

Economic Impact of the Film Industry in New York State

Prepared For: Empire State Development



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About Camoin Associates

Camoin Associates has provided economic development consulting services to municipalities, economic development agencies, and private enterprises since 1999. We specialize in economic and fiscal impact analysis studies to help clients quantify the impact of various projects, policies, and programs. Through the services offered, Camoin Associates has had the opportunity to serve EDOs and local and state governments from Maine to Texas; corporations and organizations that include Lowes Home Improvement, FedEx, Volvo (Nova Bus) and the New York Islanders; as well as private developers proposing projects in excess of \$600 million. Our reputation for detailed, place-specific, and accurate analysis has led to projects in twenty states and garnered attention from national media outlets including *Marketplace (NPR)*, *Forbes* magazine, and *The Wall Street Journal*. Additionally, our marketing strategies have helped our clients gain both national and local media coverage for their projects in order to build public support and leverage additional funding. The firm currently has offices in Saratoga Springs, NY, Portland, ME, and Brattleboro, VT. To learn more about our experience and projects in all of our service lines, please visit our website at www.camoinassociates.com. You can also find us on Twitter @camoinassociate and on Facebook.



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EXECUTIVE SUMMARY

Introduction

Empire State Development (ESD) administers the New York State Film Tax Credit Program, a program first established in 2004 and designed to increase the film and television production and post-production industry presence in New York State, and to provide an overall positive impact to the State's economy. The Program provides tax credit incentives to qualified production companies that produce feature films, television series, television pilots and films for television, and/or incur post-production costs associated with these productions to support the growth of the film industry in New York State. As part of the law that extended the program in 2013, ESD is required to have a third party review the impact of the program on a biennial basis to calculate the economic and fiscal impact of the State's investment. Camoin Associates was hired by ESD to complete this review for years 2013 and 2014. What follows is a summary of this analysis with more detail in the full report.

Background

New York offers tax incentives to encourage the growth of the film industry in the state through two separate programs: the Film Production Credit and the Post-Production Credit. Both of these programs encourage the use of New York State (NYS) facilities and offer substantial tax incentives on industry spending in the state. The incentives available in NYS are not unique, and a majority of states offer some kind of incentive program of various magnitudes. Based on interviews with industry experts, these tax incentive programs have been successful at attracting and retaining the film industry because costs, net of incentives, have become the number one driver of location decisions for film productions.

The first step of the analysis was to conduct substantial research into the film industry and understand how the tax credit program impacts filming location decisions. This research included interviews, literature review, data analysis, and reviews of similar reports on the subject. The findings of this research overwhelmingly supported the notion that the tax credit program in NYS has been a significant driver of economic activity in the film industry including not only the attraction of major film and television productions but also the construction and operation of new sound stages and the improvement of the workforce and talent necessary for a world-class film industry cluster. Furthermore, the research found that without the tax credit program, NYS would lose industry activity to other states that offer incentives since the industry is highly mobile and price sensitive.

Findings

Economic Impact Analysis

An economic impact analysis looks at how direct spending resulting from a particular industry or project has multiplier impacts throughout the economy and results in new jobs, earnings, and spending. The direct impact of this project was the production and post-production spending in New York State by credit-eligible projects produced during 2013 and 2014. The following table summarizes the combined impact of the Film Production Tax Credit and the Post-Production Tax Credit during years 2013 and 2014.

Production and Post-Production Credit - Total Economic Impact on New York State (2013 & 2014)			
	Direct	Indirect	Total
Jobs	30,761	30,146	60,907
Earnings	\$ 1,652,434,500	\$ 1,718,531,879	\$ 3,370,966,379
Spending	\$ 5,176,031,171	\$ 4,666,242,238	\$ 9,842,273,409

Source: Empire State Development, EMSI, Camoin Associates



In total, the Film Production Tax Credit and the Post-Production Tax Credit program created over \$5.1 billion in spending in New York State over the two-year period of 2013 and 2014. The \$5,176,031,171 in direct spending resulted in 60,907 total jobs,¹ \$3.3 billion in earnings, and over \$9.8 billion in total spending throughout the New York State economy.² As noted, these impacts cover a two-year period (2013–2014). Therefore, to annualize the impacts, we simply divide by 2 to find that collectively, the credits directly supported over 30,000 jobs each year, \$1.7 billion in earnings each year, and almost \$5 billion in spending per year in NYS.

Additional Impacts

The New York State film industry tax credit programs have an impact beyond just what is calculated in the above sections. These additional impacts include: (a) support of film industry cluster-specific workforce and infrastructure development, and (b) film production induced tourism. These impacts are not accounted for in the above economic impact calculations, but nevertheless have an impact on the film industry and the NYS economy.

Film Industry Cluster Effect – Because of the significant cluster of film-related industries in New York, there exists a virtuous, self-reinforcing cycle where businesses, workers, and infrastructure serve to perpetuate the advantages of producing in New York. For example, as more productions occur in NYS, there are more employment opportunities, the skill levels of the overall workforce is improved, and the industry as a whole benefits. As a result of this cluster effect, additional production activity, beyond that which is directly incentivized by the tax credit program, is occurring in NYS. Without the tax credit, this non-incentivized activity could begin to decline over time.

Film Production Induced Tourism – Film-induced tourism can take a number of different forms ranging from tourists extending their stay in a particular place to visit different sites featured in a movie or television show, to distinct visits to a location or country to see where the film was made, to visitors traveling to see where a film or television show is currently being made. All of this visitation generates revenue and employment that otherwise would not exist without the location’s connection to the film industry.

Fiscal Impact Analysis

The film industry not only impacts the NYS economy in terms of jobs, earnings, and spending but there is also a fiscal impact on both NYS and New York City (NYC) in terms of direct and indirect tax revenue. The analysis used the findings of the economic impact analysis to calculate how this activity results in additional tax revenue for NYS, NYC, and other local jurisdictions. Based on the activity that was associated with the film industry during 2013 and 2014, it is estimated that NYS, NYC and other local jurisdictions received over \$1.1 billion in additional tax revenue from the Film Production Tax Credit activity and NYS, NYC, and other local jurisdictions received an additional \$35 million from the Post-Production Tax Credit activity.

An essential question of this analysis is: How do the tax revenues that are generated by the film production tax credits compare to the amount of tax credits that are issued in order to incentivize? In other words, what is the state’s return on investment (ROI) of the tax credit program? For the production

¹ A “job” is equal to one person employed for some amount of time (part-time, full-time, or temporary) during 2013 or 2014. For example, if a person is employed full-time in 2013 and 2014 that would be considered two jobs. Another example is if one person is employed part-time for four months, then takes two months off and is hired again for four months that would be counted as two jobs.

