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Abstract

This paper investigates the timing of labour strikes in Hollywood. The occurrence of strikes, such as the WGA and SAG-AFTRA strikes in 2023, can make sense when we have the hindsight to piece together the historical details of what created rifts between labour and management. But why do strikes in Hollywood occur when they do? Are there periods of time when it is more likely that contract negotiations will break down and unions in Hollywood will go on strike?

This paper uses multiple sources of empirical data to analyse the historical trends of strikes in Hollywood between 1950 and 2023. Strikes in Hollywood – particularly by the WGA and SAG-AFTRA – have common political economic roots. They tend to occur when the profits of major Hollywood studios are in a type of danger zone: when the *differential profits* of Hollywood are stagnating or declining. Differential profit is a *relative* measure of performance. Differential profit can be found in any situation where a firm or set of firms holds a better stream of income than what others hold. For example, differential gains still occur when a firm *loses* profit at a slower rate than others. In the case of the Hollywood studios, differential profit is measured against *Dominant Capital*, which is our proxy for the S&P 500.

The paper argues that danger zones of differential accumulation hurt Hollywood labour because Hollywood's major studios often rely on stagflation to differentially profit. As a combination of unemployment and inflation, stagflation is antagonistic to union demands for increased employment, job security, or higher wages. In Hollywood, strikes tend to occur during periods when film production is stagnating. The longest absence of strikes was from 1990 to 2000, when Hollywood reversed its stagflation strategy and released films at a level that was not seen in decades.

Stagflation also has an influence on the management-artist hierarchy in Hollywood. While standard artist contracts in Hollywood construct a hierarchical structure that effectively prevents artists from exercising moral rights in opposition to aesthetic changes by management, increases of stagflation in Hollywood increase the employment size of management, both absolutely and relative to the collective employment size of actors, directors, producers, and writers.

1 Introduction

On May 2, 2023, the Writers Guild of America (WGA) went on strike after failing to reach an acceptable agreement with the Alliance of Motion Picture and Television Producers (AMPTP), the trade association that negotiates for the film and television interests of the major Hollywood studios. The Screen Actors Guild-American Federation of Television and Radio Artists (SAG-AFTRA) went on strike a few weeks later. Taken together, the WGA and SAG-AFTRA strikes of 2023 will likely be remembered as the first major labour dispute in the era of streaming. The 2008 WGA strike was largely a fight over residuals from digital content, but many of the labour issues of the 2023 strikes were about the observable effects of the streaming business on employee compensation, full-time employment, and creative input. For instance, residual earning agreements are now virtually worthless to some artists, as residuals were initially written to count television ratings and the number of sales in secondary markets of physical media (VHS, DVD); they do not fully capture audience engagement with streaming media, even for popular films and shows. The annual earnings of writers have also been affected by new cost-cutting tricks, such as hiring writers for short periods of time to complete story development in “mini rooms”. In addition to issues of income and job security, all creative types have grown fearful of how AI will be used to generate content for streaming media. The WGA and SAG-AFTRA had specific demands about AI because the studio’s usage of this new technology was not constrained by clear language in a collective agreement.

Watching the 2023 WGA and SAG-AFTRA strikes week after week prompted me to think about the timing of these strikes. Was 2023 a particularly ripe year for contract negotiations to break down? With hindsight, it seems easy to see why 2023 was a particularly ripe year for the labour issues in the age of streaming media to reach a boiling point. In the case of the WGA striking in 2023, the union claimed that its fight to protect the profession of screenwriting felt “existential” (Writers Guild of America, 2023). But *why* was 2023 a particularly ripe year for contract negotiations to break down? Aside from the opinions of studio bosses like David Zaslav and Bob Iger, few characterized the demands of WGA and SAG-AFTRA to be greedy. In fact, the strikes had public support because people working in other industries could sympathize with the struggles with rising costs of living and the erosion of job security. Therefore, why would something like job security have been an “unreasonable” demand at this point in time, especially if studios (theoretically) need actors and writers to be creative?

The question of timing has to be answered with a larger theory of labour disputes in Hollywood, or even in capitalism. The series of facts about one strike – from bargaining to the tentative agreement that ends a strike – explain what fuelled this conflict, but its historical details are unlikely to explain why, for example, some decades had many labour strikes, and others had few or none. A larger theory is needed to hypothesize how broader political economic factors effect the observable outcome of labour negotiations in Hollywood: some contract negotiations stagnate and lead to strikes, while other contracts are reached without strike, or even a strike vote, which is one of the ways a union can display its intentions and pressure management.

The hypothesis of this paper is that strikes in Hollywood between 1950 and 2023 tended to occur when the profits of major Hollywood studios were in a type of danger zone: when the *differential profits* of Hollywood were stagnating or declining. Differential profit is a *relative* measure of performance. Differential profit can be found in any situation where a

firm or set of firms holds a better stream of income than what others hold. For example, differential gains still occur when a firm *loses* profit at a slower rate than others. In the case of the Hollywood studios, differential profit is measured against *Dominant Capital*, which is our proxy for the S&P 500.

The paper argues that, overall, relationships between management and labour in Hollywood are strained by the appearance of these danger zones of differential profit. Danger zones of differential accumulation hurt Hollywood labour because Hollywood's major studios often rely on stagflation to differentially profit. As a combination of unemployment and inflation, stagflation is antagonistic to union demands for increased employment, job security, or higher wages. Strikes in Hollywood tend to occur during periods of stagflation, and the longest absence of strikes was from 1990 to 2000, when Hollywood reversed its stagflation strategy and released films at a level that was not seen in decades.

Stagflation also has an influence on the management-artist hierarchy in Hollywood. While standard artist contracts in Hollywood construct a hierarchical structure that effectively prevents artists from exercising moral rights in opposition to aesthetic changes by management, increases of stagflation in Hollywood increase the employment size of management, both absolutely and relative to the collective employment size of actors, directors, producers, and writers.

The first section of the paper will introduce enough of the capital-as-power approach to explain why differential measures of accumulation matter to the major Hollywood studios, just as differential measures matter to dominant firms in other business sectors. The second section uses the research of Bichler and Nitzan (2023) and Mouré (2023) to define the meaning of a danger zone in terms of differential accumulation. This section will present the empirical evidence to mark the occurrences of danger zones in the differential profits of Hollywood's major studios from 1950 to 2023. The third section looks at the main differential accumulation strategy of major studios, stagflation, and its impacts on artistic labour.

2 Differential accumulation

Differential accumulation is a term that originated in the capital-as-power theory of Shimshon Bichler and Jonathan Nitzan.¹ The term speaks to the need of capitalists to assess financial performance relatively, with constructed benchmarks. In spite of what is claimed by mainstream economic theory, absolute yardsticks of productivity and growth do not exist in our capitalist reality. Capitalists "assess their own performance by comparing it to the performance of others" (Nitzan & Bichler, 2009, p. 309).

Differential accumulation is the ability of a firm or set of firms to accumulate at a faster rate than others. When market value, profits, revenues, or other indicators are falling, the goal of differential accumulation is to lose at a slower rate than others. Nitzan and Bichler (2009) constructed their theory of differential accumulation around measures of market capitalization, as this is a future-oriented measure of capitalist expectations. This paper will be using measurements of differential *operating income*. Aside from Netflix, the major Hollywood studios only contribute to the market capitalization of their larger

¹ All of their work is freely available at <https://bnarchives.yorku.ca/>.

publicly-traded conglomerates. Consequently, a clearer picture of Hollywood's financial performance is found by looking inside the annual reports of conglomerates. There we can find the operating income data of filmed entertainment business operations.² Differential operating income, which will be shortened to differential income, can be found in any situation where a firm or set of firms holds a better stream of income than a relevant benchmark.

Like any comparison of performance that has the power to drive group behaviour, the benchmark that measures differential accumulation has to meaningfully drive capitalists to beat the benchmark significantly and frequently. For instance, if someone was interested in the differential accumulation of DuPont, the multinational chemical company, a worthy benchmark cannot come from the financial performance of any random company, let alone any small firm that had little chance of coming close to having a market capitalization in the billions. Useful benchmarks for DuPont's performance might be other *giants* in the same sectors of operations – e.g., 3M, Dow Chemical, Chemours – or other dominant firms that, regardless of industry, sector, or even geography, are in the same league in terms of size and performance – e.g., Disney, Google, Cisco.

