound films made in this season were essentially silent films with some musical sequences in sound, others were released in both sound and silent versions. Second, while the leading cinemas in the US had converted to sound by the end of 1928, in many international markets the process of converting cinemas for sound did not begin in earnest until 1929.
- ³⁹ Glancy, "MGM Film Grosses."
- ⁴⁰ See, for example, *The Film Daily Yearbook* (1931), 995-998. The same view was expressed by Merian Cooper, RKO's production head in 1933, see Jewell, *RKO Radio Pictures*.
- ⁴¹ Scott, "Hollywood and the world."
- ⁴² Ibid.

⁴³ Frick, "Selznick International Pictures."

⁴⁴ We can measure the amount of variability in the revenues earned by any set of films through the coefficient of variation, which is calculated by dividing the standard deviation by the mean, and multiplying by 100. We find that there is around twice as variation in the revenues earned by independent films compared to studio ones, both at home and abroad.

⁴⁵ Sedgwick and Pokorny, "Hollywood's foreign earnings during the 1930s."

⁴⁶ For example, see Petrie, *Hollywood Destinies*.

⁴⁷ Bergfelder, "German actors in Hollywood."

⁴⁸ Abel, "The long fade."

⁴⁹ Maltby and Vasey, "The international language problem."

⁵⁰ Danan, "The studio, the star and international audiences."

⁵¹ See, for example, Reynolds, *Rich Relations*.

⁵² Allan, *Walt Disney and Europe*.

⁵³ Waterman, *Hollywood's Road to Riches*.

⁵⁴ Ulf-Moller, "The origin of the French film quota policy."

⁵⁵ For example, Zaheer, "Overcoming the liability of foreignness"; Mezias, "Identifying liabilities of foreignness."

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Appendix 1: Foreign and Domestic Earnings of Walter Wanger Films

Title	Year	Dist.	Domestic (\$000s)	Foreign (\$000s)	Total Rentals (\$000s)
You Only Live Once	1936/7	UA	545	373	918
History is Made at Night	1936/7	UA	787	596	1383
Vogues of 1938	1936/7	UA	967	584	1551
52nd Street	1936/7	UA	629	195	824
Stand In	1937/8	UA	591	274	865
I Met My Love Again	1937/8	UA	430	160	590
Blockade	1937/8	UA	485	455	940
Algiers	1937/8	UA	808	544	1352
Trade Winds	1938/9	UA	970	384	1354
Stagecoach	1938/9	UA	1027	698	1725
Winter Carnival	1938/9	UA	505	148	653
Eternally Yours	1938/9	UA	752	296	1048
Slightly Honorable	1939/40	UA	440	172	612
House Across the Bay	1939/40	UA	675	292	967
Foreign Correspondent	1939/40	UA	1250	761	2011
Long Voyage Home	1939/40	UA	650	409	1059
Eagle Squadron	1941/2	Universal	1745	1030	2775
Arabian Nights	1942/3	Universal	1727	2481	4208
We've Never Been Licked	1942/3	Universal	848	345	1193
Gung Ho	1943/4	Universal	1675	730	2405
Ladies Courageous	1943/4	Universal	823	296	1119
Salome, Where She Danced	1944/5	Universal	1633	1154	2787
Night in Paradise	1944/5	Universal	1389	810	2199
Canyon Passage	1945/6	Universal	3348	1200	4548
Smash-Up	1946/7	Universal	1754	738	2492

Appendix 2: How the 'international orientation' score is constructed – some examples

Film	'Scenario'	'Artistic Resources'	International Orientation	Earnings (\$000s)
Anna Karenina	Setting – Russia (2) Char 1 – Anna (2) Char 2 – Vronsky (2) Text – L. Tolstoy (2)	Dir – Clarence Brown (0) Wr – Clemence Dane (2) Act 1 – Greta Garbo (2) Act 2 – Fredric March (0)	Scenario (8) Art Res (4) Total = 12	For = 1,439 Tot = 2,304 Foreign % = 62.5
Casablanca	Setting – Morocco (2) Char 1 – Rick (0) Char 2 – Ilsa Lund (2) Text – M. Burnett (0)	Dir – Michael Curtiz (1) Wr – Julius Epstein (0) Act 1 – H. Bogart (0) Act 2 – Ingrid Bergman (2)	Scenario (4) Art Res (3) Total = 7	For = 3,461 Tot = 6,859 Foreign % = 50.5
Key Largo	Setting – Florida (0) Char 1 – Frank (0) Char 2 – Johnny (0) Text – M. Anderson (0)	Dir – John Huston (0) Wr – Richard Brooks (0) Act 1 – H. Bogart (0) Act 2 – E. G. Robinson (1)	Scenario (0) Art Res (1) Total = 1	For = 1,150 Tot = 4,369 Foreign % = 26.3

Appendix 3: The top 25 films by international orientation

Rank	Title	Year	Dist.	Scenario	Artistic resources	International Orientation
1	Joan of Paris	1941/2	RKO	8	8	16
2	Victoria the Great	1937/8	RKO	8	8	16
3	Hunchback of Notre Dame	1939/40	RKO	8	7	15
4	The Student Prince	1927/8	MGM	8	7	15
5	The Great Waltz	1938/9	MGM	8	7	15
6	The Kiss	1928/9	MGM	8	6	14
7	Love	1927/8	MGM	8	6	14
8	Nurse Edith Cavell	1939/40	RKO	8	6	14
9	Goodbye Mr Chips	1938/9	MGM	8	6	14
10	Mrs Miniver	1941/2	MGM	8	6	14
11	Pride and Prejudice	1939/40	MGM	8	6	14
12	Kiss Me Again	1925/6	WB	8	5	13
13	Bedlam	1945/6	RKO	8	5	13
14	The Divine Woman	1927/8	MGM	7	6	13
15	Dangerous Moonlight	1941/2	RKO	6	7	13
16	Stromboli	1949/50	RKO	6	7	13
17	Random Harvest	1942/3	MGM	8	5	13
18	The Painted Veil	1933/4	MGM	8	5	13
19	If Winter Comes	1947/8	MGM	8	5	13
20	Captain Blood	1934/5	WB	8	5	13
21	Queen Christina	1933/4	MGM	8	5	13
22	A Tale of Two Cities	1935/6	MGM	8	5	13
23	Tovarich	1937/8	WB	8	5	13
24	Gaslight	1943/4	MGM	8	5	13
25	Balalaika	1939/40	MGM	8	5	13