² Note that the earnings impact is also captured in the spending impact. As the production companies spend money on labor they are creating additional earnings.



and post-production activity during the 2013–2014 period the state offered over \$1.1 billion in incentives, to be paid out over several years following the completion of the projects.

Tax Credits Issued	
Production Credits	\$ 1,131,345,215
Post-Production Credits	\$ 38,340,968
Total	\$ 1,169,686,183

Source: Empire State Development

The table below compares the NYS, NYC, and other local jurisdiction tax collections associated with the production credit to the net present value (NPV) of the production credit payout. When combining the tax benefits that accrue to NYS, NYC, and other New York local governments, the ROI ratio for the production credit is 1.09. In other words, for every \$1 NYS pays in incentives, NYC receives about \$0.50, other local jurisdictions receive \$0.10, and NYS receives \$0.49 in tax revenue.

Production Credit - Return on Investment	
New York State Tax Collections	\$ 537,566,641
New York City Tax Collections	\$ 542,985,643
All Other NYS Local Govt Tax Collections	\$ 108,419,879
Combined Tax Collection	\$ 1,188,972,162
NPV of Estimated Production Credit Payout	\$ 1,086,080,854
Return on Investment Ratio	1.09

Source: Camoin Associates

Similarly for the post-production credit, the table below compares the projected tax collections associated with the post-production activity to the projected post-production credit payout. The ROI for the post-production credit 0.94, meaning that for every \$1 of tax credits issued, NYC receives \$0.48, other local jurisdictions receive \$0.04, and NYS receives \$0.42 in tax revenue.

Post-Production Credit - Return on Investment	
New York State Tax Collections	\$ 15,607,847
New York City Tax Collections	\$ 17,698,263
All Other NYS Local Govt Tax Collections	\$ 1,671,065
Combined Tax Collection	\$ 34,977,175
NPV of Estimated Post-Production Credit Payout	\$ 37,114,507
Return on Investment Ratio	0.94

Source: Camoin Associates

Conclusion

During the 2013–2014 study period NYS invested a total of \$1,123,135,361 (net present value) in incentives through the Production Tax Credit and the Post-Production Tax Credit to be paid out over a period from 2014 to 2018. In exchange, NYS, NYC, and local jurisdictions will receive \$1,223,949,337 in total tax revenue while supporting over 30,000 jobs per year, \$1.7 billion in earnings per year, and nearly \$5 billion in spending throughout New York State per year.



INTRODUCTION

Empire State Development (ESD) administers the New York State Film Tax Credit Program, a program first established in 2004 and designed to increase the film and television production and post-production industry presence in New York State, and to provide an overall positive impact to the State's economy. The Program provides tax credit incentives to qualified production companies that produce feature films, television series, television pilots and films for television, and/or incur post-production costs associated with these productions to support the growth of the film industry in New York State. As part of the law that extended the program in 2013, ESD is required to have a third party review the impact of the program on a biennial basis to calculate the economic and fiscal impact of the State's investment. Camoin Associates was hired by ESD to complete this review for years 2013 and 2014.

In order to complete this analysis Camoin Associates conducted significant research including a review of existing literature on the topic, industry data collection and analysis, and interviews with experts in the film industry in New York State (NYS). This background research proved to be exceedingly helpful to not only understand the industry but also to determine the importance of the tax credit program in the attraction and retention of the film industry in NYS.

The following report provides background on the tax credit programs, calculates and analyzes the economic and fiscal impact of the program in NYS, and finally estimates the return on investment (ROI) ratio for the State that compares the annual investment in the credit (amount of credits issued) to the annual income that the state receives (amount of tax revenue generated by the industry).

BACKGROUND

Overview of the New York State Film Tax Credit Program

First established in 2004, the NYS Film Tax Credit Program³ is designed to encourage and support the film industry in New York State and increase its presence and overall impact on the state economy. The original legislation offered a 10% credit on qualified "below-the-line"⁴ expenditures. In 2008, the program was extended and expanded to a 30% credit on below-the-line expenditures. The program has been extended a number of times, most recently for the period of 2015–2019. The current regulations for the program make benefits eligible for production and post-production costs including a fully refundable credit of 30% (additional benefits available to projects in NYS but outside of New York City) of qualified production and post-production costs incurred in NYS. New York State has set aside \$420 million per year to be allocated towards this credit. The credits received by a film company are paid out over a period of 1 to 3 years following production, depending on production timing and budget.

³ The Empire State Film Production Credit was first enacted in 2004 (Chapter 60) and was subsequently amended several times to either increase and extend program funding or to increase the amount of credit for a project (e.g. 10% to 30% of qualified costs). In 2010, the Empire State Post Production Tax Credit was created. Total funding authorized as the first pool of program funds is \$1.035 billion for tax years 2004 to 2013. An additional pool of \$3.78 billion of funds were authorized for tax years 2010 through 2019 (\$420 million/year). The post-production tax credit is financed out of the additional pool (\$420 million/year) and the amount of the funds dedicated to post-production projects were increased from \$7 million/year for years 2010-2014 to \$25 million/year for years 2015-2019. Finally, beginning in 2015, film companies are eligible for an additional 10% credit for labor costs incurred in certain upstate counties.

⁴ "Below-the-line" expenditures include costs for technical and crew production, use of film production facilities, props, makeup, wardrobe, non-speaking background extras, film processing, camera, sound recording, set construction, lighting, shooting, editing, and meals. They exclude costs such as compensation for the screenwriter, producer, director, principal actors, and expenditures on rights to secure the material on which the script is based and production rights to the screenplay.



Film Production Credit – The Film Production Credit is available to offset qualified production costs which generally include below-the-line items. Eligibility for the credit varies based on a number of factors including the budget for the production and the type of film company (i.e. major studio versus independent film company).

Post-Production Credit – The Post-Production Credit (post-production) is available to film production companies that film a substantial portion of a project outside of NYS, but do some or all of their post-production work in the state. Note that productions that qualify under the Film Production Credit can claim their post-production costs under the Film Production Credit.

In order to receive either of the tax credits, film companies must submit documentation throughout the process including an initial application that outlines their projections for qualified spending and a final application once the project is complete. Ultimately the full project is audited to determine the actual credit amount. Administration of the program is handled by Empire State Development.