Stock indices, such as the S&P 500, are typically used for large publicly-traded firms (Nitzan & Bichler, 2009, p. 309). In the case of Hollywood's major studios, beating an index like the S&P 500 is more relevant than beating other firms in film and television. Many firms in film and television production are small, and independent firms can only grow so big when the major studios have an oligopoly in film and television distribution (Bagdikian, 2004; Drake, 2008; McMahon, 2022; Wasko, 2003). Figure 1 illustrates this point with a comparison of three series. The light blue line is the average operating income of the filmed entertainment operations of the major studios from 1950 to 2023: 20th Century Fox, Columbia, Disney, Netflix, Paramount, Universal, and Warner Bros.³ The solid black line is the average operating income of "Dominant Capital", which is proxy for the S&P 500, a standard benchmark for the performance of large US-based corporations. The set of Dominant Capital includes, for each year, the top 500 firms on the Compustat database, sorted by the market capitalization of all firms that are listed, but not necessarily incorporated, in the United States. The dashed line is the average operating income of firms that operate in the following categories of the Standard Industrial Classification manual:

- 7812 Motion Picture and Video Tape Production
- 7819 Services Allied to Motion Picture Production
- 7822 Motion Picture and Video Tape Distribution
- 7829 Services Allied to Motion Picture Distribution

All three series are smoothed as three-year moving averages and re-scaled so that the measurements in 1970 equal one. Seen on the same scale, the historical trends of operating income per firm demonstrate how major Hollywood studios can no longer find a competitive benchmark inside the sectors of film and television production and distribution. The average operating income of other firms in film and television have plateaued since 2000, while the average operating income of major Hollywood studios continued to

²See McMahon (2022) for more details about the availability of data and an explanation of the difficulties in isolating filmed entertainment operations in every corporation that owns or has owned a major Hollywood studio. Other researchers have also identified how conglomeration and financial reporting create obstacles for the empirical research on the business of Hollywood Leaver (2010); Wasko (2003).

³Information on sources is found in Appendix A.

climb. What has not lost its relevancy as a benchmark of differential gain is the average Dominant-Capital firm. The general trajectory of its operating profits is similar to the trajectory of the major Hollywood studios.

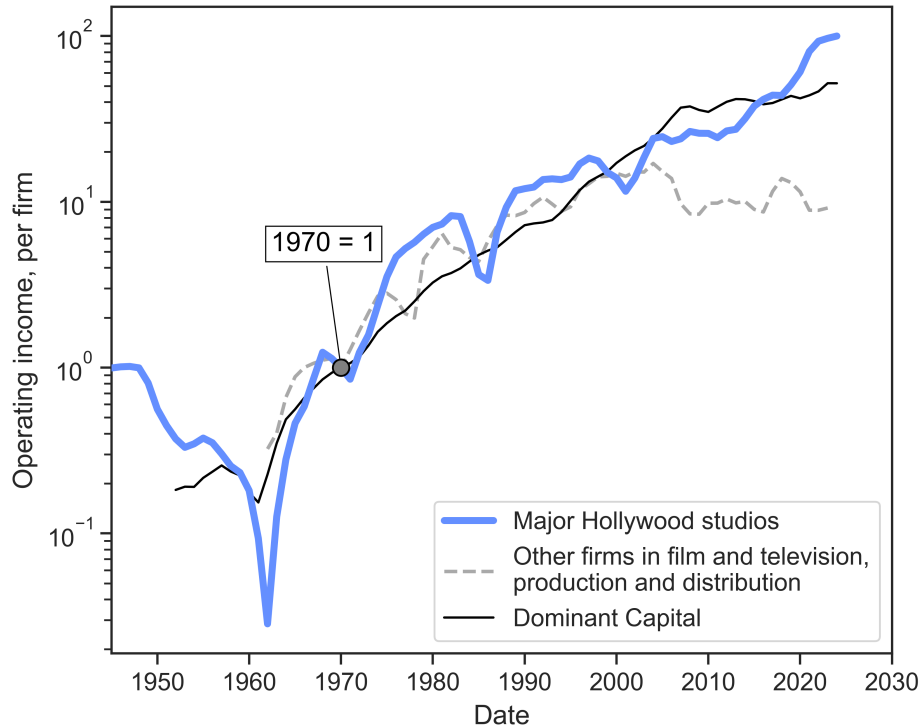


Figure 1: *Building a measure of differential income for the Hollywood film business*

Sources: Compustat and annual reports for operating income of Columbia, Disney, Fox, Paramount, Netflix, Universal, and Warner Bros (see Appendix A). Compustat for operating income of top 500 firms per year, ranked by largest market capitalization. Compustat for operating income of firms with SIC codes 7812, 7819, 7822, and 7829.

3 When Hollywood fails to differentially accumulate

The pressure for Hollywood’s major studios to differentially accumulate against the constituents of Dominant Capital – our proxy for the S&P 500 – has measurable effects on the technical and aesthetic production of mainstream film and television. For instance, plenty of critics and academics have noted the aesthetic and political differences between blockbuster Hollywood cinema and what came before it in the late 1960s and 1970s: the period that is often called “New Hollywood” (Berliner, 2011; Bernardoni, 1991; Harris, 2009; Kirschner, 2012; Prince, 2000; Wyatt, 1994). As studio executives in the early 1980s grew to resent the New-Hollywood style, particularly when it inspired directors to disobey or ignore fiscal management in pursuit of aesthetic vision (Bach, 1985), Hollywood studios were actually struggling to increase their differential profits (McMahon, 2022). Consequently, the ascendancy of blockbuster cinema in the 1980s was not just a cultural phenomenon; it was a solution to falling differential profits. From the 1980s to the present, Hollywood found it

could differentially accumulate through an aggressive reduction in risk (McMahon, 2019, 2022). Risk reduction was achieved when major Hollywood distributors tightened their control over the social creativity of filmmaking in such a way that aesthetic decisions bent to the financial considerations of such things as opening theatre sizes, cutting techniques, repetitive casting, genre complexity, and average shot length (McMahon, 2022, 2024).

3.1 Danger zones

To mark failures of differential accumulation, we will borrow a concept from the research of Bichler and Nitzan (2023) and Mouré (2023). Their work analyses the effects of dominant firms trying to exit from *danger zones*. Danger zones appear when dominant firms fail to differentially accumulate, consecutively, over a period of time, or significantly, as the difference from a benchmark. Swift exit from these danger zones is the top priority of the firms involved. Yet, strategies that led to successful differential accumulation in the past might no longer be effective in the event of a danger zone. A danger zone can also incentivize firms to restart a wave of differential accumulation with aggressive strategies like mass layoffs or price inflation. As Mouré (2023) and Bichler and Nitzan (2023) respectively conclude about the semiconductor and oil sectors, the aggressive strategies of dominant businesses can create or exacerbate social harms such as supply-chain disruptions and energy conflicts.

For this paper, Hollywood's danger zones will be constructed from the average differential operating income of Hollywood's major studios. Figure 2 visualizes the process. Panel A shows the differential operating income per firm of Hollywood's major studios. As explained above, this differential measure is a ratio of the per-firm operating income of Hollywood's major studios to the per-firm operating income of Dominant Capital (the annual top 500 firms on the Compustat database, sorted by the market capitalization). The time series in Panel A is smoothed as a 3-year moving average. In terms of differential profit, Hollywood's major studios have not had an uninterrupted history of success. Differential profit in Hollywood has been going up and down, and there are stretches of time when major studios fail to produce a new wave of differential profit.⁴

Panel B of Figure 2 shows Hollywood's danger zones, as defined to occur when the percent change of the smoothed 3-year moving average in Panel A is negative. If we group consecutive years, Hollywood's major studios have experienced thirteen danger zones between 1953 and 2024: 1953; 1955-1962; 1969-1971; 1978-1981; 1983-1986; 1990-1991; 1993-1995; 1997-2001; 2005-2007; 2011; 2013; 2018; and 2023. The total length of these danger zones is 37 years, which is 51% of our 72-year timespan.

