

# Industry Report

## Economic and Production Impacts of the 2009 California Film and Television Tax Credit

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## **A Note on the UCLA-IRLE and Headway Project Reports**

This report, including the economic impact of the California Film & Television Tax Credit, as well as the analysis of the LAEDC study were funded by The Headway Project and are also published in a separate Headway Project report titled "There's No Place Like Home: Bringing Film & Television Production Home to California," by Michael Kong and Aniruddha Bette. It can be found on their website at [www.headwayproject.org](http://www.headwayproject.org). The Headway Project contracted with UCLA-IRLE to conduct the economic analysis for this study, and to provide our specific expertise in the area of measuring employment subsidy programs such as this tax credit. Thus, for this report, UCLA-IRLE provided the economic analysis piece and The Headway Project provided the public policy piece.

Although published in two editions, the economic findings in the two reports were both produced by UCLA-IRLE. The UCLA-IRLE version is more academically exhaustive (containing a lengthy literature review of studies produced on other states, for instance). The version on The Headway Project website is shorter and more accessible to the general reader, and contains recommendations for program administrators and state lawmakers. In order to maintain its academic objectivity and political neutrality, UCLA did not wish to be a part of any of the policy recommendations contained in this report, and thus published its own version containing only the economic analysis.

It is important to note that all of the economic findings, as well as the analysis of the LAEDC study, were produced by UCLA-IRLE and are identical in both reports. UCLA-IRLE approved all of the economic findings published in The Headway Project report, and The Headway Project approved the publication of the UCLA-IRLE report.

## Executive Summary

This report investigates the importance and impact of the California Film and Television Tax Credit. We examine both the immediate economic impact of the tax credit and the longer-term impacts on California's dominance in the film and television industry. The evidence suggests that film incentives do influence production location decisions. While not the only factor involved in the decision making process, productions do seem to follow the incentives.

Following the June, 2011 publication by the Los Angeles Economic Development Corporation (LAEDC) of an analysis of the California Film & Television Tax Credit Program, and in the context of the debate around the renewal of this incentive program, it is important to understand its full impact. Our report is unique in that it provides a detailed review of the literature on production incentives, provides the analysis of an original survey of actual film and television producers who have applied for this tax credit in California, and conducts a thorough analysis of the LAEDC report.

- Research on production location decisions indicates that incentives have a significant impact on shifting productions away from California and in the emergence of new production locations in Canada, other countries, and other states. The vast majority of states have some form of a film incentive program, including tax credits, rebates, and exemptions.
- While incentives do play a role in production location decisions, other factors must also be considered. Significant labor costs differences can also affect location decisions. However, the potential labor savings from low-wage states are mitigated by the huge cost of locating a production out of state, and also by the lack of available, skilled production crews, resulting in the importing of labor from other states.
- Important factors that tend to keep film and television production in California are production crew depth and quality, technological expertise, and a critical mass of production and post-production facilities. The potential development of infrastructure in other locales can threaten California's comparative advantage.
- An original survey of producers conducted for this report examines the role that incentives, labor costs, and infrastructure play in the production location decisions of California film and television producers.

- 90% of survey respondents indicated that a tax credit was somewhat or very important to their decision to film in California and 94% of respondents who filmed in another state, reported that they received a tax credit in the state in which they filmed.
- Difficulties encountered by respondents when applying or using the credit included the lack of transferability of the credit, difficulties in monetizing the credit, completing production before getting a response on the application, and being disqualified for the credit because of the way people working on the production were classified.
- The LAEDC report found that the California tax credit returned \$1.13 for every \$1 of tax subsidy and concluded that the subsidy provided a net positive return to the state. While the subsidy does create jobs, we find a problem in the analysis of the fiscal impact of the subsidy on the state budget. The LAEDC assumes that all productions applying for a subsidy but not receiving one will leave the state. However, data from a subsequent year show that of the productions that were produced despite applying for, but not receiving a subsidy, 5 out 14 productions, accounting for 8.4% of the total production budgets, filmed in California without getting a tax credit. Thus, the economic benefits associated with those five productions should not be included in calculating the return to the state. This reduces the fiscal impact of the tax credit such that the state may recoup as much as \$1.04 per \$1 of tax credit allocated, but not \$1.13.

We conclude that while the economic benefit to the state may not be as great as calculated by the LAEDC, the California tax credit is creating jobs and is likely providing an immediate economic benefit to the state. Furthermore, it is keeping productions in the state, which will serve to maintain California's long-run dominance in the film and television industry. Given that the industry is such a large part of California's economy, we argue that it is important to maintain California's status as an industry leader with a qualified indigenous workforce.

## **Economic and Production Impacts of the California Film and Television Tax Credit**

### **Introduction**

This report investigates the importance and impact of the California Film and Television Tax Credit. We examine both the immediate economic impact of the tax credit and the longer-term impacts on California's dominance in the film and television industry. The evidence suggests that film incentives do influence production location decisions. While not the only factor involved in the decision making process, productions do seem to follow the incentives.

Following the recent publication by the Los Angeles Economic Development Corporation (LAEDC) of an analysis of the California tax credit and in the context of the debate around the renewal of California's incentive program, it is important to understand the full impact of the California Film and Television Tax Credit. Our report is unique in that it provides a detailed review of the literature on production incentives, analyzes an original survey of producers in California, and conducts a thorough analysis of the LAEDC report.

We conclude that the California tax credit is likely creating jobs and a small economic benefit to the state. The LAEDC report found that the tax credit returned \$1.13 for every \$1 of tax subsidy and concluded that the subsidy provided a net positive return to the state. We find a problem in the analysis of the fiscal impact of the subsidy on the state budget. The LAEDC assumes that all productions applying for a subsidy but not receiving one will leave the state. In order for the state to break even on the tax credit, at least 88% of productions applying for but not receiving the credit would have to film outside of California. However, data from a subsequent year show that of the productions that were produced despite applying for, but not receiving a subsidy, 5 out of 14 productions, accounting for 8.4% of the total production budgets, filmed in California without getting a tax credit. Thus the economic benefits associated with those five productions should not be included in calculating the return to the state. This reduces the fiscal impact of the tax credit such that the state may recoup as much as \$1.04 per \$1 of tax credit allocated, but not \$1.13.

In addition, taking a longer term perspective, the California Film and Television Tax Credit is keeping productions in the state, which will serve to maintain California's dominance in the film and television industry. Given that the industry is such a large part of California's economy, we argue that it is important to maintain California's status as an industry leader with a qualified indigenous workforce.

This report is divided into three sections. In the first section we review the literature on production location decisions in order to examine the impact of incentives on these decisions. We

examine the role of incentives in global competition for production as well as state level incentives. Other factors that affect location decisions are labor costs, crew depth and quality, and infrastructure development. We review the effects of these factors as well. Section Two reports the results of an original survey of California film and television producers who have applied for the California Film and Television Tax Credit. Section Three provides a critical analysis of the LAEDC report on the impact of the California Film and Television Tax Credit.

## **Location Decisions**

Numerous factors influence producers' decisions about where to produce a film or television program. There is a complex relationship between incentives and the other factors contributing to production location decisions. We examine these issues here.

### Film Industry Incentives

Research on production location decisions indicates that incentives have a significant impact on shifting productions away from California and in the emergence of new production locations in Canada, other countries, and other states. Other locations have chipped away at California's lead with lower costs, incentives that are easier to qualify for, and fewer regulatory obstacles to production. Yet, for any given production location decision, while incentives are a significant factor, whether they are the tipping point in determining if a production stays or leaves depends on the full consideration of all relevant factors, such as total production costs, production requirements and preferences, and availability of location alternatives.

### *Global Incentives*

In the global competition for film productions, Stephen Katz at the Center for Entertainment Industry Data and Research (CEIDR) concluded that financial incentive programs around the world significantly influenced the choice to film outside the U.S., but also acknowledged the relevancy of other cost factors such as differences in wages and exchange rates, producers' preferences for the U.S., and artistic factors. Katz' 2006 report analyzed production location trends from 1998 to 2005 by genre: (1) feature films, (2) made-for-TV and mini-series as well as international and domestic factors, and (3) broadcast and cable TV shows.

As evidence of the impact of incentives on feature film production, Katz cited the example of Canada's introduction of subsidies in 1998 and its subsequent increase in productions at a time when

labor and exchange rates were stable. In Canada, the development of the industry was boosted by incentives from the federal government and subsequent enhancements from the provinces. In combination with savings from labor and a weaker Canadian dollar, the industry now provides services at a level competitive with New York and Los Angeles. The link between the timing of the introduction of subsidy programs in other foreign countries and productions leaving the U.S. was not as strong as the Canadian example. Nonetheless there does appear to be a relationship, since as subsidy programs have begun, the U.S. share of films has declined as compared to those shot outside the U.S. California fared better than other U.S. states in terms of competing with foreign locations because of an on-going “competitive edge” in “talent base and infrastructure” (Katz 2006, 1-4).

In the category of “Made-for-Television Movies and Miniseries,” 90% of productions stay in the U.S. or Canada as compared to only 10% that leave North America for other countries. Katz at the Center for Entertainment Industry Data and Research attributes this to three factors: foreign production incentives do not sufficiently outweigh the added costs of going abroad; the limits of other countries’ capacity in terms of production staff and infrastructure; and the ability to obtain competitive labor costs from unions or to use non-union labor on smaller budget productions in both the U.S. and Canada. Between the U.S. and Canada the choice has evened out to slightly favor the U.S. because of U.S. legislation enacted in 2004 benefiting television production (Katz 2006, 5-6). “Broadcast and Cable Television Productions,” a category including scripted and reality programs, were less likely to leave the country than films. This is because a television series might film 9 months out of each year for several years, rather than filming for a relatively short 3-month stint abroad. This longer outlook may create complications in “relocat[ing] the necessary American talent” (Katz 2006, 6).