Other Film Industry Incentive Programs

New York State’s incentive program for the film industry is not unique. A 2014 study issued by the National Conference of State Legislatures reported that thirty-nine states and Puerto Rico offer film production incentives.⁵ The incentives available for the film industry started to take root in the 1990s with Louisiana passing the Motion Picture Investor Tax Credit.⁶ In the early 2000s only a handful of states offered similar programs but the number of states with film incentives increased dramatically by 2010 as states began to compete in earnest with each other. Incentives to the film industry vary widely from state to state but some of the key differences are that some states offer incentives on above-the-line costs, which NYS does not do, and some offer cash rebates rather than refundable tax credits. Additionally, other countries have significant incentives that draw productions out of the United States to places like Toronto, Vancouver, London, Turkey, Australia and throughout the world. Prior to credits being available in NYS, many films set in New York were primarily shot in foreign locations (Toronto in particular) with the crew coming to New York for a short time to shoot key location shots such as the Empire State Building, Times Square, the New York City skyline, and the Statute of Liberty.

LITERATURE REVIEW

As part of the research process, Camoin Associates reviewed dozens of reports and articles on the film industry and the associated incentive programs in New York State and throughout the United States. This research provided us with an in-depth understanding of how and why the tax credit programs came to be and the role that they play in growing the film industry in places outside of the traditional United States “powerhouses” of New York and California.

Previous Reports on the Impact on New York State

Two previous studies have been completed to analyze the impact of the tax credit program on New York State, including a report prepared in February 2009 by Ernst & Young for the New York State Governors Office of Motion Picture and Television Development and the Motion Picture Association of America

⁵ (National Conference of State Legislatures, 2014)

⁶ (Adkisson, 2013)



(“Ernst & Young Report”) and subsequent update report completed in December 2012 by HR&A Advisors for the Motion Picture Association of America (“HR&A Report”). Both reports looked at the economic and fiscal impact of the New York State Film Production Tax Credit and compared the fiscal benefits to the cost associated with the program (lost tax revenue resulting from the credit).⁷

The most recent study prepared by HR&A Advisors found that in 2011 the Film Production Tax Credit supported 28,000 jobs (including 12,600 direct jobs and 16,300 indirect jobs), \$6.9 billion in sales and \$4.2 billion in wages per year. Additionally, the Film Production Tax Credit generated \$748 million (New York State and New York City taxes) in taxes while distributing \$355 million in credits, resulting in a return on investment of 2.23 for the credits. When considering only the tax revenues received by New York State, the return on investment is 1.09, so for every dollar of tax credit issued the report finds that \$1.09 is generated as tax revenue.

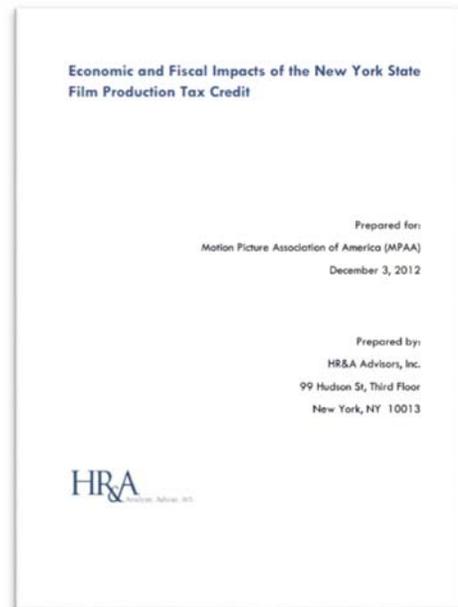
Note that the methodology of the HR&A Report differs from the Camoin Associates methodology in two primary ways, both of which have an impact when comparing the findings of the two reports. First, the HR&A Report is looking at a one year time frame whereas this report is focused on a two year timeframe. Secondly, the HR&A Report includes all of the spending of projects that received the tax credit, plus a percent of all other spending in the film industry in New York State. In comparison, this analysis only includes the spending by productions that received the tax credit and can be reasonably assumed to have been induced to New York State as a result of access to the credit program. The approach of this analysis is more conservative and is focused on measuring only the activity that occurred as a direct result of the tax credit program.

Other Reports

In addition to the reports that have been written about the film industry in New York State, the research team also reviewed reports on other states, countries, and topics associated with the analysis. The full list of references can be found in Attachment B. The following is a summary of some of the key documents reviewed in connection with this analysis.

“New York’s Motion Picture Industry: A Statewide and Regional Analysis”

Published in June 2014, this report was prepared by the New York State Department of Labor and highlights the growth in traditional film industry sub-sectors as well as emerging industries. This report showed that employment in the Motion Picture and Video Industries between 2009 and 2013 (time period when the enhanced credit was made available) grew by nearly 30% in New York State and nearly 44% in New York City when during that same period of time the United States as a whole only saw a 6% increase. This report also summarizes findings of a report completed by the Boston Consulting Group in 2012 that estimated that approximately 130,000 people in New York City work in jobs directly related to film and TV. The BCG report also notes reality shows and TV series that depend on strong city infrastructure and are less mobile than one-time film productions.



⁷ Note that these studies were not done in connection with Empire State Development. In fact, the requirement for the analysis to be completed on a biennial basis was not added to the legislation until the most recent amendments that extended the program.



In reporting on the impact of the production tax credit program, the study highlights the increase in the number of projects that occurred in NYS. In 2003 only 18 films and 7 television shows were shot in New York State but that number grew to 181 films and 29 TV series by 2013. Showcasing the importance of New York State in the United States film industry, the report states, “in 2014, a record 15 broadcast pilots will be filming in New York, more than anywhere else in the country, including Los Angeles.”⁸

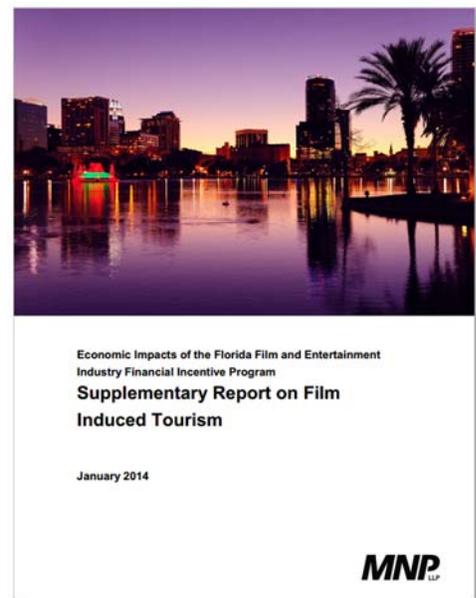
“State Film Production Incentives & Programs”

This document, published in March 2014, provides a brief summary of the growth of film industry incentives in the United States and provides an updated list of the types of incentives offered. This document was helpful in understanding how New York State relates to the other states in terms of incentives being offered.