⁴It is important to note that the definition of differential accumulation in the capital-as-power theory is both more and different than just levels of profit. To Bichler and Nitzan, measures of differential accumulation are about more than profit because capitalists incorporate hype, risk, and the normal rate of return into their capitalization formulas. Consequently, firms that report large profits will not necessarily have large market value. Differential accumulation is also different than reported levels of profit because capitalists are not discounting past profits, but rather expected future profits. Differential profit is constructed from earnings that, at each point in time, have already been reported. As noted elsewhere (McMahon, 2019, 2022), the use of differential profit is a solution to the empirical obstacles that will affect any analysis of the differential accumulation of Hollywood film production and distribution.

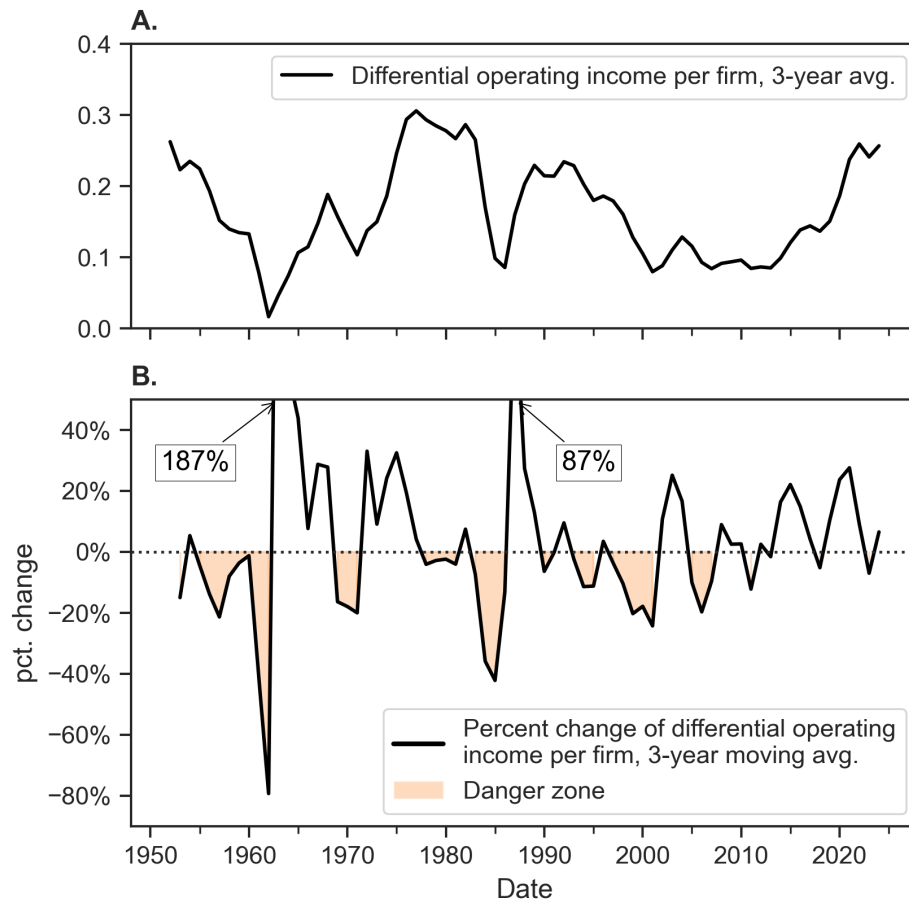


Figure 2: *Finding the danger zones of Hollywood's differential profits*

Sources: Compustat and annual reports for operating income of Columbia, Disney, Fox, Paramount, Netflix, Universal, and Warner Bros (see Appendix A). Compustat for operating income of top 500 firms per year, ranked by largest market capitalization.

3.2 The timing of Hollywood strikes

For the majority of the population under capitalism, the fear of failing to differentially accumulate is not a first-hand experience. Yet, the fear of the social consequences of a danger zone can be felt by many. The political economic effects of danger zones can ripple across society and harm people who would never spend a minute of their day thinking about how to beat financial benchmarks like the S&P 500. In Hollywood, the failure to differentially accumulate against Dominant Capital is not top of mind for the thousands of employees who, in some way or another, contribute to the production of film and television. The film and television industry is already filled with internal competition and career anxiety, and why should a screenwriter, actor, or gaffer worry that the film operations of a company like Sony are low performers relative to an external benchmark, especially if most of the firms in Dominant Capital do not operate in film and television?

Table 1: Strikes in Hollywood, longer than 1 week, 1950-2023

Strike	Year, start	Duration (weeks)
Screen Writers Guild television strike	1952	15
Screen Actors Guild (SAG) filmed television commercials strike	1952	10
Writers Guild of American (WGA) strike	1960	21
SAG theatrical strike	1960	6
American Federation of Television and Radio Artists (AFTRA) national strike	1967	3
WGA strike	1973	14
SAG & AFTRA commercials strike	1978	8
Hollywood Animation Union (MPSC Local 839) strike	1979	2
SAG theatrical strike	1980	15
WGA strike	1981	16
MPSC Local 839 strike	1982	11
WGA strike	1985	2
WGA strike	1988	22
SAG commercials strike	2000	24
WGA strike	2007	14
WGA strike	2023	21
SAG-AFTRA strike	2023	17

Source: Fortmueller and Marzola (2025).

This paper is curious to see the effects of Hollywood danger zones in the history of union labour. If danger zones fuel waves of downsizing or cost-cutting within film production, actor, writer, and other unions might be more likely to strike. To measure the effects of falling differential profits on the timing of strikes in Hollywood, Table 1 uses the Appendix in Fortmueller and Marzola (2025) to collect information about the Hollywood strikes that lasted longer than one week. Each strike is named by the union involved. Sometimes the scope of the labour dispute is defined by a type of work, such as commercial acting. When plotting annual data, each strike will be plotted on its starting year.

Two strikes listed in Fortmueller and Marzola (2025) are excluded from Table 1. The Directors Guild of America (DGA) strike in 1987 lasted just three hours. It is the only strike to fall below the one-week threshold. Setting a one-week threshold can seem arbitrary, but it is not difficult for strikes to last longer than one week, especially if an employer refuses to quickly resume bargaining once a strike is called. Also, the brevity of the DGA strike points to differences between the relationships that the major studios have with the DGA and other unions in Hollywood. Past presidents of the DGA have praised the closeness of the executive-director relationship (Smukler, 2025, p. 297). The SAG-AFTRA video game strike from 2016-2017 was excluded because the labour dispute was with several large video game firms and not with the AMPTP. Although some of the video game firms involved in the strike are subsidiaries of conglomerates that also own Hollywood studios, additional empirical research would need to be done to analyze the story of differential accumulation in the video games sector.

Figure 3 plots the strikes in Table 1 on the time series in Panel B of Figure 2. Figure 3 shows when strikes are occurring, relative to changes in the differential profits of major

Hollywood studios. Each strike, plotted as a circle marker on the year it began, has a size proportional to its duration.