#### *State-Level Incentives*

Within the U.S., production location decisions are also impacted by the differing incentives offered in competing states. In reviewing the reports available on state programs, researcher Darcy Rollins Saas at the Federal Reserve Bank of Boston found in 2006 that film tax credit programs successfully lured productions to some states, but also spent credits on productions that would have filmed in-state anyway. In 2010, Robert Tannenwald, writing for the Center on Budget and Policy Priorities in Washington, DC, stated that film production incentive programs may have succeeded in attracting productions because of high levels of subsidization. Louisiana increased from one film produced in 2002 to 54 films produced in 2007. Prior to Louisiana’s 2002 enactment of tax credits, the state’s annual film production ranged from \$10 million to \$30 million and was inconsistent. After

enactment, it increased to \$354.7 million in 2004. Rhode Island, Massachusetts, and New Mexico also experienced large increases in film production spending after enacting tax credits (Economic Research Associates 2009; Saas 2006; Tannenwald 2010). However, as cited in Saas (2006), in March 2006, the *New York Times* reported that most of the credits in New York went to existing, not new, productions.

Recently, New York conducted a natural experiment demonstrating the potential impact of incentives. According to the New York State Department of Taxation and Finance (2010), although approved through 2013, New York State's production tax credit program ran out of money in 2009. By the end of 2009, additional money had been allocated for the program. However, during the time that New York had no ability to allocate tax credits to new productions, there was a dramatic decline in the filming of television pilots. In the spring of 2008, 20 television pilots filmed in New York. However in 2009, only four pilots were able to apply for the tax credit before the funds ran out. *Los Angeles Times* reporter, Matea Gold, and *The Observer* reporter, Joanna Walters, indicated that no other pilots were shot in New York during the spring of 2009. In 2010, when there was again money available for tax credits, many new and returning pilots shot in the state. In the 2010-2011 television season, 22 TV pilots filmed in New York City (Gold 2009; New York State Department of Taxation and Finance 2010; Walters 2011). Some pilots may have waited and shot a year later in 2010, but it is likely that in 2009 many of the pilots that would have filmed in New York went to a different state with an incentive. Supporting this possibility is research by Canadian researchers, Charles Davis and Janice Kaye (2010), which highlights concerns about retaliation against locations that withdraw their production incentives.

In 2007, researchers Isaiah Litvak and Marilyn Litvak noted that the "project-based" nature of film and television productions allows them to easily pick up and leave in order to take advantage of cost differences in different locations. However, incentives are not the only deciding factor, rather total cost and production requirements taken together must be favorable for a production to move location. Total production costs consist of above- and below-the-line costs, exchange rates, residuals, and government incentives or lack thereof, while production requirements include "infrastructure, crew depth and quality, and locations that are appropriate and accessible" (Litvak and Litvak 2007, 8). Artistic, creative, and director or actors' preferences are secondary and are only taken into consideration while making the final decision about location (Litvak and Litvak 2006; 2007).

To support their argument, Litvak and Litvak (2007) analyze the decision factors in two case studies: *Cold Mountain* and *Walk the Line*. North Carolina lobbied producers hard for *Cold Mountain*, but lost out to Romania. A key factor was the producer/director's preference for high above-the-line spending to pay for top actors on an \$83 million budget (as compared to MPAA estimate of an average

studio budget of \$60 million with around one-third spent on location), putting pressure to save on below-the-line costs. The film saved on labor that was a fraction of the US labor cost and benefited from exchange rates. Tennessee persuaded *Walk the Line*, a \$28 million budget film, to film in its state rather than save \$3 million by filming in Louisiana, primarily by giving “soft incentives” (free space/use of government buildings, local hotel/motel tax refunds, use of state plane) and actress Reese Witherspoon’s influence on the studio. In this second example, soft incentives were as important as incentives created through tax credits.

While incentives have the potential to create a competitive edge, their full impact remains unclear. For instance, the research brief for the California Legislature written in March 2011 by Brian Sala and Maeve Roche of the California Research Bureau did not find a clear impact of the proliferation of incentive programs in other states on California. Their presentation of FilmL.A. data on permit production days in the Los Angeles area demonstrates declines in film production. This may be an indicator of possible relocation of productions, but U.S. government data on employment (in the broader category of film and video production) and a summary of studies on state programs, provided by Sala and Roche, did not suggest a trend of job loss over the last decade. Anecdotal evidence suggests that some films that could have been produced in California left and were produced in other states. However, the largest growth in production related jobs in other states seems to have been immediately following the passage of incentive programs. For the most part, the number of production jobs in other states has held steady or declined since the years immediately after these programs were implemented. Thus, there may be a trend of film productions being made elsewhere, but this trend is more likely reflecting flight to locales outside the U.S. such as Canada (with well-established incentives) and Romania (with low labor costs). Their findings are similar to a 2005 report to the legislature produced by the California Employment Development Department which also found it difficult to attribute employment trends to a particular source: “Because film production location studies differ on how much film activity is occurring outside California, it is less clear whether falling employment is due to “runaway production” or to other factors” (Employment Development Department 2005, vii).

The vast majority of states have some form of a film incentive program, including tax credits, rebates, and exemptions. According to Sala and Roche (2011), the number of states offering a production incentive (although not necessarily a tax credit) increased from 5 in 2002 to a high of 44 in 2010. However, organizations tracking state programs differ in their counts of states. In a report written for the Tax Foundation in 2010, Will Luther stated that 44 states had an incentive program in 2009 and

Tannenwald (2010) found that 43 states had such programs in 2010. In January of 2011, the National Conference of State Legislatures (NCSL) reported that 45 states and Puerto Rico offered incentives.

Sala and Roche's (2011) analysis of other academic and state government studies of incentive programs in a variety of states demonstrated that in many states other than California, non-residents received most of the jobs created. Sala and Roche's analysis indicated that many of these out-of-state employees may have been from California. Also coming to this same conclusion are a number of other reports, coming from a variety of institutions (e.g., Joseph Henchman (2011) and Will Luther (2010), both of the Tax Foundation, Robert Tannenwald (2009), writing for the Center on Budget and Policy Priorities, and Jennifer Weiner (2009) a researcher at the New England Public Policy Center of the Federal Reserve Bank of Boston). For example, as noted by Navjeet Bal of the Massachusetts Department of Revenue, in Massachusetts in 2009 only 33% of spending on eligible expenses from productions was paid to Massachusetts residents or Massachusetts-based businesses. Similarly, only 22% of new production related wages and salaries were paid to Massachusetts residents in 2011 (Bal 2011).

News reports indicate that recent state budget and economic problems have caused lawmakers to question the value or the size of film tax incentives. States such as Michigan have been severely cutting back on public services in the face of more than a billion dollar budget gap. In Wisconsin, a state report showing a lack of positive returns on the film incentive prompted the Governor to reduce the program. In fact, challenges to state programs occurred in nine states, while eight states renewed or increased programs. Henchman at the Tax Foundation has tracked the number and value of film and television tax incentives by year since 1999. He found a recent peak in 2010 of 40 states offering a total of \$1.4 billion in incentives and a subsequent scale back that will result in 35 states having incentive programs as of 2012 (Henchman 2011).

### Labor Costs

While incentives do play a role in production location decisions, other factors must also be considered. Researchers Allen Scott and Naomi Pope (2007) argue that the global nature of production may relegate the impact of state film tax incentives to being temporary and marginal, as has occurred in other industries. Filming as an outsourced activity appears to be following the path of manufacturing. The savings from locations outside of North America may be at levels incentives cannot match. Labor may be 25-35% cheaper than the U.S. New facilities with lower costs are also adding to the appeal of

locations such as Eastern Europe, New Zealand, and Australia. Labor, studio space, and subsidies all add up to favorable conditions abroad (Scott and Pope 2007).

Researcher Adrian McDonald (2007) acknowledges the cheaper labor costs in countries such as in eastern European countries like Romania. He cites the large overall increase in production spending (927%) across Eastern Europe between 2001 and 2005. As long as labor costs remain low in poorer countries, industrialized nations like the U.S. and Canada will have a difficult time competing for productions, even with generous tax incentives. Nonetheless, citing the increase of production in Canada during a time when there was no significant change in the exchange rate, McDonald concludes that within the developed world, government incentives are the main driver of economic runaways.

Within the U.S., government employment data do indicate significant labor cost differences amongst the states. While union contracts may call for uniform benefit levels throughout the country, workers in one location may earn significantly more or less than workers in another (Bureau of Labor Statistics, 2011). However, the potential labor savings from low-wage states are mitigated by the lack of available, skilled production crews, resulting in the importing of labor from other states. Some of this imported labor undoubtedly comes from California, creating a lack of clarity of the trends in California film and television industry employment.