“Economic Impacts of the Florida Film and Entertainment Industry Financial Incentive Program: Supplementary Report on Film Induced Tourism”

In addition to an analysis of the incentive program, Florida commissioned a report in January 2014 that looked specifically at how the film industry impacted the tourism industry in a state with a large existing tourism industry. This report is particularly interesting because, like New York City, Florida has a strong tourism industry even without film-induced visitation. The report found that between 5% and 19.5% of all visitors to Florida are influenced in whole or in part by film and/or television. Based on this range of direct impacts, it is clear that the film and entertainment industry is a significant contributor to the economy. The survey was based on visitors who had been to Florida in the past year and did not include information about the specifics of their travel.

This report also conducted a state and local government return on investment calculation to compare the amount of tax credits issued with the tax revenue generated. The analysis found that state and local governments ROI is between 10 and 38, in other words for every \$1 of tax credit issued the state and local governments earn between \$10 and \$38 in tax revenue.⁹



“More States Abandon Film Tax Incentives as Programs’ Ineffectiveness Becomes More Apparent”

This article written by the Tax Foundation in June 2011 summarizes some of the controversies surrounding incentive programs in the United States and specifically whether the incentives for the film industry are effective in their effort to encourage economic growth and raise tax revenue. The article highlights states that have suspended or eliminated their programs, states that have reduced their available incentives, as well as the states that have expanded or strengthened their program. The recommendation of the report is that states require reporting about the amount of incentives provided per Full-Time Equivalent job created and that the effectiveness of the programs be reviewed periodically.¹⁰

⁸ (New York State Department of Labor, Division of Research and Statistics, Bureau of Labor Market Information, 2014)

⁹ (MNP, LLP, 2014)

¹⁰ (Henchman, 2011)

“The Economic Impact of the UK Film Industry”

This report by Oxford Economics studied the film industry in the United Kingdom, the impact of the film industry, and the role that the Film Tax Relief program (incentive program) plays in sustaining the film industry in the UK. The report estimates that, without the tax relief program, film production in the UK would decrease by 71%. The report also finds that the program has a positive return on investment (£1 of incentive generates £12 in GDP), has led to significant investment in studios and other infrastructure, and has generated tourism from overseas.¹¹

Major takeaways of the literature review:

- The vast majority of the film industry is highly mobile and able to relocate productions relatively quickly if a better offer is available that would make the project easier to finance or allow for a better return. As a result, states have had to remain highly competitive with their incentive programs to attract and retain the film industry.
- The film industry program in NYS has been growing steadily since the inception of the tax credit program in 2004. The growth of the industry, particularly since implementing the tax credit program, has been faster than the overall industry growth in the United States.
- Growth of the film industry has additional economic benefits outside of the sub-sectors directly related to movie and television production. Reports have shown that film-induced tourism is real and can have positive implications on the overall economy. Additionally, when productions move in they impact many other industries such as lodging, retail, construction, services, and others as the operation hires locally.
- Reports that look at the economic impact of the film industry in a particular geography consider all eligible spending as a result of access to the incentive program.
- Incentive programs, of all types and for all industries, are controversial. The film industry tax credit program is no different and oversight and periodic reviews are necessary to ensure the programs are furthering the intended goals.

In summary, film-related incentive programs are widely available and are a key consideration in film production financing. In this highly mobile industry, incentives appear to have a real effect on location decision-making.

DATA ANALYSIS

As shown in the following chart, New York State began to lose film industry¹² employment and earnings share beginning around 2001. In that year, 21% of film industry jobs were in the state. As other states started to introduce incentive programs, New York began to lose employment share, falling 6 percentage points to 15% in just three years. This comports with what our interviewees reported to us—that during this period projects were moving elsewhere and overall activity in the industry was sparse.

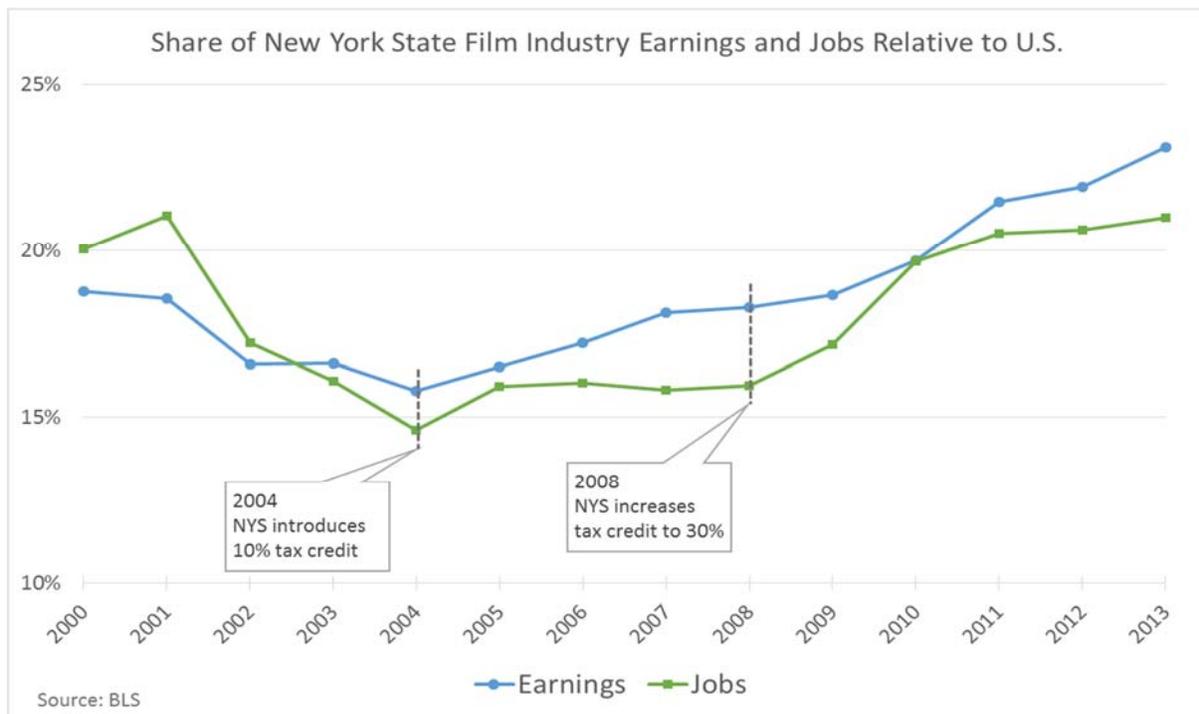
In 2004, the state introduced its 10% film credit program, which had the effect of creating new jobs and investment in New York. The credit was enhanced to 30% in 2008, which further strengthened New York’s

¹¹ (Oxford Economics, 2012)

¹² The film industry is defined as the following NAICS codes: 512110 Motion Picture and Video Production, 512120 Motion Picture and Video Distribution, 512191 Teleproduction and Other Postproduction Services, and 512199 Other Motion Picture and Video Industries. It is important to note, however, that many film jobs are not classified in these specific NAICS codes. For example, many in the film industry are counted in the Independent Artists sector or Entertainment Payroll sector and those are not counted here so the impact listed is most likely a conservative estimate.



position in the industry. Since then, the state's share of film jobs and earnings has continued to rise, again reaching its 2001 peak of 21% in 2013. Meanwhile New York's share of earnings surpassed 23% in 2013, higher than it had ever been since at least 1990.