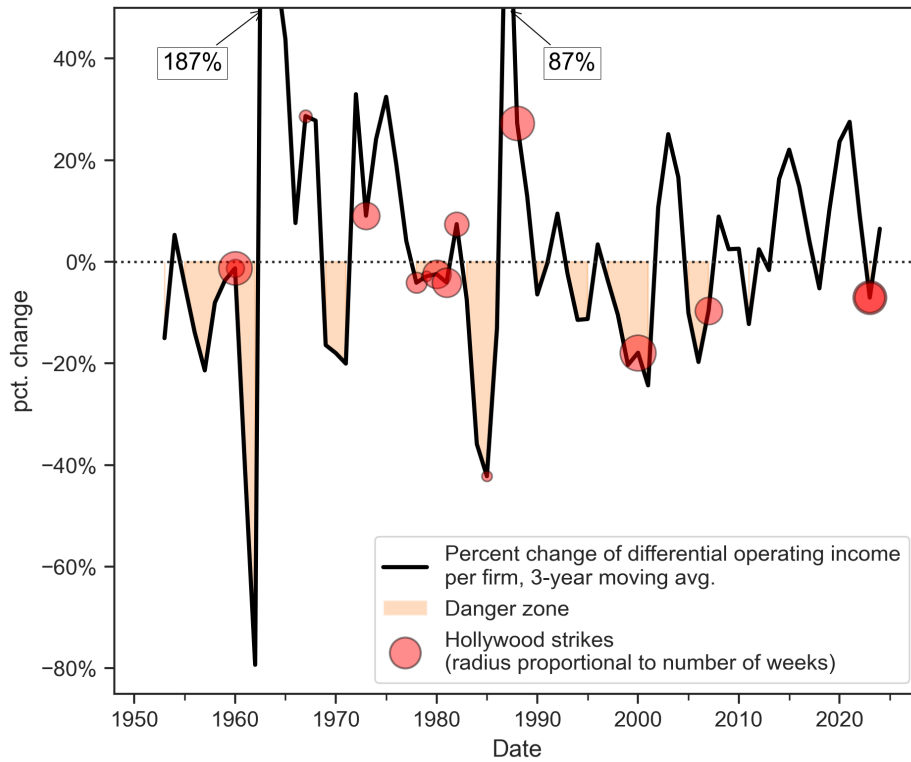


Figure 3: *Danger zones and strikes in Hollywood*

Sources: Compustat and annual reports for operating income of Columbia, Disney, Fox, Paramount, Netflix, Universal, and Warner Bros (see Appendix A). Compustat for operating income of top 500 firms per year, ranked by largest market capitalization. Fortmueller and Marzola (2025) for strikes in Hollywood, longer than 1 week, 1950-2023.

The visual of Figure 3 supports the hypothesis that strikes tend to occur in danger zones of differential accumulation. Greater support for this hypothesis is found when the data is examined more closely. First, Hollywood strikes tend to occur when differential profit is falling, but not necessarily when absolute profit is falling. Table 2 compares the two measurements of what is happening to Hollywood profits when strikes occur. The absolute measure (*Abs*) shows the percent changes of Hollywood profits on their own, without any comparison to the changes of profits of other firms. When looking at Hollywood's profits this way, there is no clear logic to when strikes occur. As the unions on strike have said themselves, Hollywood studios are squeezing labour when they are profitable! But there is clearer capitalist logic in the differential measure (*Diff*). Seen from this perspective, many strikes in Hollywood are results of a failure to differentially profit. Two tests check for the significance of differences between the absolute and differential measures. One test shows that, except for 1952 and 1960, the absolute measure of profit of each strike year is larger than its differential measure. The other test indicates how 50% of the strike years are particularly painful danger zones, as absolute profit growth is positive but differential profit growth is negative.

Table 2: Hollywood strikes and the differences between absolute and differential changes of operating profit per firm, 1950-2023

Strike Year	Major Hollywood Studios		Tests	
	(<i>Abs</i>) Pct. change of operating income per firm, 3-year moving avg.	(<i>Diff</i>) Pct. change of differential operating income per firm, 3-year moving avg.	$Diff < Abs^\dagger$	$Diff < 0 \text{ \& } Abs > 0$
1952	-16.9%	NA	NO*	NO*
1960	-22.1%	-1.3%	NO	NO
1967	+46.5%	+28.7%	YES	NO
1973	+28%	+9.1%	YES	NO
1978	+9%	-4.1%	YES	YES
1979	+12%	-2.9%	YES	YES
1980	+9.9%	-2.4%	YES	YES
1981	+4.6%	-4.1%	YES	YES
1982	+12.4%	+7.4%	YES	NO
1985	-36.7%	-42.2%	YES	YES
1988	+41.3%	+27.3%	YES	NO
2000	-7.5%	-17.9%	YES	NO
2007	+3.7%	-9.6%	YES	YES
2023	+4.1%	-7%	YES	YES

† The t-test that the mean of the *Abs* distribution of strikes from 1960-2023 is greater than the mean of the *Diff* distribution from 1960-2023 gives a p-value of 0.0024, which is smaller than the 1% threshold.

* Because the *Diff* value for 1952 is missing, we take the conservative estimate that both tests fail for that year.

Second, the depth of a danger zone has some effect on the probability that a Hollywood strike will occur. When modelled as a probabilistic event, the probability of a strike occurring increases as differential profit falls. Figure 4 visualizes the relationship with a bootstrap method.⁵ The figure shows how the probability of a strike increases as the percent change of Hollywood's differential profits slows and then becomes negative.⁶

⁵The parameters of a logistic regression, found in Appendix B, were used to run 5,000 iterations for 50 values within the distribution of the percent change of a 3-year moving average of Hollywood's differential profit per firm.

⁶There is one clear limit to modelling the probability of a strike occurring from a fall in differential profit. An annual change in differential profit is just that, annual; collective bargaining is a slower endeavour. There are likely to some years when, regardless of financial performance, none of Hollywood's major unions are bargaining for a new contract. Therefore, a fall in differential profit does not increase the risk of a strike when, save for spontaneous lockouts or walkouts, a strike is a structural impossibility.

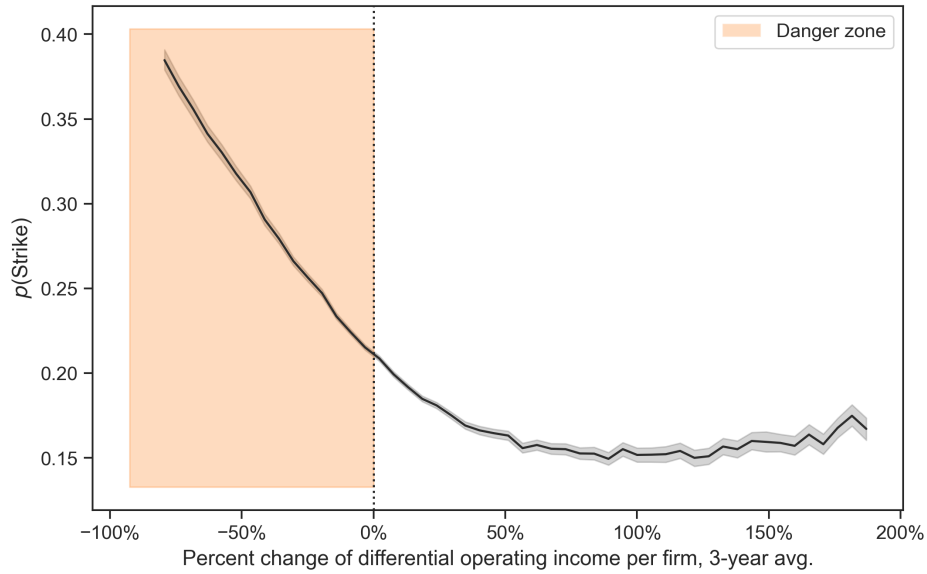


Figure 4: *Modelled probability of a strike occurring from a fall in differential profit*

Note: See Appendix B for logistic regression results.

4 Why differential accumulation hurts labour

So far we have found that strikes tend to occur in danger zones of differential accumulation. This is an unsurprising tendency if, at the time of labour negotiations, management is feeling the pangs of poor financial performance. Yet, there is an additional reason why the danger zones of differential accumulation will hurt labour in Hollywood.

To differentially profit, Hollywood relies heavily on stagflation, which is the combined effect of industrial stagnation – e.g., slow output, unemployment – and inflation. Figure 5 plots the history of stagflation in Hollywood from 1960 to 2023. The index of stagflation is the solid line in purple. It is a product of the other two series, which are the 10-year percent change of movie ticket prices and the 10-year percent change of motion picture and sound recording employment in the United States motion picture and sound industries.⁷ Since stagnation is the opposite of employment growth, the 10-year percent change is subtracted from – rather than added to – the 10-year percent change of movie ticket prices. For example, the boom of motion picture and sound recording employment in the late

⁷ Available industry-level data in the United States groups motion picture employment with employment in the sound recording industries. Ideally, an analysis of film industry employment would use data that is not aggregated with other industries. However, the obstacle is the availability of time series data where, at a lower level of the North American Industry Classification System (NAICS), motion pictures and sound recording are split into subsector industry groups:

- Motion Picture and Video Industries (NAICS 5121)
- Sound Recording Industries (NAICS 5122)

Fortunately, the employment of Motion Picture and Video Industries accounts for over 90% of the employment in Motion Picture and Sound Recording Industries (NAICS 512). This means that there is a high likelihood that a change in the employment of the motion picture and sound recording industries is an effect of an employment change in the film and television industries.