### Crew Depth and Quality

A salient dimension of labor affecting film location seems to be crew depth and quality. Staffing capacity limits decisions on where a production can go. Researchers Susan Christopherson and Ned Rightor (2010) describe this as a paradox created by the problem of availability of specialized professional and technical skills. “A state has to get multiple projects to keep skilled crew employed consistently (so that they won’t leave for greener pastures or take a job outside the industry), but it also has to have enough skilled crew *unemployed* and available so that they can attract new productions.” (Christopherson and Rightor 2010, 4). Anecdotal information from industry professionals supports the view that this paradox impacts production location decisions. In describing some recent choices for film locations, Greg Marcks, a director and screenwriter, noted that in 2002, he had considered New Mexico for the incentives, which required local hires to qualify, but he ended up filming in Los Angeles because the entire local crew base was already employed on other projects (Marcks 2007).

## Infrastructure Development

One effect of productions moving out of California is the potential development of infrastructure in other locales. Outsourcing to Canada provides an example of both the possibility of gradual development of an industry cluster and the challenges. Davis and Kaye (2010) argue that service providers in Canada have benefited from outsourcing to Canada. They draw a distinction, however, between service provision sustained by subsidization with tax credits and independent firms that can become self-sustaining with profits from the ownership and licensing of intellectual property. When not restricted by firm origin, tax incentive programs may attract foreign productions and create work for service providers. Canada has been very successful with developing service provision, but has had more modest results in developing “business and creative” capabilities. While subsidies supporting firms that serve foreign production companies have provided opportunities for developing skills and creating steady revenues, they have potential drawbacks. These drawbacks include spending on foreign productions that could have gone to developing Canadian firms, becoming relegated to lower rungs of service providers to Hollywood, and escalation of the competition to be the lowest cost location.

Nonetheless, Canada has been quite successful in creating an industry cluster. In the 1970s, the British Columbia government initiated efforts to attract Hollywood productions to replace productions the national government had moved to Ontario and Quebec. This built a base of service providers and independent production firms. Outsourcing increased rapidly with the introduction of Canadian incentives in the late 1990s. Canada offered foreign productions lower labor costs, accommodating labor unions, proximity to Southern California, good weather, and range of scenery. For Canada, the industry has attracted work for service providers whose employees have gradually moved up to more skilled production work and provided financial resources for some firms to stay in business long enough to develop higher-order creative and business capabilities. Despite the growth of the film and television industry in Canada, Davis and Kaye assert that strategies such as international partnerships rather than service provision would be even more effective in developing the industry (Davis and Kaye 2010).

The literature on relocation within the U.S. reaches varying conclusions on the current state of cluster development outside of Southern California and New York. Some argue that the infrastructure has already developed in states such as Louisiana or New Mexico, while others point to the enduring dominance of the two leaders. Klownen, Chatterjee, and Hynek’s 2010 report for the Milken Institute focused on the impact of incentives on the decline in film production and what they characterize as a

drop in movie and video industry employment between 1997 and 2008.<sup>1</sup> The authors attributed these declines to increasing competition from Canada and some U.S. states that already have incentives, a qualified workforce, low costs, and a developed infrastructure.

Infrastructure development also extends to post-production where technology enables the work to be done outside the U.S. or in other states at lower costs than in California. Thus, many states have “built a true critical mass of production and post-production activity that can sustain ongoing work rather than just landing one-shot individual projects” (Klowden, Chatterjee, and Hynek 2010, 4). For instance, as indicated in a 2010 report published by the Los Angeles Economic Development Corporation, infrastructure development in Michigan, Louisiana, and New Mexico, has included construction of studios, sound stages, and post-production facilities (Kyser, Sidhu, Ritter, and Guerra 2010).

Kyser et al. (2010), in an industry report for the LAEDC, argue that California’s unique confluence of well-regarded film schools, the entertainment ‘community,’ production crew depth and quality, technological expertise, multiple suppliers, and jobs when not working in entertainment would be difficult imitate. Nonetheless, the Los Angeles-Orange County area has seen a decrease in its share of industry gross product from a 2004 high of 57.7% to 53.9% in 2007. The enactment of the film tax incentive and inventory stock-piling before the 2011 union contract expirations are expected to lift 2010 production levels. However, they advise maintaining the tax credit program and “monitor[ing] the results of California’s film incentive program to see if it needs to be enhanced” (Kyser et al. 2010, 12) as well as watching trends in post-production.

According to Scott and Pope (2007), Hollywood’s sustained competitive advantage in the entertainment industry endures because of a unique mix of “agglomeration economies,” artistic talent, distribution, and marketing. Some pieces of production, such as filming, began to drift away from Hollywood as early as the 1950s and this trend has increased in recent decades. The causes are both creative and economic. The economic runaways result from relative differences in labor costs, the self-contained nature of filming tasks, and financial incentives. Possible destinations may be constrained by quality and quantity of facilities and workers. As compared to pre- and post-production, film shoots are less enmeshed in the rest of the production system and can be separated for outsourcing elsewhere.

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<sup>1</sup> It should be noted, however, that there was a spike in employment beginning in 1995 and continuing through 1997, followed by a drop in employment in 1998. This drop occurred before most state incentive programs were implemented, although it does follow the implementation of Canadian film incentives. Industry employment levels did increase again between 2002 and 2008, although not quite reaching the peak employment level found in 1997.

While the shift has been significant and will likely continue, film shooting activity is one piece of a larger production and distribution system deeply embedded in Southern California.

Scott and Pope (2007) therefore conclude that there “is thus far little or no evidence to denote that a wholesale rout is in the offing” (Scott and Pope 2007, 1372). Scott and Pope contend that small-scale productions will be difficult to move because there is insufficient scale to recoup the fixed setup costs. Complex productions will be difficult to move because of the costs of bringing in specialized workers and the transaction costs of more intense control and coordination needed with the head office in Hollywood. Nevertheless, over time, the “satellite production center” might improve its capacity for handling more complex projects. Simple, repetitive filming such as some television series would, however, be easier to move (Scott and Pope 2007).

Indeed, a report by the Entertainment Industry Development Corporation (EIDC) in 2001 identifies movies-of-the-week as a major source of runaways, up from 63% of runaways in 1990 to 81% in 1998. The 2001 EIDC report and another report by the Monitor Company in 1999, provide some support for this trend of productions leaving California. The Monitor Company reports that 285 out of 1,075 film and television projects left in 1998, with most going to Canada. This represents a 185% increase over 1990, with a loss of 20,000 jobs in California over the decade. Both reports state that Hollywood’s relatively high production costs, of which labor is a large share, incentives from foreign countries such as Canada, and exchange rates are the main factors in shifting production away from Hollywood (EIDC 2001; Monitor Company 1999; Scott and Pope 2007).

States have difficulty building long-term industry clusters. Despite offering incentives for many years, they are still competing for subsidies. Through training programs in New Mexico universities and construction of studios in Louisiana, the two states have worked towards building clusters. Although this resolves some capacity issues, the new locations require continued subsidies because productions are still temporary, mobile, and not self-sufficient (Tannenwald 2010).

### Incentives & Location Decisions

Despite the ability of incentives to attract film and television production, some authors raised concerns about the sustainability of incentives and their impact on long term economic development. Litvak and Litvak (2006) asserted that these “artificially created competitive advantages through select government incentives and related subsidies are not sustainable” (Litvak and Litvak 2006, 281) and it is doubtful that they will lead to clusters of film and television production activity on scale with the “Los Angeles-Hollywood colossus.” They expressed concerns over high costs of the tax breaks and forgone

alternatives resulting from the escalating competition for projects. Litvak and Litvak argued that incentives may sway the location decisions of film productions at the margin once other production needs are met, but the prize is a temporary “floating factory,” while alternatives such as investments in improving workers’ skills or creating other business that will stay for more than a few months may yield better long-term results. The authors also question whether government officials are able to make good deals and strike the right balance in their level of spending to attract temporary enterprises.

Researchers Kathleen Wright, Stewart Karlinsky, and Kim Tarantino (2009) argue that there is a downward economic spiral when states compete against each other and end up spending more than necessary. The authors note that the generation of new economic activity is still unproven. They also indicate that there are several other shortcomings of tax incentives, including the subsidization of existing in-state businesses unrelated to film when transferable credits are sold, income and income taxes that go back home when non-resident staff and businesses leave, cash rebates as incentives that are not required to be spent in state, and the waste of spending incentives on productions that were already going to film in-state.

Wright et al. (2009) examine the impact of New York's refundable credits, which were enacted in 2004, during the period from 2003, one year before enactment, through 2006, two years after the incentives were enacted. Wright et al. report that the impacts of New York's incentives during this period are mixed in terms of census data on employment, payroll, and number of businesses with “modest growth.” In same period, California with no incentive program showed “some growth” in payroll and employment. However, Wright et al. also find that states that have little or no film industry prior to enacting motion picture tax credits are successful in luring projects. Wright et al. argue that the permanence of these effects is still uncertain and states using incentives to create a new film industry may not stimulate enough economic activity to pay for the loss in tax revenue resulting from the incentives. However, for locales where the industry is established such as, California, New York, and Vancouver, incentives may help to sustain comparative advantage.

It is clear that incentives have a significant impact on production location decisions. In particular, Canada has fared well since the introduction of film industry incentives in 1998. Furthermore, the vast majority of U.S. states have some sort of film incentive program. Labor costs differences can affect location decisions. However, labor costs advantages may be offset by a lack of crew depth and quality. On the other hand, film industry infrastructure may develop as production shifts to other locales. This incentive driven effect has been seen in Canada. While the sustainability of incentives has been questioned, the potential development of infrastructure in other locales can threaten California's long-

term comparative advantage.