If not for the tax credit program, it is possible that the downward trend in New York's share of film industry earnings and jobs seen between 2001 and 2004 would likely have continued, as more states began instituting their own credit programs.

INTERVIEW FINDINGS

An essential piece of our research was to conduct interviews with representatives from various fields within the film industry including production companies, film studios, production crew union representatives, post-production and visual effects companies, the Motion Picture Association of America, Upstate Film Commissioners, and others. These interviews provided the research team with anecdotal information about issues being faced in the film industry, the role of the tax credit within the work that they do, and how they have seen the industry change over time in New York including before the tax credit was offered, when other states began offering it, when the New York tax credit was first established and then strengthened, and finally when it was extended.

Some of the key findings from the interviews include:

- Prior to the implementation of the tax credit program in 2004, work in the film industry was sporadic and unsteady. Only a handful of television shows and movies were shot in New York. Many productions were shot elsewhere, primarily Toronto, with one or two weeks' worth of shooting in New York City to capture key shots of streets, landmarks, and iconic buildings. In addition, prior to the tax credit program, commercials accounted for a larger share of the industry's work when now it accounts for only a small share of overall work and industry spending in New York.



- Historically, during periods of time when the stability of the tax credit program was uncertain, work in the film industry would fall off as productions moved elsewhere to locations with more stability surrounding the availability of incentives.
- While location decisions in the industry were historically driven by creative factors, more recently cost (and the availability of incentive programs to offset those costs) have been the number one factor considered. This has led to competition between states and countries that offer incentives.
- Comparatively, NYS is an expensive place to do business for the film industry when considering wages, taxes, and other costs. The tax credit brings films and television productions in NYS more in line with other location options and “levels the playing field” somewhat so that productions in NY make financial sense.
- The aspects of the program that require use of qualified production facilities has helped to build up the industry’s infrastructure in a way that has not occurred in other states. This investment in infrastructure has had a lasting impact on the New York State economy through increased property tax revenue and an overall improvement to the industry as one project builds off the next.
- The film industry in Upstate NY is in competition with other neighboring states such as Massachusetts and Connecticut but not typically in competition with New York City. The increased cost of doing work outside of New York City is a factor when considering where to locate a film. The increased cost of productions in Upstate (and other adjacent states) is a result of the need to provide transportation, overnight accommodations, per diem, and other benefits to those working on the productions because most of the production staff are based in NYC. Some Upstate NY locations are better equipped to support the industry with workforce and talent base necessary for smaller independent productions.
- The interviewees indicated that the non-scripted productions (e.g. documentaries, reality shows, and news programs which are not eligible for the NYS tax credit) are not as mobile, have lower budgets, and their location decisions are not as tied to the availability of incentive programs.
- The access of the standalone post-production incentive has had a major impact on the post-production industry in NYS and has allowed it to compete with other states.
- Conversations with ESD officials highlighted the many productions that are being shot outside of New York City in places such as Rochester, the Adirondacks, the Capital Region, Long Island, and beyond. The officials reported the spending that occurs in the local economy as a result of these types of productions include spending on local restaurants/catering, lodging, dumpsters, equipment rentals, local contractors, site rentals, police, local labor, and other. Some of the productions that were highlighted include: *Teenage Mutant Ninja Turtles* (Tupper Lake, NY), *Muhammad Ali’s Greatest Fight* (Capital Region), *The Amazing Spider-Man 2* (Rochester), *The Place Beyond the Pines* (Schenectady), and others.



These types of productions have a major impact on the local economy and can really provide a boost to goods and service providers. For example, *The Amazing Spider-Man 2* brought in over \$2 million in new spending to the Rochester economy and *Teenage Mutant Ninja Turtles* brought in over \$1 million to Tupper Lake. In Tupper Lake, one deli did the catering daily for the three month shoot of *Teenage Mutant Ninja Turtles* and with the additional income was able to upgrade their operation into a fully functioning bar and restaurant. As productions outside of NYC become more common the workforce and infrastructure will continue to build and be even more attractive to productions looking for unique settings and landscapes.



ECONOMIC IMPACT OF THE FILM INDUSTRY

Availability of the New York State film industry tax credit programs (both the production and post-production credit) has resulted in the industry spending significant amounts of money throughout the state. Expenditures on labor, equipment, construction, lodging, food, transportation, and many other expenses are the “Direct Impact” of the film industry tax credit program. “Indirect Impacts” occur as the businesses supplying directly to the film industry make purchases from second-tier suppliers, those second-tier suppliers make purchases from third-tier suppliers, and so on, back through the supply chain. Another component of indirect impacts are induced impacts—those impacts that occur as employees, both those in the film industry and those working for film industry suppliers—spend their wages in the economy. Together, direct, indirect, and induced impacts comprise the total economic impact of the film industry on New York State.

Methodology

Empire State Development provided Camoin Associates with production and post-production spending figures for credit-eligible projects scheduled to be produced during 2013 and 2014. These were projects for which tax credit applications had been submitted as of December 2014. A production credit-eligible project was included in the analysis if its photography start date was in 2013 or 2014. A post-production credit-eligible project was included if its post-production start date was in either of these years.

There are three stages of the application process: submission of the initial application, submission of the final application, and audit of the final application. Because many of the projects included in the analysis have not yet completed production, complete final audited spending data was not yet available. As a result, Camoin Associates relied on the most current data available for each project. For projects in the first stage, we used project spending estimates provided by the applicant, and for projects in the second phase we used actual unaudited data on project spending provided by the applicant. Actual audited data on project spending was used for projects in the third phase of the application process.

Production and post-production spending by credit-eligible projects falls into two categories: qualified and non-qualified costs. Qualified costs refer to production costs to which the tax credit can be applied and include most “below-the-line” expenditures, such as costs for technical and crew production, use of film production facilities, props, makeup, wardrobe, non-speaking background extras, film processing, camera, sound recording, set construction, lighting, shooting, editing, and meals. Non-qualified costs

Modeling Software

Economic Modeling Specialists, Intl. (EMSI) designed the input-output model used in this analysis. The EMSI model allows the analyst to input the amount of new direct economic activity (spending, earnings, or jobs) occurring within the study area and uses the direct inputs to estimate the spillover effects that the net new spending, earnings, or jobs have as these new dollars circulate through the study area’s economy. This is captured in the indirect impacts and is commonly referred to as the “multiplier effect.” See Attachment A for more information on economic impact analysis.