1990s (the red dashed line) *depresses* the stagflation index.

Figure 5 helps us see how inflation and unemployment can combine to create periods of stagflation in Hollywood. For instance, the peak of 1970 marked the end of a long period of high ticket price inflation and shrinking employment. There are also periods of receding stagflation, such as the period from 1970 to 2000.⁸ These ups and downs are significant to the wallets of moviegoers and to the pool of actors, writers, and other artists that hope to work on Hollywood film and television productions. The ups and downs of the stagflation index are also very significant to the profitability of the Hollywood film business. Figure 6 visualizes how stagflation is a *leading* effect of Hollywood's differential profits. Figure 6a plots the differential operating profits of the Hollywood studios and compares it to the index of stagflation, shifted fifteen years. The shift of the stagflation index demonstrates how a wave of differential profit in Hollywood is an after-effect of a wave of stagflation.

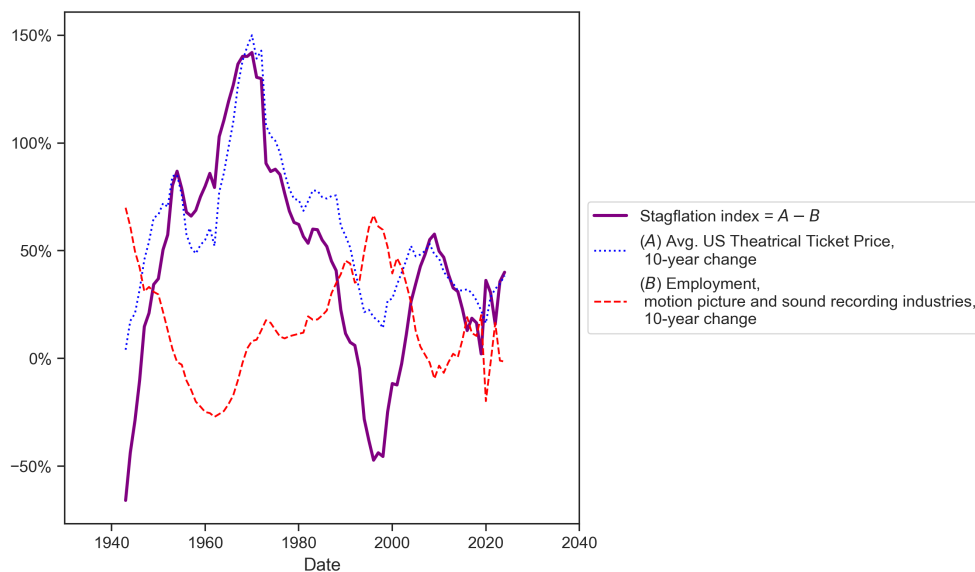


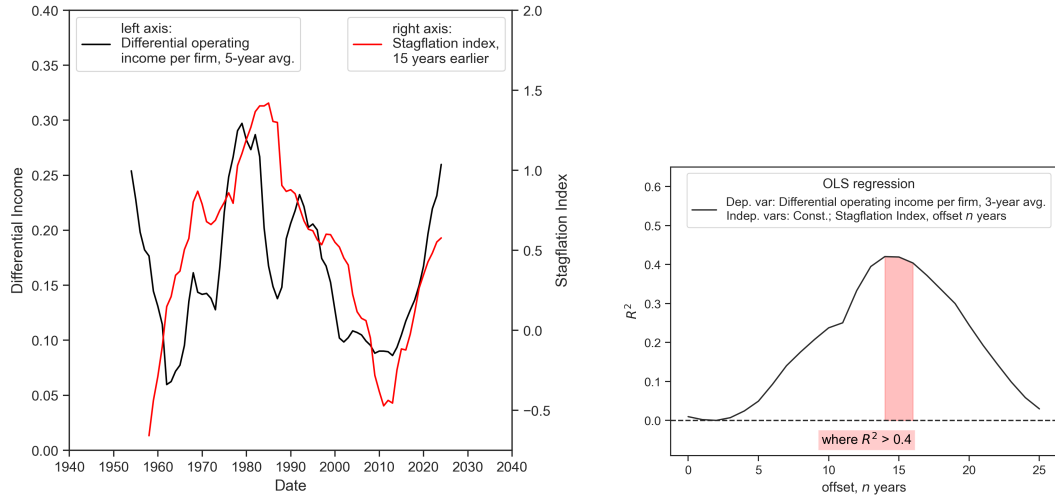
Figure 5: *Hollywood's index of stagflation*

Note: National Association of Theatre Owners, boxofficemojo, and Statista for average US Theatrical ticket price. FRED Economic data for Full-time and Part-time employees: Motion picture and sound recording industries.

Figure 6b investigates when the after-effect is strongest. The series plots R^2 values of linear regressions that have differential profit as the dependent variable and the stagflation index and a constant as the independent variables. The results of the linear regressions change by incrementally offsetting the stagflation index one year, from 0 years to 25 years. For example, if $n = 1$ the 2010 value of the stagflation index becomes its value for 2011, 2011 becomes 2012, and so on. Periods when the R^2 value is above 0.4 are highlighted on red. The relationship between Hollywood's differential profit and stagflation is strongest when n equals 14, 15, and 16. This means that the shape of Hollywood's differential profit

⁸Inflation and unemployment do not disappear in periods of low stagflation. Rather, the a low stagflation index suggests that the *combined effect* of inflation and unemployment has weakened. Thorstein Veblen's concept of *strategic sabotage* is very important on this point. Employment growth and low inflation can still be strategic, especially if they stop or reverse course when they no longer serve the interests of business (Veblen, 2004, p. 67). Additionally, the growth of employment or the of falling prices do not erase a business owner's legal right to keep "the work out of the hands of the workmen and product out of the market" (Veblen, 2004, p. 66).

will resemble the shape of stagflation that occurred in Hollywood around 15 years earlier.⁹



(a) Stagflation and Hollywood's differential profits

(b) R^2 values of different offsets for the stagflation index

Figure 6: *The leading effect of stagflation on differential profit*

As stagflation is typically Hollywood's strategy to produce differential profits, demands of unions in the political economic environment appear "unrealistic" by design. Certainly any union can accept any contract that management offers; but when dominant firms prepare to slow employment and increase prices, it is counterproductive to the strategies of management to offer its employees a healthy contract that increases job security or offers better opportunities for profit sharing. In other words, stagflation puts labour on a defensive position, where it will have to fight for gains.

The effects of stagflation in Hollywood can also impact the creative demands of artists. We can make two observations about Hollywood's accumulation strategies and theorize why they antagonize artistic labour.

4.1 Accumulation through depth

In their theory of capital accumulation, Bichler and Nitzan argue that stagflation is a means for dominant capitalist firms to accumulate capital through *depth*. Accumulation through depth involves increasing the intensity of income per unit, such as profit per employee. By contrast, breadth strategies, such as green-field production, increase income through expansion.¹⁰ Bichler and Nitzan's conceptualization of stagflation's *role* in capital accumulation differs from both neo-classical and Marxist theories, as these theories are built on assumptions that, behind nominal prices, capital is a magnitude of real productivity (Nitzan

⁹There is plenty to unpack in Figure 6 with additional analysis. Most pressing, perhaps, is an analysis of why effects of stagflation on Hollywood's differential accumulation roughly lag 15 years. This analysis of lag will have to be saved for another research paper.

¹⁰For a fuller explanation of the differences between breadth and depth strategies of capital accumulation, see Chapters 15 and 16 of Nitzan and Bichler (2009).

& Bichler, 2009). When a theory assumes that capital is a productive magnitude – utils or socially necessary abstract labour time – severe periods of unemployment choke the productive engine that, theoretically, drives accumulation. In terms of inflation, the dominant narrative is still that firms are reactive price-takers in the macroeconomics of inflation. Theories of monopoly power do consider the ability of firms to raise prices or hold them high when demand drops (Kalecki, 1971; Sweezy, 1939). Yet, studies of monopoly power can frequently assume that monopoly pricing is the addition of a marginal advantage to a price that, at its core, is derived from productivity.