### **Survey of Producers**

The literature indicates that incentives, labor costs, and infrastructure are likely to all contribute to the production location decision. However, to better understand how these decisions are made, we surveyed a group of producers who have filmed inside and outside of California. In this way, we are able to go beyond the current literature and get a first-hand account of the factors that producers think about when deciding where to make a film or television show.

### Method

We analyzed the results of an original survey of film and television producers in order to better understand how they make decisions about production location. All of the producers in the sample had applied for, but not necessarily received the California Film and Television Tax Credit at some point since the program began. Emails were sent to 111 valid email addresses. Of these 38 producers completed an on-line survey, a 34% response rate. Thus, while the response rate was excellent for a survey, the sample is small. The sample is also comprised of producers who are interested in incentives or tax credits, as they have applied for the California tax credit at least once.<sup>2</sup>

### Production Characteristics

Overall, the median number of films produced by each producer in the last three fiscal years (July 1 2008 – June 30, 2011) was 3. It should be noted though, that the number of productions ranged from 0 to more than 75. The median typical budget for these productions was \$3.75 million. Again, the range was much more diverse, with budgets starting as low as \$250,000 and going as high as \$75 million. The median number of films produced in California in this period was 2 and the mean was 5.2. The median number produced outside of California was 3, with a mean of 6.6. If the one outlying producer that made more than 70 productions outside of California is removed, then the mean number of productions outside of California drops to 3.7, noticeably less than the average number produced in California. The median number of productions made outside of California does not change and remains slightly higher than the median number of in-state productions.

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<sup>2</sup> The survey is not intended to be scientific. Rather, it is intended to allow us to better understand production location decisions of producers who might produce films or television shows eligible for the California Film and Television Tax Credit. As such, the sample is appropriate to shed light on these how these decisions are made.

### Importance of Tax Credits

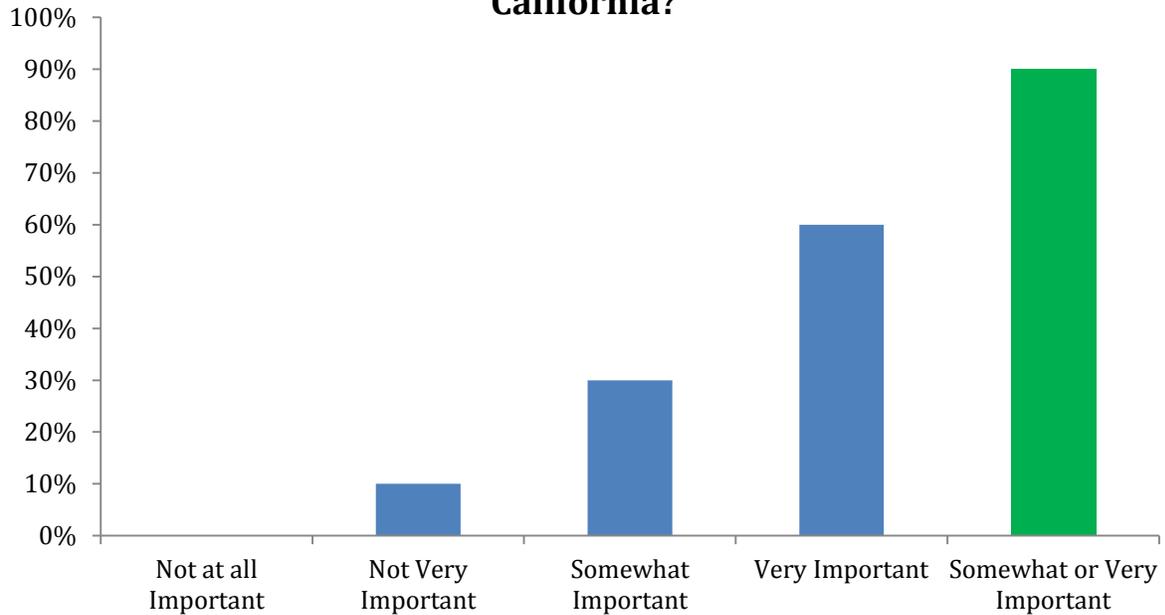
All of the respondents had applied for the California tax credit at some point since the credit program began. Yet one-quarter of the respondents who answered the question whether they had applied for the California tax credit for their most recent in-state production said that they had not done so.<sup>3</sup> Although they had produced in California in the last 3 years, they had not applied for the tax credit for their most recent in-state production. Furthermore, only two-thirds of those that did apply for the California tax credit for their most recent in-state production indicated that they had received it. Yet, all of these respondents, including the one-third that did not receive the tax credit, still produced in California. Similarly, while just over 81% of respondents said that not getting the California tax credit influenced their decision to film out of state somewhat or to a great extent, almost 19% indicated that not receiving a tax credit in California did not have any impact on their decision to film in another state.

While these responses show that some producers are willing to make films and television shows in California without a tax credit, the credit was an important decision making factor. Ninety percent of respondents who received a credit felt that the credit was somewhat or very important to their decision to film in California.

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<sup>3</sup> While 38 producers completed the survey, not all producers were eligible to answer every question (e.g., only people who have made a production outside of California may answer the questions about filming out of state). In addition, some respondents chose not to answer some of the questions. Therefore, when we talk about percentages of respondents answering in a particular way, we are always referring to the subsample of respondents who answered each question.

**Figure 1. How Important was the California Film and Television Tax Credit to Your Decision to Film in California?**



Of the three respondents who only filmed out of state, two indicated that they did not receive the California tax credit (one did not respond). In addition, when asked about the most important factors in choosing to film outside of California, a tax incentive in another state was mentioned more frequently than any other reason.<sup>4</sup>

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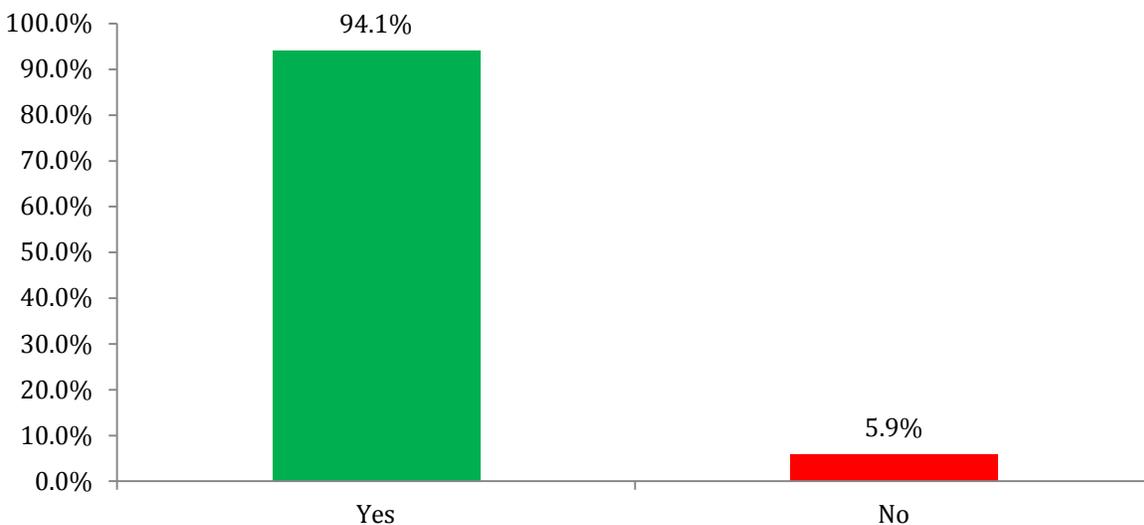
<sup>4</sup> It should be noted however, that budget/cost, availability of qualified crew, and script location were also mentioned several times.

Table 1. Most Important Factors in the Decision to Film Outside of California

Factor	Number of Times Mentioned
Tax incentive in another state	12
Budget/Cost	7
Availability of Qualified Crew	5
Script Location/Look	5
Ease of Filming	2
Producer & Director Requests	1

Furthermore, all respondents indicated that a tax credit was at least somewhat important in their decision to film in a state other than California. Getting a tax credit was very important to 86.7% of producers who filmed out of state. Even more striking was the finding that 94% of respondents filming out of state indicated that they had received a tax credit in the state in which they filmed.