Definition of a “Job”

A “job” is equal to one person employed for some amount of time (part-time, full-time, or temporary) during 2013 or 2014. For example, if a person is employed full-time in 2013 and 2014 that would be considered two jobs. Another example is if one person is employed part-time for four months, then takes two months off and is hired again for four months that would be counted as two jobs.

The information must be calculated in this way as a result of the way the job information is reported by the Quarterly Census of Employment and Wages (QCEW), Bureau of Labor Statistics (BLS) and Bureau of Economic Analysis (BEA). The information is provided by the employers to the government in terms of total jobs, not by total number of total full-time equivalents (FTE).



include “above-the-line” expenditures, such as story and script costs and wages for writers, directors, producers, actors, and performers.

While only qualified costs are eligible for the film tax credit, non-qualified costs incurred in New York State were also included in the analysis because the State would not have benefited from this non-qualified spending without the tax credit being in place. In other words, the economic benefits derived from non-qualified spending are entirely contingent on the qualified spending incentivized by the tax credit program. Therefore, any production and post-production spending occurring in New York State, whether qualified or non-qualified, was included in the analysis.

The following sections detail the economic impacts of the production and post-production tax credits on New York State as a whole, and by region. For the production credit, there are additional benefits granted to projects for spending that occurs outside of New York City. We show separately economic impacts for New York City and the rest of New York State. For the post-production credit, the geographic distinctions are different. The state is divided into Downstate and Upstate regions, with Downstate corresponding to the Metropolitan Commuter Transportation District (MCTD),¹³ and Upstate consisting of the remaining New York State counties.

Production Tax Credit

The table below shows aggregate spending in New York State in 2013 and 2014 associated with the production credit, as reported in tax credit applications. In total, credit-eligible projects accounted for over \$5 billion in in-state spending. The vast majority of that amount—89%—occurred in New York City

Spending in NYS Associated with Production Credit (2013 & 2014)	
NYC Productions	\$ 4,476,712,190
NYS Outside NYC Productions	\$ 553,276,998
Total	\$ 5,029,989,188

Source: Empire State Development

Economic Impact of the Production Credit on New York State

The \$5 billion in direct spending was inputted into the input-output model to generate the total impacts on the state in terms of jobs, earnings, and spending. Over the two-year period covering 2013 and 2014, Camoin Associates estimates the following impacts associated with the production tax credit:

- Approximately 59,200 jobs in New York State, of which about 29,900 were directly related to production activities and 29,300 were a result of indirect economic activity.
- Approximately \$3.3 billion in earnings by New York State workers, of which \$1.6 billion was directly attributable to production activities and \$1.7 billion was a result of indirect activity.¹⁴
- Approximately \$9.6 billion in spending in the New York State economy, of which about \$5.0 billion was direct spending by credit-eligible projects and about \$4.5 billion was indirect spending.¹⁵

¹³ Downstate is defined as the Metropolitan Commuter Transportation District (MCTD), which consists of the five boroughs of NYC, as well as Dutchess, Nassau, Orange, Putnam, Rockland, Suffolk, and Westchester counties. Upstate consists of the remaining counties in New York State.

¹⁴ Note that the EMSI model provides the total number of jobs, whether they are part-time, full-time or temporary. This is particularly important to note as it relates to the film industry in which there are many temporary jobs. While the model estimates average earnings per worker of \$55,000, note that this includes the full range of employment from workers who may have worked only a portion of the year to those holding full-time jobs.

¹⁵ Note that the earnings impact is also captured in the spending impact. As the production companies spend money on labor they are creating additional earnings.



Production Credit - Impact on New York State (2013 & 2014)			
	Direct	Indirect	Total
Jobs	29,893	29,305	59,198
Earnings	\$ 1,605,810,976	\$ 1,670,043,416	\$ 3,275,854,392
Spending	\$ 5,029,989,189	\$ 4,534,583,977	\$ 9,564,573,166

Source: Empire State Development, EMSI, Camoin Associates

Economic Impact of the Production Credit on New York City

A separate model was run to estimate the impact on New York City of NYC productions receiving production credits. Over the two-year period covering 2013 and 2014, Camoin Associates estimates the following impacts on New York City associated with the production tax credit:

- Approximately 41,700 jobs in New York City, of which about 23,700 were directly related to production activities and 18,000 were a result of indirect economic activity.
- Approximately \$2.6 billion in earnings by New York City workers, of which \$1.4 billion was directly attributable to production activities and \$1.2 billion was a result of indirect activity.
- Approximately \$7.6 billion in spending in the New York City economy, of which about \$4.5 billion was direct spending by credit-eligible projects and about \$3.1 billion was indirect spending.

Production Credit - Impact of NYC Productions on NYC (2013 & 2014)			
	Direct	Indirect	Total
Jobs	23,673	17,992	41,665
Earnings	\$ 1,429,552,874	\$ 1,172,233,356	\$ 2,601,786,230
Spending	\$ 4,476,712,189	\$ 3,106,026,432	\$ 7,582,738,621

Source: Empire State Development, EMSI, Camoin Associates

Economic Impact of the Production Credit on New York State outside of New York City

A third model was run to estimate the impact of productions outside of New York City receiving the production credit on the rest of New York State outside of New York City. Over the two-year period covering 2013 and 2014, Camoin Associates estimates the following impacts associated with the production tax credit:

- Approximately 7,300 jobs in the rest of New York State, of which about 4,500 were directly related to production activities and 2,800 were a result of indirect economic activity.
- Approximately \$302 million in earnings, of which \$177 million was directly attributable to production activities and \$126 million was a result of indirect activity.
- Approximately \$891 million in spending, of which about \$553 million was direct spending by credit-eligible projects and about \$338 million was indirect spending.

Production Credit - Impact of Productions Outside of NYC on NYS Outside of NYC (2013 & 2014)			
	Direct	Indirect	Total
Jobs	4,531	2,764	7,295
Earnings	\$ 176,868,405	\$ 125,576,568	\$ 302,444,973
Spending	\$ 553,277,000	\$ 337,710,884	\$ 890,987,884

Source: Empire State Development, EMSI, Camoin Associates

Note that the impacts estimated by the individual models for New York City and the rest of New York State do not sum to the total impacts estimated by the New York State model. This is because the individual models are not able to take into account the economic exchanges between the two sub-regions. In other words, the model assessing the impact on NYC is only measuring the impact of NYC productions on NYC



and therefore it does not account for the impact of NYC productions on other NYS locations, and vice versa. The economic exchanges between the two sub-regions accounts for the difference of 10,238 jobs in New York State and associated earnings and spending.