When capital is instead conceptualized as a power process that involves – but is not a quantity of – production, accumulation through depth can be examined without making productivity the concept that defines the theoretical significance of dominant firms successfully profiting from (unproductive) stagnation or (financial) inflation. In fact, the political economic history of Hollywood’s major studios is filled with long periods of accumulation through depth, and these periods occur more frequently than periods of breadth (McMahon, 2022, p. 134-139).

Hollywood strategies to accumulate through depth certainly involve increasing earnings per employee, but it can also involve increasing *earnings per project*, such as earnings per film. A strategy to produce fewer projects might appear to be a strategy to reduce the number of employees, just expressed differently. However, the impacts of a reduction in the number of Hollywood projects can be severe for subsets of employees in Hollywood, such as artists that build their income with several roles or jobs. Moreover, the reduction in the number of projects can signal to both employed and job-seeking artists that certain opportunities, such as a major Hollywood film project, will be rare.¹¹

Figure 7 plots the number of major film releases in Hollywood and marks when strikes occur in the history of stagnating major film releases. A major film release is defined as a film that is produced or distributed by a studio that, at the time of release, is a member of the trade association that was called the Motion Picture Association of America (MPAA) for over 70 years. In 2019 the MPAA was renamed as the Motion Picture Association (MPA) and Netflix joined as a member. Prime Video & Amazon MGM Studios became a member in 2024.

Panel A of Figure 7 plots the annual number of major film releases from 1933 to 2023. The long historical decline of annual film output is easy to see. Major studios in the 1930s and early 1940s collectively put out almost 400 films annually; nowadays, two hundred major releases a year would be considered a glut. Panel B plots the 5-year rates of change from the data in Panel A. For example, if the value for 2010 is -27.3% , this means that the annual film output of 2010 is -27.3% smaller than it was in 2005.

There are exceptions to the nearly permanent existence of film stagnation at the level of major Hollywood releases. These exceptions are mostly bursts of momentary increases in film output. Yet there is a one significant period: the one from 1990 to 2000. As it also can be seen with motion picture and sound employment in Figure 5, the period from 1990 to 2000 was one of expanding production, as Hollywood was releasing films at a level that was not seen in decades. This period also did not have a significant labour strike (see Table 1). In fact, labour strikes have been infrequent events during significant increases of film production. Only three strikes occurred when the 5-year rate of change in Panel B was

¹¹For a more thorough application Bichler and Nitzan’s capital-as-power theory to Hollywood, see McMahon (2022), particularly Chapter 5.

above the 75th percentile of +6.4%: the 1952 strikes of the Screen Writers Guild and the Screen Actors Guild, and the 1982 strike of the Motion Picture Screen Cartoonists Guild, IATSE Local 839.

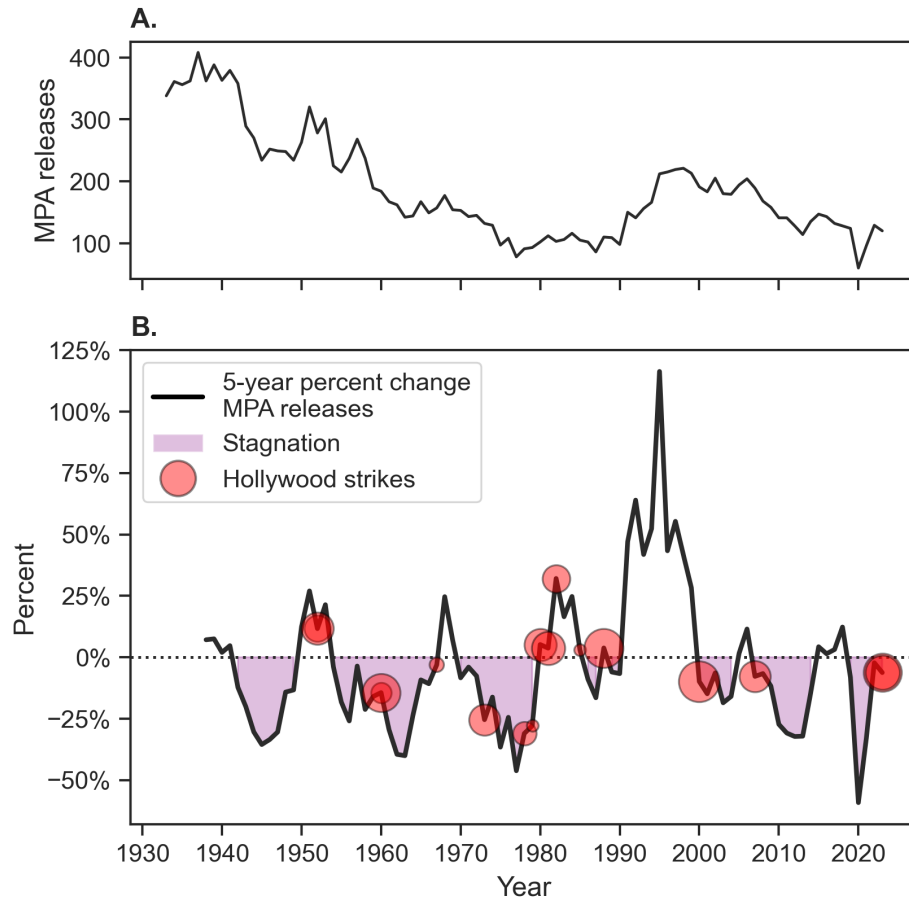


Figure 7: *Stagnation of film production and strikes in Hollywood*

Source: Finler (2003) for US theatrical releases from 1933 to 2002; MPAA Theatrical Market Statistics and MPA Theme Reports for US theatrical releases from 2003 to 2021. As of February 2026, the last available MPA Theme Report is 2021. For an explanation of the methods used to estimate major film releases after 2021, see Appendix C.

4.2 Managerial hierarchy in Hollywood

Here's something else, Bob. I have eight different bosses right now.

Office Space

As Powdermaker (1950) noted in her anthropological study of the studio system, not every filmmaker or artist in Hollywood is strongly opposed to the control of artistic creativity

by management. Some appear more than happy to obey the orders of management if the payoff is fame and fortune. But even if the dislike of the control of artistic creativity in Hollywood was or is never universal, there is a hierarchical relationship that prevents artists from having the last word on their creative decisions.

The hierarchical power that gives management the ability to control the product and process of labour is certainly not unique to Hollywood filmmaking (Marglin, 1974). However, the artistic and technical characteristics of filmmaking can produce distinct antagonisms over the ability of management to, when needed, sabotage creativity in the interests of profit.

First, management can pressure artists to make a film in a certain way. This type of pressure is not the same thing as a physical or technical limit to producing what is envisioned. For example, Hollywood's demand for complete coverage – shooting scenes from multiple angles and distances – defers artistic decisions to editing and, importantly, gives material for producers to use with their right of final cut (Bordwell, 2006; Nykvist, 1981).

Second, there are institutional barriers that protect the power of management against artists that are willing to fight for more creative control in Hollywood. Ever since the inclusion of cinematic art in American copyright law, which recognizes film as its own artistic medium rather than an appendage of either photography or theatre, the rights of cinematic expression have almost always gone to the film producer, the distributor or both. In other words, ultimate power of control went not to the film creators, but to the owners. And while the United States did implement the Berne Convention in 1988¹², Congress also made it explicit that it would take a “minimalist” approach to the issue of moral rights. This minimalist approach has refused to recognize that artists naturally possess moral rights over their works (Salokannel, 2003).