**Figure 2. When Filming Outside of California, Did Producers Receive A Tax Credit in the State in Which They Filmed?**



### Application Process

Given that tax credits are an important part of the decision making process for producers deciding where to film, it follows that a smooth and simple application process should encourage producers to apply and stay in-state. However, the process in California faces some stumbling blocks. Nearly half (47.8%) of respondents indicated that the June 1 application deadline had stopped them from applying for the California tax credit on at least one occasion since the program started June 1 2009. Of those that did not apply, only 40% applied for a credit for the same project in a later year. Furthermore, nearly one-quarter of respondents who received a tax credit allocation letter had difficulties using their credit. Reasons included not being able to monetize the credit, the fact that the credit was not transferable,<sup>5</sup> and the slow response time before being approved.<sup>6</sup>

### Infrastructure, Workforce, & Location

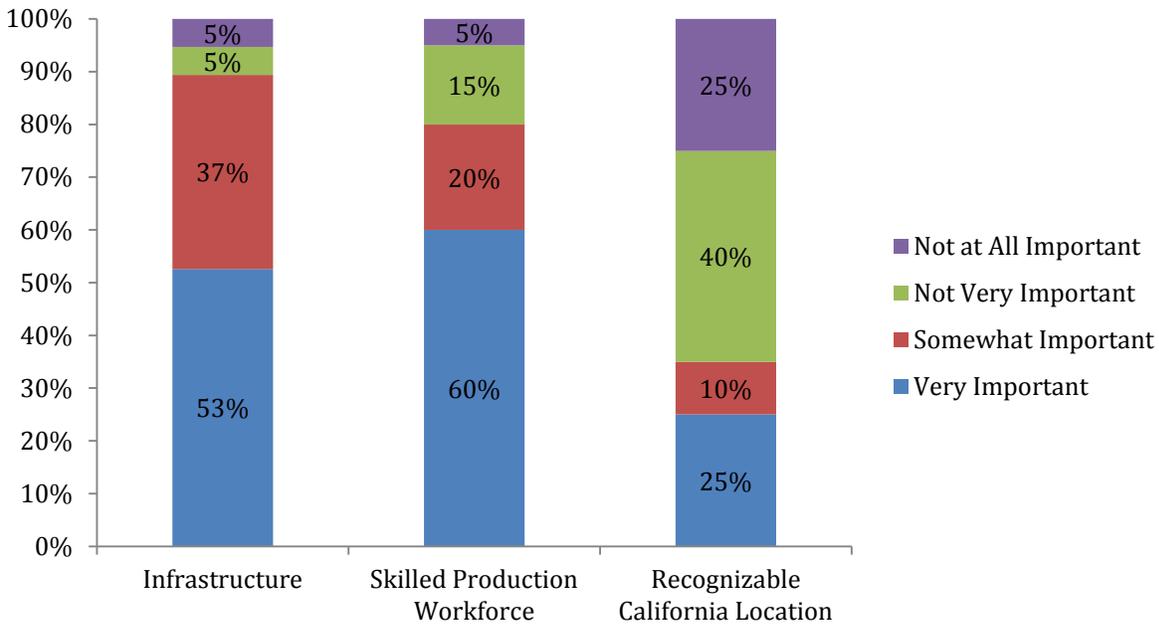
There are other factors that contribute to the production location decision making process in addition to tax credits. More than half of respondents thought that infrastructure was very important to their decision to film in California and about 90% thought it was at least somewhat important. Similarly, 80% of respondents thought that a skilled workforce was somewhat or very important to their decision to film in California. While contributing to the decision making process somewhat, a recognizable California location did not influence the final location decision nearly as much as the other factors. Only 25% of respondents thought a recognizable California location was very important to their decision to film in California and 65% felt it was either not very or not at all important to their production location decision.

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<sup>5</sup> The tax credit is transferable only for independent films with budgets under \$10 million.

<sup>6</sup> Presumably this respondent was on the waiting list and did not receive the tax credit until other productions had dropped out of the program.

**Figure 3. Importance of Different Factors in Decision to Film in California**



Survey Conclusion

While this was a small and admittedly not disinterested sample, data were collected from individuals who would be most likely to be affected by the continuance or discontinuance of the California Film and Television Tax Credit. Producers indicated that indeed, tax credits are an important part of their film location decision making process. This is true whether the decision is made to film inside of California or outside of the state. Strikingly, 94% of producers who went out of state, filmed in a state that provided them with a tax credit. On the other hand, 25% of producers indicated that they made films in California without receiving a tax credit. Clearly there were factors other than tax credits that were included in the decision about where to film. The most important of these were infrastructure and a skilled production workforce. Thus, while tax credits play an important part in determining whether a producer will stay in or leave a state, they are not the only factor that plays a role, even among producers who have demonstrated their interest in tax incentives by applying for the California tax credit at some point since it was originally authorized. Producers also described several issues that made the credit program difficult to use, notably the lack of transferability of the credit, difficulties in monetizing the credit, completing production before getting a response on the application, and being disqualified for the credit because of the way people working on the production were classified.

## **Financial Efficacy of State Film Subsidies and Incentives**

While not the only decision making factor, tax incentives clearly play a large role in producers' determination of production location. Productions are likely to go where there are incentives. Given the importance of these programs for bringing filming to a locale and their widespread use, it is important to understand whether film subsidies and tax incentives are economically advantageous. The following sections of this report will look to the literature to answer this question as well as take a close examination of the recent report of the Los Angeles Economic Development Corporation, which finds a positive financial impact for California of the California Film and Television Tax Credit.

### Effectiveness of State programs

Saas (2006) suggests a policy analysis framework of evaluating tax incentives<sup>7</sup> against (1) their effectiveness as compared to other options for economic development such as spending on education, infrastructure, other industries or tax cuts, and (2) the impact of increased taxes or spending cuts required when tax credits do not pay for themselves. Effectiveness entails quantifying how many jobs were created and at what cost for both the tax credit program and for possible policy alternatives. On the cost side, the difficulty is in ensuring that government funds reach the target of in-state film production activities, do not pay for activities that would have occurred anyway, and do not over-pay to attract production. In practice, these goals are often not achieved and "tax windfalls" result. Saas concludes that the New England states spent credits on productions that already existed before the credit enactments and were eligible for newly created credits regardless of whether they increased production. He finds that tax windfalls could have also resulted from unused credits being sold and the proceeds being spent out-of-state (Saas 2006).

Counting jobs created is also complicated because the measure of interest is the hypothetical marginal increase over the level of employment that would occur without incentives. Many other employment effects like the multiplier and the impacts of marketing and tourism are also hard to measure. Some jobs counted may have gone to job-switchers or new hires brought in from other states. It is also difficult to figure out if the temporary project-based jobs are going to the same person who

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<sup>7</sup> Before discussing the efficacy of different state incentive programs, it is important to note that states vary considerably in their infrastructure, crew depth, and specifics of their tax incentive programs. California in particular has a relatively small and restrictive program, offering between 20 and 25% rebates for below the line expenses on projects produced at least 75% in the state. Furthermore, unlike most other states, the credit in California is not transferable. These factors increase the likelihood that California will see a positive impact from its program relative to other states with more generous and unrestrictive incentive programs.

eventually picks up enough work to approximate full-time work or if different people are working short stints (Saas 2006).

As for job creation and fiscal impact, Saas (2006) noted that Louisiana reported 3,000 film industry jobs created between 2002 and 2011 at a cost of \$16,000 each. Outside the industry, two jobs were created for every five film jobs. The return on tax credit spending was 15 to 20 cents in tax revenues per dollar spent. In general, Saas concludes that film tax credits are not self-supporting through the generation of additional tax revenues from direct or indirect activities. However, in states with established film industries, such as New York, the evidence was inconclusive.

In light of these findings, Saas (2006) suggests that states have been giving up a lot of revenue, spending on unintended activities, over-paying, and even if successful in reaching the goal of targeting local film production that would not have otherwise occurred, the benefits are rather modest. Indeed, many states have incurred losses on film tax credit programs, spending more on the credits than what came back in the form of new tax revenue. Luther's 2010 report for The Tax Foundation criticized the use of film tax credits for their shortcomings in delivering on jobs and tax revenues. The popularity of subsidies, they assert, is often based on flawed advocacy research for the subsidies that present exaggerated claims of benefits and assumptions such as those in a Pennsylvania report that attributed the existence of any businesses serving the film industry to the credit.

Christopherson and Rightor (2010) reach a similar conclusion on the costs of attracting productions with subsidies that costs more than they return directly and indirectly in tax revenues. They suggest that states consider whether they really have what it takes to build a long-term future in the sector. Entertainment is strongest in California, followed by New York, while other states have comparative advantages in other types of commercial, educational, or industrial work that may offer a steadier flow than film. Opting out of the state competition may be a better option for most states because the funds could be directed towards improving skills of the workforce or towards other industries with better chances in the state for long-term success in economic development. It is possible, however that for states with well-established and strong film and television industries, incentives could work as intended to maintain the competitive edge.

Tannenwald's 2010 review of past studies on state programs for the Center on Budget and Policy Priorities draws conclusions similar to those of the Tax Foundation (Luther 2010) on job creation, tax revenues, and the escalating state competition. Programs are overly generous with a median offer of 25% of qualified expenses with the upper end at 44%, and may go towards productions that would have occurred without subsidization. In fact, only one study, Massachusetts, incorporated a method to

address the issue of productions that would have been produced in Massachusetts without the incentive. However, it may not be possible to distinguish such intentions from those of producers who would truly leave or choose another state without a subsidy. New York was found to have positive returns – \$1.90 in tax receipts for \$1 of tax credit allocated. However, no other state studied fared this well and even the magnitude of this finding for New York is suspect (see below for more discussion of the New York study). New Mexico state and local governments collected \$1.50 per \$1 spent (or \$0.94 in state revenues alone) according to one study, but only \$0.14 in state revenue in another study. The other states' reports reviewed by Tannenwald created less than \$0.28 per dollar spent. When tax breaks do not pay for themselves, budget cuts to state programs or tax increases are needed to offset the cost and meet balanced budget requirements. Less than half of the studies reviewed account for these impacts (Tannenwald 2010).

Luther (2010) argues that in most states jobs for residents created by tax incentives are temporary, unsustainable without continued subsidization, and lack advancement potential. Tannenwald (2010) also notes the poor job quality for in-state residents in most states, who lack the skills of the workers that must be brought in from California or New York. Luther concurs that the more specialized jobs are filled by out-of-state residents. Furthermore, job counts might be overstated by not accounting for job switching by people who were already employed. Some states supported creation of film incentives based on the supposed success of Louisiana, but overlooked reports of poor economic results in Louisiana and the increased intensity in the competition over time that make it more difficult for late entrants to the subsidy game to catch up.