Post-Production Tax Credit

The table below shows aggregate spending in New York State in 2013 and 2014 associated with the post-production credit, as reported in tax credit applications. In total, credit-eligible projects accounted for over \$146 million in in-state spending. The overwhelming majority of that amount—more than 99%—occurred in Downstate New York.

Spending in NYS Associated with Post-Production Credit (2013 & 2014)	
Downstate Activity	\$ 145,208,097
Upstate Activity	\$ 833,888
Total	\$ 146,041,985

Source: Empire State Development

Economic Impact of the Post-Production Credit on New York State

The \$146 million in direct spending was inputted in to the input-output model to generate the total impacts on the state in terms of jobs, earnings, and spending. Over the two-year period covering 2013 and 2014, Camoin Associates estimates the following impacts associated with the post-production tax credit:

- Approximately 1,700 jobs in New York State, of which about 870 were directly related to production activities and 850 were a result of indirect economic activity.
- Approximately \$95 million in earnings by New York State workers, of which \$47 million was directly attributable to production activities and \$48 million was a result of indirect activity.
- Approximately \$278 million in spending in the New York State economy, of which about \$146 million was direct spending by credit-eligible projects and about \$132 million was indirect spending.

Post-Production Credit - Impact on New York State (2013 & 2014)			
	Direct	Indirect	Total
Jobs	868	850	1,718
Earnings	\$ 46,623,525	\$ 48,488,465	\$ 95,111,990
Spending	\$ 146,041,986	\$ 131,658,265	\$ 277,700,251

Source: Empire State Development, EMSI, Camoin Associates

Economic Impact of the Post-Production Credit on Downstate

A second model was run to estimate the impact of the post-production credit on Downstate New York. Over the two-year period covering 2013 and 2014, Camoin Associates estimates the following impacts on Downstate associated with the post-production tax credit:

- Approximately 1,500 jobs in Downstate, of which about 800 were directly related to production activities and 700 were a result of indirect economic activity.
- Approximately \$92 million in earnings by Downstate workers, of which \$46 million was directly attributable to production activities and \$46 million was a result of indirect activity.
- Approximately \$267 million in spending in the Downstate economy, of which about \$145 million was direct spending by credit-eligible projects and about \$122 million was indirect spending.



Post-Production Credit - Impact of Downstate NY Activity on Downstate NY (2013 & 2014)

	Direct	Indirect	Total
Jobs	797	741	1,538
Earnings	\$ 46,416,086	\$ 45,951,925	\$ 92,368,011
Spending	\$ 145,208,096	\$ 121,850,918	\$ 267,059,014

Source: Empire State Development, EMSI, Camoin Associates

Economic Impact of the Post-Production Credit on Upstate

A final model was run to estimate the impact of the post-production credit on Upstate New York. Over the two-year period covering 2013 and 2014, Camoin Associates estimates the following impacts on Upstate associated with the post-production tax credit:

- Approximately 15 jobs in Upstate New York, of which about 10 were directly related to production activities and 5 were a result of indirect economic activity.
- Approximately \$445,000 in earnings, of which \$266,000 was directly attributable to production activities and \$178,000 was a result of indirect activity.
- Approximately \$1.3 million in spending, of which about \$834,000 was direct spending by credit-eligible projects and about \$481,000 was indirect spending.

Post-Production Credit - Impact of Upstate NY Activity on Upstate NY (2013 & 2014)

	Direct	Indirect	Total
Jobs	10	5	15
Earnings	\$ 266,205	\$ 178,358	\$ 444,563
Spending	\$ 833,890	\$ 481,452	\$ 1,315,342

Source: Empire State Development, EMSI, Camoin Associates

Total Economic Impact of the Film Tax Credit Program on New York State

The table below shows the combined impact of both the production and post-production tax credits on all of New York State. Over the two-year period covering 2013 and 2014, Camoin Associates estimates the following impacts on the State associated with the credits:

- Approximately 60,900 jobs in New York State, of which about 30,800 were directly related to production activities and 30,100 were a result of indirect economic activity.
- Approximately \$3.4 billion in earnings, of which \$1.7 billion was directly attributable to production activities and \$1.7 billion was a result of indirect activity.
- Approximately \$9.8 billion in spending, of which about \$5.2 billion was direct spending by credit-eligible projects and about \$4.7 billion was indirect spending.

Production and Post-Production Credit - Total Economic Impact on New York State (2013 & 2014)

	Direct	Indirect	Total
Jobs	30,761	30,146	60,907
Earnings	\$ 1,652,434,500	\$ 1,718,531,879	\$ 3,370,966,379
Spending	\$ 5,176,031,171	\$ 4,666,242,238	\$ 9,842,273,409

Source: Empire State Development, EMSI, Camoin Associates



Additional Economic Activity

The New York State film industry tax credit programs have an impact beyond just what is calculated in the above sections. These additional impacts include: (a) support of film industry cluster-specific workforce and infrastructure development, and (b) film production-induced tourism. These impacts are not accounted for in the above economic impact calculations, but nevertheless have an impact on the film industry and the NYS economy.

Film Industry Workforce and Film Production Infrastructure Development

The film industry is clearly an important industry cluster for NYS. As with all clusters, there is a virtuous self-reinforcing cycle where groupings of like-minded businesses, workers and infrastructure serve to perpetuate the advantages of doing business in that location.

For example, as more productions occur in NYS, there are more employment opportunities, the skill levels of the overall workforce is improved, and the industry as a whole benefits. As new productions come up, they have access to the high quality workforce that has been built through the years.

In the ten years since the credit was implemented, employment in the film industry in NYS has increased by 50%, from 28,458 jobs to 42,564 jobs. This is compared to just a 5% increase in jobs in the state's economy overall. The chart below highlights the top 10 occupations in the industry and how much they have grown since 2004. Producers and Directors comprised the largest share of film industry jobs, accounting for about 19% of jobs, followed by Actors with 8.2% of jobs, and Film and Video Editors with 7.3%. All ten occupations experienced at least 30% job growth over this period. In general, NYS film industry jobs are relatively high-paying, with over 70% of industry jobs in occupations with a median hourly wage higher than the economy-wide median (\$23.82).