Without a firm legal foundation for artists to exercise their moral rights in the United States, film industry artists must negotiate to have greater control over their product. Dougherty (2023) demonstrates how directors, actors, and screenwriters can try to build two types of moral rights – the right to integrity and the right to attribution – “privately”, through collective bargaining and individual contracts. The key phrase in the last sentence is “can try”. First, the standard in Hollywood is to set the moral rights of artists at zero:

Although the US Copyright Office found the private ordering network to be “robust”, it is a common practice in US audiovisual industry contracts for creative talent to waive, and to agree not to assert claims for violation of, moral rights as such. Indeed, such a provision is viewed by many production attorneys as one of the “holy trinity” of provisions that must be included in virtually every contract in connection with the creation of an audiovisual work. (Dougherty, 2023, p. 170)

Second, audiovisual collective agreements are typically constructed with contractual minimums that producers are not allowed to go “below”. Minimums related to the rights of

¹²The Berne Convention states that “Independently of the author's economic rights, and even after the transfer of the said rights, the author shall have the right to claim authorship of the work and to object to any distortion, mutilation or other modification of, or other derogatory action in relation to, the said work, which would be prejudicial to his [sic.] honour or reputation.” (Kamina, 2002, p. 286)

integrity will often require that artists are notified or consulted when producers make changes to the product. Notification and consultation are relatively toothless mechanisms without extra decision-making powers.¹³ Extra decision-making powers, such as a director having creative control after the submission of the directors cut, are only written into the individual contracts of very few directors and actors (Dougherty, 2023). And even then, these powers stack onto the minimums of a collective agreement for only the duration of project. The creative control that is granted to an individual in their contract is rare; it is even rarer for an artist to have contractually-given moral rights consistently throughout a long career in directing, acting, or screenwriting.

At the ground level of labour relations in Hollywood, an artist union might not see all the ways that differential accumulation drives Hollywood to sabotage creativity in the pursuit of profit. What would be visible are changes to the management-labour relationship. If stagflation is a core strategy of Hollywood's differential accumulation, changes to employment are likely to raise tensions between management and labour. Figure 8 uses occupational statistics to count the number of managers in the American film industry. It appears that a rise of stagflation creates demands for employment *growth* in management positions. Figure 9 estimates the hierarchical tension that is produced through the ratio of the employment size of management to artists, which is the total employment size of actors, directors, producers and writers in Occupational Employment and Wage Statistics (OEWS).¹⁴ The correlation of the log of the ratio to the stagflation index (+0.32) is lower than the correlation of the log of employment size of management to the stagflation index (+0.45). Nevertheless, stagflation in Hollywood will often strengthen the size of management, both in absolute terms and relative to the types of artists that bargain through unions.

¹³Phil Alden Robinson, screenwriter, director and the representative for the Writers Guild of America, spoke about the difference between objection and consultation, and the limits of the latter, at a 1990 United States Congressional Hearing before the Subcommittee on Courts, Intellectual Property and the Administration of Justice: "Mr. ROBINSON. Well, in fact, what we are asking for, we are saying, "You can do whatever you want to but we retain the right to object to it, if you change it in a way that"—

Mr. BERMAN [Congressman for California's 26th district]. Here is my problem, this word objection.

Mr. ROBINSON. Yes, sir.

Mr. BERMAN. Consultation, I understand. And I understand your version of consultation which is, "Come on in; tell us what you think. If we like what you say, we may do it, but we are going to decide and all the cards are in our hand". That is what consultation is. It is better to have it than not. ... But now registering your right to object, what does that mean? Is that, you can block [a film] from being shown in an [edited] form?

Mr. ROBINSON. To me the right to object is the right to objectively object. It is not to have freedom of speech, to say, "Wait I object." And they say, "Thank you, goodbye" ... And my limited understanding of the Berne Convention is that moral rights includes the right to object. It seems to me that we need some way to redress our grievances. Right now, we do not have one other than the individual clout of the director or the writer. When they cut up my film or when they change it in a way that I feel damages me, where can I go? Who do I talk to under the present system?" (Robinson, 1990, p. 209)

¹⁴See Appendix D for details of data collection methods with OEWS data.



Figure 8: *Stagflation and the number of managers in the US motion picture video industries (NAICS: 512100)*

Note: SIC code 7810 (Motion Picture Production and Allied Services) is used for the years 1990, 1993, 1997, 1999, 2000.

Source: Occupational Employment and Wage Statistics (OEWS), US Bureau of Labor Statistics for number of employees in Management Occupations (11-000).

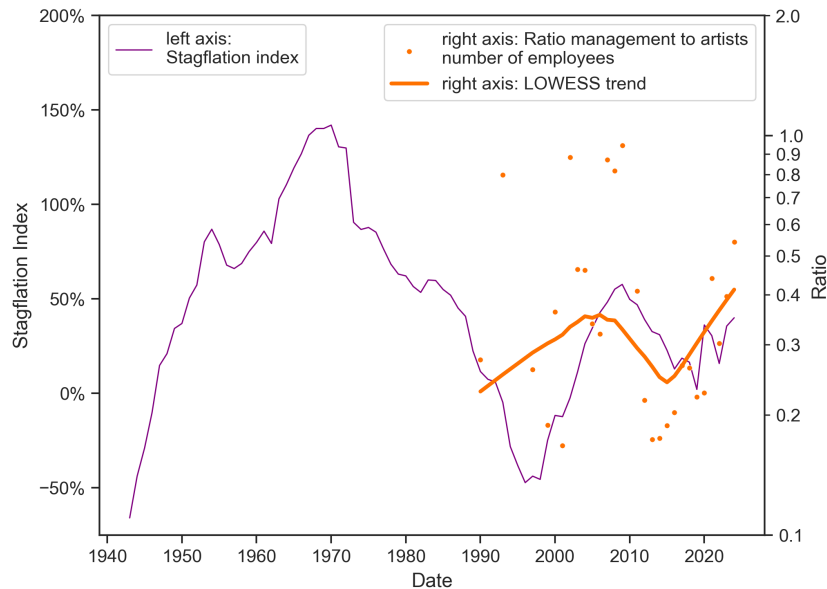


Figure 9: *Stagflation and the ratio of managers to artists in the US motion picture video industries (NAICS: 512100)*

Note: SIC code 7810 (Motion Picture Production and Allied Services) is used for the years 1990, 1993, 1997, 1999, 2000.

Source: Occupational Employment and Wage Statistics (OEWS), US Bureau of Labor Statistics for number of employees in Management Occupations (11-000). Appendix D summarizes how number of artists in the US motion picture video industries was measured.

5 Conclusion

Like any empirical analysis in political economy, there is no guarantee that trends in this paper will carry on into the future. Years later we could find a different relationship between Hollywood's differential accumulation and the frequency of strikes. There could also be new versions of old ideas in industrial relations, where something like the 1933 National Recovery Administration code of practice uses government pressure to have Hollywood unions compromise with studios on the terms of collective bargaining (Cohen, 2016).

Uncertainty of how trends in this paper will carry into future does not foreclose all considerations of future labour relations in Hollywood. The tendency for strikes in Hollywood to occur when major studios experience danger zones of differential accumulation could weaken through a reordering of film and television labour in America. Since the 1990s there have been parallel declines of union membership in the American motion picture industries and California's share of motion picture employment in the United States. Figure 10 shows a positive correlation (+0.47) between the declining rate of union membership in the motion picture industry and a declining 24-month moving average of California's share of national employment in motion picture and sound industries.

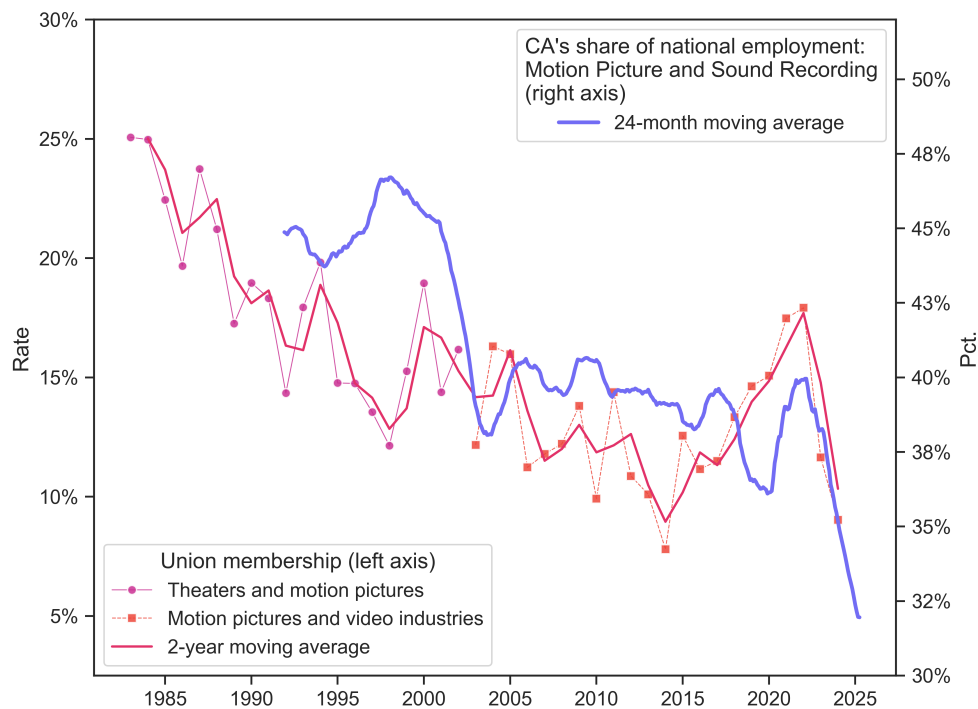


Figure 10: *Motion picture union membership and California's share of motion picture employment*