Luther (2010) provides an economic multiplier of 1.92 for film production and states that other industries have higher multipliers (e.g., Luther states that automotive manufacturing has a multiplier of 2.25). Thus, he argues that states might do better with investing in other industries or cutting taxes more broadly. Much like Luther, Tannenwald (2010) concludes that states should scale back on incentives so they can put the funds to better use on long-term economic development such as education, infrastructure, and a neutral tax system.

While positive impacts on tourism might be possible, proponents frequently fail to provide evidence of it and fail to estimate the cost to achieve increased tourism. In addition, incentives often do not break even in terms of tax revenues because states often exempt productions from sales and use taxes. As states compete with each other, the cost of attracting projects increases and the likelihood of coming out ahead with positive returns falls. Luther (2010) further argues that California's entrance into the subsidy competition further raises the bar for other states. California's 20% or 25% tax credit and its

advantage in infrastructure is likely to make it difficult for other states to reasonably provide a competitive incentive in the near future (Luther 2010).

### Case Study – New York

New York and California are both different from other states in that they have a history of dominance in the film and television industry. Along with this dominance comes a fully formed industry infrastructure, with state residents who are highly qualified and available to work, state-of-the-art production facilities, and strong post-production capabilities. Thus, when trying to understand the impact of tax incentives on the California film and television industry, comparison to other states may not tell the full story. A better comparison would be to New York, which looks much more like California than does any other state in the country.

Ernst & Young's (2009) report for the New York film office analyzed the effect of the 2008 increase in the state's film tax credit. In response to a \$750 million decline in production during fiscal year 2006-2007 (July 2006-June 2007), the state enacted an increase in its tax credit from 10% to 30% of qualified expenses. Ernst & Young estimated the impact on jobs and tax revenues by modeling the cost of the 30% credit rate and the 2007 level of film spending of \$940 million. They found \$1.90 returned in state and local taxes per dollar spent on credits, and \$1.10 on state taxes alone. These figures exclude tourism related to film production, but include non-qualifying production activities and post-production. For the remainder of 2008 after enactment of the increase in credit rate, applications totaled 100, an increase from the 60 received in the same period of time in 2007.

The Ernst & Young (2009) model estimated that 19,512 jobs would be created or retained. This figure consists of 7,031 jobs created from direct spending on the productions eligible for the credit and 12,481 jobs from indirect spending. The firm asserts that this is an increase over previous years and a reversal of the loss in New York's share of U.S. film industry employment from 13% in 1999 to 8% in 2004. They state that if "employment had continued to decline through 2006, New York employment in the industry would have been 9,472 in 2006—6,115 fewer jobs than the 15,587 actual jobs in 2006 under the credit program"(Ernst & Young 2009, 7).

Even though New York may be more likely than many other states to reap a positive benefit from its production tax credit, there has been criticism of the Ernst & Young report. Weiner (2009) critiques the Ernst & Young report, stating that the differences in returns on investment in Connecticut, New York, and New Mexico are due to methodology as well as state characteristics. Ernst & Young's reports on New Mexico and New York do not adjust employment for above-the-line or balanced budget

requirements that would cause tax increases or budget cuts to pay for the film credits. For example, Weiner argues that accounting for balanced budget requirements in Massachusetts reduces the fiscal impact of that state's tax credit by 20%. The assumptions in a model of economic impacts can also produce very different results. Weiner points out that two New Mexico studies both used IMPLAN, but one study's estimate was significantly greater than the other's (\$1.50 in state and local revenues and \$0.94 in state revenues vs. \$0.14 in state revenues). Another major issue is the absence of a method to distinguish activity that would have occurred without credits. Indeed, Ernst & Young seem to have assumed that all productions receiving a credit in New York would not have filmed there absent the credit. Weiner asserts that this assumption may be acceptable for states starting out with very little film industry, but in New York, which long ago established itself as a film production center, this assumption may be least justifiable. It is also worth noting that Ernst & Young's method for modeling the spillover effects of the credits on non-credited productions makes rather aggressive positive assumptions (a point not commented on by Weiner). Given all of these issues, while there may be a positive return on the NY State tax credit, it is unlikely to be as high as \$1.90 for each \$1 of credit allocated as calculated by Ernst & Young.

### **Analysis of the LAEDC Study**

The New York case study raises interesting questions for California's Film and Television Tax Credit. The LAEDC analysis and report explores whether California will benefit from its credit or whether it will experience a negative fiscal impact.

### Background

In June 2011, the Los Angeles Economic Development Commission (LAEDC) published a study of the California Film and Television tax credit. The LAEDC has determined that for every dollar of tax credit allocated by the State, \$1.13 would be returned to the State from the activities associated with the productions that received the credit. We have gone through the LAEDC report in an effort to determine whether the study findings are plausible. We know which types of productions (e.g., feature, independent feature, MOW, etc.) were used in the LAEDC study, general budgetary information about all of the projects that received tax credit allocation letters in the time period examined by LAEDC, and the detailed results of the LAEDC analysis.<sup>8</sup> We also are able to compare the LAEDC analysis to the

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<sup>8</sup> This information was provided to us by Christine Cooper at the LAEDC and Amy Lemisch and Nancy Rae Stone at the California Film Commission.

results of analyses from other states. However, our analysis of the LAEDC report is limited in that the Minnesota Implan data are proprietary so neither we nor the LAEDC has access to the exact assumptions that went into the LAEDC model. Furthermore, our objective was to examine the LAEDC report and as such, we did not conduct a complete, original economic analysis of the data. Thus, while we cannot say whether the benefit to the state found by the LAEDC is exactly \$1.13 for each \$1 of tax credit allocated, we can determine whether the results are reasonable and are likely to provide a benefit to the state, as determined by the LAEDC.

The California Film and Television Tax Credit provides \$100 million in tax credits each fiscal year (July 1 of one year through June 30 of the following year) for the five years from 2009-2010 through 2013-2014. A one year extension of the program was recently passed. Feature films with production budgets ranging from \$1 million to \$75 million, independent films with a minimum production budget of \$1 million and qualified expenditures not surpassing \$10 million, movies of the week and miniseries with minimum production budgets of \$500,000, new television series on basic cable with a production budget for one season of at least \$1 million, and television series relocating to California are eligible for the tax credit. For all eligible productions, at least 75% of the principal photography days or 75% of the production budget must take place or be used in California. Independent films and relocating television series receive a 25% credit on all qualified expenditures, while feature films, mini-series, movies of the week, and new television series receive a 20% credit on all qualified expenditures.

The incentive in California is somewhat smaller and more restrictive than in many other states. California's credit ranges from 20-25% depending on the type of production. The median credit across the U.S. is 25%. Highlighting just a few states, Alaska and Michigan provide tax credits that are over 40% or more, New York and Louisiana have 30% tax credits, and New Mexico and Rhode Island have 25% tax credits. Furthermore, in California, 75% of the budget or of the filming must occur in California and except for smaller, independent films, the tax credit in California is not transferable. These restrictions are not found in all states. For instance, in the vast majority of film tax credits in Massachusetts in 2009 had been transferred to insurance companies and other financial institutions (Klowden, Chatterjee, and Hynek 2010; New York State Department of Taxation and Finance 2010; Tannenwald 2010). Because California has such a strong film and television industry infrastructure and a large indigenous work force, California can attract productions with a smaller incentive. This, of course, increases the financial benefit that the state will receive from implementing a tax credit incentive program.

## LAEDC Analyses & Assumptions

### *Economic Impact Model*

The LAEDC used Minnesota Implan to generate their economic impact model and conduct many of their analyses. Minnesota Implan is a respected modeling program that has been used by federal government agencies, state agencies, and universities. Thus, there is no reason to believe that the model used would be inherently problematic.

### *Typicality of Budgets Analyzed*

The LAEDC was granted access to the full, itemized budgets of nine productions that received credit allocations during the first application year (2009-2010). The LAEDC report analyzed the data from these nine projects and then extrapolated from these productions to estimate the revenues and expenditures of the 77 productions<sup>9</sup> receiving credit allocations during the first two funding years of the program.<sup>10</sup> That is, for their analysis, the LAEDC used the figures from only the nine productions for which they had access to the full budgets. These productions represented 22% of the allocations. In order to extrapolate their findings to the total sample, the LAEDC multiplied all of their findings by about 4.5.<sup>11</sup>

Thus, the entire LAEDC analysis is predicated upon the assumption that the nine budgets for which they had detailed information were in fact, representative of the 77 projects receiving tax credits at the time of analysis. The validity of this assumption is a very important factor to explore when assessing the validity of the LAEDC study.

In many respects, the nine budgets used by the LAEDC were typical of all applicants. The LAEDC analyzed films with production budgets ranging from \$2.5 million to \$75 million. The productions represent most of the types of productions that are eligible for the credit – independent feature film, independent movie of the week, TV series, and small, medium, and large budget films. Furthermore, since most of the work is unionized, wage scales are standardized. Thus, labor costs for all of the productions receiving a tax credit allocation are likely to be fairly uniform.

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<sup>9</sup> In the end, seven productions withdrew from the program leaving 70 productions, rather than 77. However, at the time the LAEDC report was published, there were still 77 productions participating using year-one allocations. The unused allocations were rolled over into year two of the program, allowing for additional productions to be granted a tax credit allocation in year two.

<sup>10</sup> Applicants in the first year of the program were granted allocations from the first two fiscal years (2009-2010 and 2010-2011). When the LAEDC refers to the first two years of credits, they are referring to the fact that to get the program up and running, the money available for the first two years was allocated in the first year of applications. Thus \$198.8 million in tax credits, rather than \$100 million were allocated in year one.

<sup>11</sup> 4.5 is about what 22 must be multiplied by to reach 100%.

However, the *total* budgets for these nine productions are not representative of all of the budgets of participating productions. That is, while the nine productions make up just over 1/8 of the total number of projects participating in the program, they represent almost ¼ of the tax credits allocated. Although they do not discuss this discrepancy directly in their report, the LAEDC did recognize and attempt to account for the difference between the productions they analyzed and the total sample of year-one applicants. The LAEDC study notes that the nine productions for which they had detailed information resulted in a total state and local tax impact of \$1.08. These nine productions have relatively large budgets and are more likely than the remaining productions to receive a 20% tax credit, rather than a 25% tax credit. In fact, only one of the nine productions included in the LAEDC sample was eligible for a 25% tax credit. Thus the per dollar impact from the nine productions studied is likely to be somewhat greater than the per dollar impact from the remaining 68 productions, which include more productions receiving a 25% tax credit and which have, on average, smaller budgets. Smaller budget films tend to have fewer non-qualifying expenses (such as above-the-line salaries for talent) and importantly, tend to devote a smaller *percentage* of their budgets to non-qualifying expenses. Therefore, the amount of nonqualified expenses relative to the qualified expenses and the amount of the credit will be smaller for the remaining budgets than for the budgets analyzed by the LAEDC.

The LAEDC analysis does attempt to account for this discrepancy. Extrapolating, as explained above, from the nine detailed production budgets, the LAEDC found that in total, \$198.8 million in credits were allocated during the first two allocation years of the program. Using the Minnesota Implan model, the LAEDC calculates that, as a result of the productions the credits support, \$201 million will be collected in state and local taxes<sup>12</sup>. Since the \$198.8 million in credits will be distributed after the taxes are collected, the LAEDC accounts for the time lapse by using the present value of the tax credit.<sup>13</sup> Dividing the amount of taxes collected (\$201 million) by the credit allocated (\$189.8 million in 2011 dollars), they find that for all 77 productions utilizing the first two years of funds, \$1.06 will be returned for every \$1 credited.

When the LAEDC does this same calculation for the 9 productions for which they have full budgetary information, they find that \$1.08 will be returned for every \$1 credited. The LAEDC uses the smaller rate of return in order to account for the fact that the productions in their analysis have

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<sup>12</sup> The LAEDC used both state and local taxes in their analysis because local tax receipts are an important part of the general benefit to the state of productions being made in California.

<sup>13</sup> One issue that is not addressed in the LAEDC report is the fact that setting aside this money in the California budget means that spending on some other program or programs will be foregone. The study does not take this opportunity cost into account in weighing the costs and benefits of the California Film and Television Tax Credit.

qualifying expenditures that are nearly twice as high as those of participating productions as a whole, and the consequence from this fact (i.e., a smaller percentage of expenses subject to the credit means a larger percentage of expenditures not subject to the credit) that estimates based on the subset of productions examined are likely to overstate the overall return for the state. Thus, the LAEDC analysis concludes that before taking into consideration ancillary production, the credit will garner \$1.06 in state and local taxes for each \$1 allocated, substituting the smaller multiplier figure based on the full sample. Whether this is the exact reduction warranted by the difference between the budgets used for the analysis and the total set of productions allocated credits during the first two funding years is hard to say because the full budgets for all of the productions are not available. However, the LAEDC did attempt to take into consideration budgetary and allocation differences in their analysis.

### *Job Creation*

In addition, the LAEDC analysis determined that 21 jobs are created for each \$1 million in qualifying expenditures. This number is an output of the economic modeling program that the LAEDC used (Minnesota IMPLAN) to conduct their analyses. Since, Minnesota Implan is respected and widely used, as noted above, the model produced for this analysis is likely to be reasonable. The modeling program uses the direct impact, indirect impact and induced impact<sup>14</sup> of film and television productions being produced in California to calculate how many jobs will be created for each \$1 million in qualifying expenditures. Since job creation represents the number of jobs created per \$1 million in qualifying expenditures, it is a straightforward calculation to determine how many jobs would be created by all of the productions participating in the program. Thus, the LAEDC found that 4,440 jobs would be created by the nine productions that they were able to study in detail and 20,040 jobs would be created by all 77 productions receiving credit allocations during the first two funding years of the program.<sup>15</sup> It is significant to note that the jobs reported here are annual positions with a 95% conversion rate to full-

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<sup>14</sup> Direct impact is defined as the economic impact of activities coming directly from the production of the movie or TV show. The monetary figures for this economic impact are drawn directly from the nine budgets analyzed by the LAEDC. Indirect impact is defined as the economic impact of goods and services related to the production, for example the cost of materials and labor paid by the set designer to build a set. Induced impact is defined as the economic impact of spending by the households of production employees.

<sup>15</sup> Using the project budgets, the LAEDC found that the 77 productions in the program had \$970.3 million in qualifying expenses. 21 times 970.3 equals 20,376 jobs, not 20,040 as reported by the LAEDC. Presumably this difference is due to rounding.

time equivalent jobs (FTEs). Thus, the 77 productions receiving participating in the tax credit program are estimated to create 19,038 annual FTEs.<sup>16</sup>

### *Ancillary Production*

The LAEDC assumes \$100 million in follow-on or ancillary production for the 77 productions taking part in the first two funding years of the tax credit allocation program. This ancillary production includes later projects that will film in California because a producer was already in California due to a project that was part of the incentive program. It is unclear if ancillary production includes video games or marketing products related to a participating production that are also produced in California. The \$100 million of ancillary production is a consensus of estimates provided by people in the film and television industry. Therefore, it was not possible to directly measure its impact and to thus confirm or disconfirm the LAEDC analysis of the benefit of the tax credit on revenues to the state from ancillary production.

Certainly whatever ancillary production is created in California as a result of the activities of productions participating in the incentive program will be a boon to the California economy. That additional production may not receive a tax credit, so all revenues will be used in their entirety to add to state tax revenue. However, as noted below (in the discussion of production flight), the LAEDC report assumes that only films receiving credits will be produced in the state. If this assumption does not hold, then not all of the revenue coming from ancillary production will be a result of the tax credit.

Nevertheless, the LAEDC calculates that the \$100 million in ancillary production creates at least \$10 million in state and local taxes,<sup>17</sup> resulting in an additional \$.07 per \$1 of tax credit allocated. While this calculation may not be unreasonable, it also is not verifiable. It is possible that the economic activity created by ancillary production is even greater, but it is also possible that it is less. Furthermore, as with the other analyses, it is not possible to replicate the induced impacts, which are determined using assumptions created by the modeling program.

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<sup>16</sup> As with other job creation measures, there are follow-on effects that are difficult to measure. For example, to the extent that jobs created by the tax credit are filled by unemployed workers, this will decrease the average duration of unemployment, which will decrease the cost of unemployment insurance premiums paid by employers. This in turn, will tend to encourage employers to locate, remain, or start up within the state. However, there is no practical way to quantify this effect.

<sup>17</sup> \$13 million is the number provided in Exhibit 4-1, p. 13 of the report. These numbers are calculated using the Minnesota Implan model.

### *Film Related Tourism*

As with most analyses of film and television industry incentives, film related tourism is not included in the analysis. This is because it is very difficult to determine the precise amount of tourism and spending created by a particular production. However, it is clear that productions with a recognizable location attract tourism to that location. For instance, the vineyards highlighted in the movie, *Sideways*, no doubt received a surge of visitors after the movie was released. Thus, this is an unmeasured, but not insignificant source of revenue for the state, directly related to keeping productions in the state.

### *Direct, Indirect, & Induced Impacts*

The direct, indirect, and induced impacts are the three types of economic impact that are calculated in any economic benefit analysis. The direct impact is simply the impact of the actual spending on the production. This figure is obtained from the budgets. This figure is likely to be fairly accurate. However, as noted earlier, since the budgets on which the analysis is based overrepresent big budget films<sup>18</sup> the total production spending for all 77 productions may be somewhat overstated. The indirect impact is the impact of spending related to the production, but not in the budget such as the money spent by the set designer to create the set. The indirect impact is created using a government input-output table of all spending related to the film and television industry and can be expected to be accurate.

The induced impact is the impact of added spending, unrelated to the production but stimulated by the production's spending, by everyone associated with the production and their households. This reflects the fact that people receiving income from the production will spend some of that income. The induced impact is estimated by using an economic impact model that utilizes a number of assumptions. Again, the LAEDC used Minnesota Implan to generate their economic impact model. It is not possible to know what all of the assumptions in the model are. However, since Minnesota Implan is a respected modeling program, the model is unlikely to be inherently biased or problematic.