Source: Union membership data comes from Hirsch, Barry T., David A. Macpherson, and William E. Even (2025). Union Membership, Coverage, and Earnings from the CPS, found on unionstats.com. FRED for All Employees, Motion Picture and Sound Recording Industries (CES5051200001) and All Employees: Information: Motion Picture and Sound Recording Industries in California (SMU06000005051200001SA).

In the short term, it seems unlikely that Hollywood major studios can forget about California labour entirely. Los Angeles is still America's largest source of actors, screenwriters, makeup artists, set designers, stunt performers, and other jobs for film and television production. Yet California's share of national employment in the motion pictures and sound recording has declined in the last three decades, and the left-axis series in Figure 10 indicates that motion picture union membership coverage in the United States has declined from around 25 percent in 1984 to less than 10 percent in 2024. If these trends continue, Hollywood studios might successfully alter the political economic roots of motion picture union power in California. Gone could be the era when Hollywood unions are big enough for their labour strikes to overlap with danger zones of differential accumulation.

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A Hollywood's major studios

Table 3 lists the seven major studios and provides additional information on corporate ownership and the sources for financial data. Twentieth-Century Fox was sold to Disney in 2019, which means that its revenues and operating income are counted under the filmed entertainment segment of Disney's business operations. For this paper, financial data on Netflix began to be included in the major studio dataset in 2019. One could argue that Netflix was a major studio before 2019; nevertheless, this paper's threshold for Netflix joining the ranks of major Hollywood studios was the year it became a member of the Motion Picture Association (MPA).

Table 3: Major Hollywood Studios, 1950-2023

Studio	Parents (period of ownership)	Data sources
Columbia	Coca-Cola (1982-1987) Columbia Pictures Ent./TriStar (1987-1989) Sony (1989-2023)	Annual Reports (1943-1949, 1991-2023); Compustat (1950-1981)
Disney		Annual Reports (1983-2023)
Fox	News Corporation (1985-2012) Twenty-First Century Fox (2013-2018) Disney (2019-2023)	Annual Reports (1941-1949, 1993-2018); Compustat (1950-1992)
Netflix		Compustat (2019-2023)
Paramount	Gulf + Western (1966-1989) Paramount Communications (1989-1994) Viacom (1995-2019) ViacomCBS (2019-2022) Paramount Global (2022-2023)	Annual Reports (1941-1960, 1994-2023); Compustat (1961-1994)
Warner Bros.	Warner Bros.-Seven Arts (1967-1969) Kinney National Company (1969-1971) Warner Communications (1972-1989) Time Warner (1990-2018) Warner Media (2018-2021) Warner Bros. Discovery (2022-2023)	Annual Reports (1941-1957, 1990-2023); Compustat (1958-1989)
Universal	MCA (1964-1989) Matsushita (1990-1995) Seagram Ltd. (1995-2000) Vivendi (2000-2011) GE (2004-2012) Comcast (2009-2023)	Annual Reports (1941-1953, 1993-2023); Compustat (1954-1989)

Note: Excluded from the table are instances of a parent changing its name because of other acquisitions or sales of business operations – e.g., Time Warner → AOL Time Warner → Time Warner. For a longer rationale on my approach to gathering data on Hollywood film operations, see McMahon (2022).

Relevant sources: For histories of the Hollywood film business and profiles of the major studios after the Paramount case of 1948, see Cook (2000); Langford (2010); Maltby (2003); Prince (2000); Wasko (1994, 2003). For details on the conglomeration and ownership structure of Hollywood, see Bagdikian (2004); Compaine and Gomery (2000); Kunz (2007); Thomas and Nain (2004).

B Logistic regression results

Table 4: Logit Regression Results

Dep. Variable:	Strike	No. Observations:	74			
Model:	Logit	Df Residuals:	72			
Method:	MLE	Df Model:	1			
Date:	Tue, 05 Aug 2025	Pseudo R-squ.:	0.01015			
Time:	21:35:13	Log-Likelihood:	-36.927			
converged:	True	LL-Null:	-37.305			
Covariance Type:	nonrobust	LLR p-value:	0.3841			
	coef	std err	z	P> z 	[0.025	0.975]
const	-1.3555	0.291	-4.663	0.000	-1.925	-0.786
OI_mean_3y_avg_DIFF	-0.0094	0.012	-0.808	0.419	-0.032	0.013

C Counting major film releases after 2021

As of February 2026, the last available MPA Theme Report is 2021. For 2022 and 2023, movies listed on IMDbPro were searched for with the following filters:

1. A movie's country of origin was the United States
2. A movie has an Motion Picture Association (MPA) rating (G, PG, PG-13, or R).

Distributor data was collected for every returned from the search. Each distributor in the data was manually labelled as being major studio or not. Table 5 shows distributors that were counted as distributors of a major film releases.

Some distributors in the dataset are sub-divisions of the major studios – e.g., Focus Features, which released 8 films in 2022 and 10 films in 2023, is a subdivision of Universal Pictures, which is itself a subdivision of Comcast. To avoid the error of mislabelling subdivisions, the conservative approach was to label films under “major studio” when the name of the distributor was clearly a corporate parent – e.g., Sony Pictures – or a flagship studio in a conglomerate hierarchy – e.g., 20th Century Studios.

Excluded from the label of “major studio” were films that were distributed by home entertainment divisions – e.g., Warner Bros. Home Entertainment – or for direct streaming – e.g., Disney+. The one exception to excluding direct streaming is Netflix. Almost every film distributed by Netflix will not have a theatrical release, but unlike streaming services like Disney+, Netflix is not a branch of a filmed entertainment division.

Table 5: Major studio film releases, 2022 & 2023

2022		2023	
Distributor	Releases	Distributor	Releases
20th Century Studios	9	20th Century Studios	3
Netflix	47	Netflix	42
Paramount Distribution	7	Paramount Distribution	7
Paramount Global Content Dis- tribution	1	Paramount Global	3
Paramount Pictures	10	Paramount Global	3
Sony Pictures Classics	4	Paramount Global Content Dis- tribution	1
Sony Pictures Entertainment	2	Paramount Pictures	7
Sony Pictures Releasing	11	Sony Pictures Classics	7
Universal Pictures	20	Sony Pictures Releasing	13
Walt Disney Studios Motion Pic- tures	10	Universal Pictures	14
Warner Bros.	8	Walt Disney Studios Motion Pic- tures	8
		Warner Bros.	14
		Universal Pictures Content Group	1

D Counting number of artists in OEWS data

All of the occupational data was taken from [Occupational Employment and Wage Statistics \(OEWS\) Tables](#). For the years 1990, 1993, and 1997, the annual number of artists are the sum of two occupation groups for Motion Picture Production and Allied Services (SIC 7810):

- OCC code 34002: Writers & Editors
- OCC code 34056: Producers, Directors, Actors & Other Entertainers

For 1999 to 2001, the annual number of artists are the sum of three occupation groups for Motion Picture Production and Allied Services (SIC 7810):

- OCC code 27-2011: Actors
- OCC code 27-2012: Producers and Directors
- OCC code 27-3043: Writers and Authors

The same three occupation groups are used from 2002 to 2024. Occupational data for these years counts occupations in the Motion Picture and Video Industries (NAICS code 512100).