### *Multiplier*

The LAEDC analysis finds a multiplier of 2.5. The multiplier represents the amount by which the direct spending is multiplied to get the total output, which includes direct spending, indirect spending,

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<sup>18</sup> Again, the budgets analyzed represent just over 1/8 of the projects in the program, and almost 1/4 of the qualifying expenses.

and induced spending. The multiplier takes into account three elements, as noted above – direct spending, indirect spending, and induced spending. The direct spending comes from the budgets provided. The indirect spending comes from a government produced input-output table, so it should be reliable. The model determines the induced spending. This is a conventional way to come up with such estimates, but it is indeed an estimate dependent on the economic assumptions built into the model. While not in the LAEDC report, their analysis found that direct spending on the 77 films that received funding for the first two funding years came to \$1.575 billion, indirect spending came to \$1.340 billion, and induced spending amounted to \$1.525 billion.<sup>19</sup> These figures indicate a household savings rate of about one-third.<sup>20</sup> In other words, the LAEDC is estimating that on average, people spend about two-thirds of their income on consumption. This figure is quite conservative and leads us to conclude that the impact of induced spending (the amount spent by households of people affiliated with the production on expenses unrelated to the production) is very reasonable. Thus, it follows as well that the multiplier used by the LAEDC is likely not exaggerated.

### *Production Flight*

Two of the most critical assumptions of the LAEDC study are that *all* productions that do not receive a tax credit allocation will leave California and that *only* productions that receive a credit will stay and film in California.<sup>21</sup> Research cited in the literature review suggests that tax credits and other incentives do work to lure productions to states where they may not otherwise have been made. However, it is not clear that producers only film where they have an incentive. All of the producers who were able to begin production in the first funding year, who were working on eligible productions and who applied for the credit in the first round of applications eventually received a tax credit allocation letter. In the second year of applications, some productions remained waitlisted and did not receive an allocation letter. Some of these productions never began filming because they were never green lit or were unable to come up with the funding to film. However, 14 waitlisted productions did begin filming.

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<sup>19</sup> These figures were reported in personal communication with Christine Cooper at the LAEDC.

<sup>20</sup> Initial spending (direct + indirect) X 1/(1-savings rate) = Total spending (direct + indirect + induced). Solving the equation using the figures provided by the LAEDC results in a savings rate of 34%.

<sup>21</sup> The Motion Picture Association of America noted that 111 films that were qualified to receive the tax credit began production in California in 2010. Based on their estimated start dates, 46 films that began filming in 2010 received tax credits. Presumably the remaining 65 films produced in California without receiving a tax credit. This argues for limiting the size of the tax credit and continuing the current restrictions on the types of productions that are eligible to apply for the program since a number of productions are made in California without a tax credit. However, the assumptions made in the LAEDC report are most relevant to the population of producers who are eligible for and interested in receiving a tax credit.

Among these 14 productions, five filmed in California without receiving a tax credit and nine began filming outside of the state.

Thus, it is clear that this first assumption of the LAEDC does not provide a complete picture of production location decision making – not all productions left when they did not receive a credit and not only productions with a credit filmed in California. However, most productions without a credit did leave the state. Notably, all of the productions that filmed in California while on the waiting list were independent films. Independent films are likely to have relatively smaller budgets and the costs of scouting a new location and relocating are more than what these productions would receive in credits from another state. Furthermore, any portion of a production that is made after receiving a tax credit allocation letter is eligible for the tax credit, a benefit that some waitlisted independent producers may have been counting on. So, the existence of the tax credit no doubt influenced these producers' decision to film in California. While all of the productions that stayed and filmed in California despite not receiving the tax credits were independent productions, all of the bigger budget productions that were made left the state after being put on the waiting list. Even though small, independent films may be a special case because they often cannot afford to leave the state, as long as they remain a part of the California Film and Television Tax Credit program, they must be included in the analysis of the benefit of the credit to the state.

Nonetheless, the fact that five of applicants filmed in California without receiving a tax credit, rather than leaving the state to film elsewhere changes the economic impact of the tax credit. These five productions had budgets totaling \$20.2 million and represent 8.4% of the total production budgets (\$240.2 million) of waitlisted productions.<sup>22</sup> We cannot be certain of the exact proportion of spending by productions that would film in the state without an incentive. However, based on what actually happened when there was a waiting list in the second application year of the California tax credit program, our best estimate is that 8.4% of production spending would come from productions that would film in the state even with no incentive. This means that the state is paying for productions that would have provided jobs for Californians and stimulated the California economy anyway.

Therefore, the benefit to the state of the tax credit will not be quite as high as \$1.13 for every \$1 in tax credit allocated. Rather, the benefit will only be returned for those tax credit recipients who would have left the state without an incentive. The incentive is wasted on those who would have stayed and filmed in California anyway. In this case, \$220 million out of \$240.2 million or 91.6% of the tax credit applicants are estimated to flee absent an incentive. Hence, the state will likely realize as much as 91.6%

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<sup>22</sup> Total production budgets for waitlisted productions were provided by the California Film Commission.

of the economic benefit of the tax credit, or \$1.04 for every dollar of tax credit allocated. It appears then, that while the California Film and Television Tax Credit most likely creates an immediate economic benefit for the state, it will not be quite as large as what was calculated by the LAEDC analysis.

#### LAEDC Analysis Conclusion

The analysis presented by the LAEDC is reasonable. Minnesota Implan, the program they used to create their economic impact model, is respected, used by government and academia. The LAEDC used nine productions, representing a variety of production types on which to base their analyses. Their analyses around economic impact and job creation seem reasonable. Moreover, the importance of the job creation component of the LAEDC analysis should not be overlooked. The LAEDC estimates that more than 19,000 full time equivalent positions will be created directly and indirectly by the productions participating in the tax credit program. Given that unemployment in the state has been near or above 12% for over two years, a program that can create a significant number of jobs should not be discounted.

However, the LAEDC analysis does have some problems that likely reduce the efficacy of the program. The productions on which the LAEDC analyses were based represented a variety of production types, but overrepresented the proportion of the total tax credit that was used. This will have the effect of reducing the impact of the tax credit. While the LAEDC did account for this reduced impact, we were unable to determine if they did so adequately. It is also unclear where the numbers for ancillary production come from and whether the benefit ascribed to this additional production is accurate. Nonetheless, there certainly is some benefit from ancillary production. There is also some benefit from entertainment tourism that is unaccounted for, which would help to compensate if there were any overestimating of ancillary production benefits.

However, most importantly, while many producers are swayed by the enticement of a tax credit in their production location decision making, the assumption that all productions that do not receive a credit will leave the state and only productions that do receive a credit will stay, is not true. The fact that this assumption does not bear out reduces the economic impact of the tax credit from the state collecting \$1.13 for every \$1 it allocates in tax credits to an estimated recouping of \$1.04 for each dollar allocated. Again while there likely is a benefit to California as a result of the tax credit, it is not quite as large as what was estimated by the LAEDC.

A number of other states have not actually found a benefit from their incentive programs. While the tax incentives may be attracting production, most states are losing revenue as a result of the tax

credits they offered. For instance, a report published by the Center on Budget and Policy Priorities found that Massachusetts, Connecticut, Louisiana, Michigan, Pennsylvania, and Arizona have all suffered revenue losses as a result of their film industry tax credits (Tannenwald 2010).

However, there is evidence that some productions will leave California if there is no incentive in the state. The LAEDC notes that incentives across the U.S. and around the world have created a shift away from filming in California. Indeed, California has dropped from having 40% of movie and video industry employees in North America in 1997 to having 37.4% of these employees in 2008. Nonetheless, as noted previously, after initial boosts following the implementation of tax credits, most states have stopped seeing large increases in production related employment.

However, states like Louisiana, which are not yet true competitors of California, have seen recent growth. Louisiana experienced a jump in employees related to film production immediately following the establishment of their tax credit in 2002, which held on until the effects of the recession were felt in 2008. This increase in employees may imply an increase in production. Furthermore, movie production and video production related establishments have continued to increase slowly from 49 in 2002 to 71 in 2009 (US Census Bureau 2011). This is a sign of increased infrastructure. Thus Louisiana is clearly taking a long-term view that incentives will build up the film industry in that state. Without a challenge from California coming from an incentive program, states like Louisiana have the potential to develop into real competitors.

In addition, New York and Canada have the largest share of the industry outside of California and like California have strong infrastructure and a qualified indigenous workforce. Both of these regions have implemented tax credits and both have seen an increase in production activities, and, at least in the case of New York, what may be a positive return on the tax credit. The incentives in New York and Canada are, indeed, cause for concern in California as they may give these locations a competitive edge. Thus, the California tax credit may play a vital role in keeping production occurring in California, and sustaining the competitiveness of the California film industry over the long run.

## **Report Conclusions**

The literature, our analysis of the survey of producers, and the LAEDC report all support the idea that incentives are a major factor in production location decisions. However, incentives are not the only factor that is important to producers when they are deciding where to produce a film or television show. A well-trained workforce, low cost labor, location, and a film industry infrastructure all contribute to the final decision about where to film. The analysis here demonstrates that the California Film and

Television Tax Credit most likely has small short-term benefits and important long-term benefits. Without incentives, some productions may be pulled out of California. Over time, this would have the effect of reducing California's dominance in the film industry. Right now, for example, California workers are sometimes hired to work on out of state productions. If California is no longer the leader in the industry, then eventually, California workers may not be needed to help on out of state productions, as other states build their infrastructure and indigenous workforce. In addition, if other states' tax credit advantage leads them to build up their skilled production workforce, state-of-the-art facilities, and supporting industries, California's overall comparative advantage will diminish. While there is no way to put a dollar amount on the benefit of maintaining the state's dominance in the long-run, both the immediate and longer-term economic benefits of the incentive program need to be considered when deciding on the ultimate benefit of the incentive program.

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