Top 10 Occupations in the Film Industry								
SOC	Description	Employed in Film Industry (2004)	Employed in Film Industry (2014)	Change (2004 - 2014)	% Change (2004 - 2014)	% of Total Jobs in Industry Group (2014)	Median Hourly Earnings	Typical Entry Level Education
27-2012	Producers and Directors	5,372	8,095	2,723	51%	18.9%	\$42.70	Bachelor's degree
27-2011	Actors	2,512	3,528	1,016	40%	8.2%	\$35.59	Some college, no degree
27-4032	Film and Video Editors	2,117	3,141	1,024	48%	7.3%	\$31.17	Bachelor's degree
27-4011	Audio and Video Equipment Technicians	1,039	1,698	659	63%	4.0%	\$26.16	Postsecondary non-degree award
27-1014	Multimedia Artists and Animators	973	1,431	458	47%	3.3%	\$20.91	Bachelor's degree
27-4031	Camera Operators, Television, Video, and Motion Picture	1,037	1,409	372	36%	3.3%	\$23.64	Bachelor's degree
43-9061	Office Clerks, General	716	1,126	410	57%	2.6%	\$13.94	High school diploma or equivalent
27-3041	Editors	780	1,025	245	31%	2.4%	\$32.90	Bachelor's degree
43-6014	Secretaries and Administrative Assistants, Except Legal, Medical, and Executive	518	895	377	73%	2.1%	\$18.03	High school diploma or equivalent
27-3043	Writers and Authors	607	876	269	44%	2.0%	\$24.62	Bachelor's degree

Source: EMSI

Several workforce training programs have been implemented in response to New York's burgeoning film industry. For example, in collaboration with the New York City Department of Education and the Tribeca Film Festival, the Office of Media and Entertainment has implemented a curriculum for elementary, middle, and high school students to learn about media arts in the classroom. In 2015 Brooklyn College's Barry R. Feirstein Graduate School of Cinema will begin offering a cinema graduate program located at Steiner Studios at the Brooklyn Navy Yard. Also at Steiner Studios will be a technology-focused media and design program offered by Carnegie Mellon University. Working with the City of New York, non-profit Brooklyn Workforce Innovations developed the "Made in NY" program which recruits unemployed New Yorkers for jobs in the film industry, offering a training program that leads to certification and job placement.



The requirement of the program that productions must use qualified production facilities has also led to the expansion of the number of studios in New York State. Some of the key studios that have been created to respond to the increased demand include:¹⁶

- Broadway Stages which will be a \$20 million project to renovate the Arthur Kill Correctional Facility on Staten Island;
- The expansion of the Astoria Kaufman outdoor lot to be used for long-term sets. This project included the demapping of a one-block stretch in Astoria, Queens, to be used exclusively by the studio.
- The 20-acre site within the Brooklyn Navy Yard will add five new Steiner Studios sound stages.
- The Grumman Studios and Gold Coast Studios in Nassau County, which were both retrofitted from former Grumman Aerospace Corporation hangars, have hosted dozens of film and television productions.

These are just a small selection of the investments that have been made in the hard infrastructure of the film industry in NYS. While the development of this infrastructure is a great benefit to productions looking to locate in New York State, information learned from interviews suggests that simply having the infrastructure is not enough to counteract the financial incentive of tax credit programs elsewhere and that the infrastructure must be combined with the NYS tax incentive program.

However, there are a host of non-eligible film productions¹⁷ that currently occur in NYS that are largely a result of the virtuous cycle of the film industry's economic cluster in the state. In fact, these non-eligible productions account for a majority of the employment in the film industry cluster in NYS. Therefore, eligible productions that occur in the state due to the tax credit program are serving to maintain the viability of the economic cluster. Said another way, should NYS abandon its incentive programs and thus precipitate a departure of a portion of the cluster, the entire cluster is weakened, including the non-eligible jobs.

Quantifying this effect is extremely problematic and, at best, imprecise. Of the 52,850 New York State film industry jobs in 2014, approximately 7,900 (about 15%) are directly attributable to the tax credit program, while the remaining 85% are therefore associated with non-eligible productions. To best understand the effect of losing non-eligible production activity on an order-of-magnitude basis, we will simply note that if NYS had shed even 10% of the cluster jobs associated with non-eligible production over the 2013–2014 period, it would have lost a total of 29,035 jobs, over \$2 billion in earnings, and over \$7 billion in spending.¹⁸

Economic Impact on NYS of Losing 10% of Ineligible Production Activity			
	Direct	Indirect	Total
Jobs	8,989	20,046	29,035
Earnings	\$ 948,140,123	\$ 1,137,768,148	\$ 2,085,908,271
Spending	\$ 3,903,559,638	\$ 3,189,853,894	\$ 7,093,413,532

Source: Empire State Development, EMSI, Camoin Associates

¹⁶ (New York State Department of Labor, Division of Research and Statistics, Bureau of Labor Market Information, 2014)

¹⁷ As noted above, non-eligible productions exclude non-scripted film production such as documentaries and news broadcasts.

¹⁸ 8,989 jobs was used as an input into the model. $8,989 = 52,850 * 85\% * 10\% * 2$, where 52,850 is the total number of NYS film industry jobs, 85% is the share of those jobs associated with credit non-eligible activity, 10% is the hypothetical amount of lost non-eligible activity, and 2 is the number of years in the 2013–2014 period.



Lost tax collections by New York State and New York City as a result of losing 10% of credit non-eligible production activity would total \$873 million.¹⁹

Fiscal Impact of Losing 10% of Ineligible Production Activity	
New York State Tax Collections	\$ 398,677,747
New York City Tax Collections	\$ 474,636,898
Total	\$ 873,314,645

Source: Camoin Associates

Film Production Induced Tourism

Both quantitative and qualitative research suggests that the film industry has a positive impact on tourism, as people want to visit the places they have seen in film and television. Film-induced tourism can take a number of different forms ranging from tourists extending their stay at a destination to visit different sites featured in a movie or television show, to distinct visits to a location or country to see where the film was made, to visitors traveling to see where a film or television show is currently being made. All of this visitation generates revenue and employment that otherwise would not exist without the connection to the film industry.

A study conducted on tourism in Australia, New Zealand, and Kazakhstan after releases of movies that are either set or filmed in those locations (*Mad Max*, *The Lord of the Rings*, and *Borat*, respectively) found that there was evidence of an increase in tourism for a period following the release of a successful movie.²⁰ Additional research confirms the finding that television and movies can have a strong influence on the tourism industry.²¹

Examples of film induced tourism include:

- **Field of Dreams** - The movie *Field of Dreams* starring Kevin Costner and James Earl Jones was first released in 1989 and portrays a story about a baseball field in rural Iowa. Since the movie was released, the site where Universal Studios built the baseball field has remained relatively untouched and attracted hundreds of thousands of tourists. Some changes are being proposed for the site by the new owners that would maintain the original field but would add additional fields to host tournaments and other events and bring in even more people.^{22,23}
- **Twilight Trilogy** – Before the *Twilight* trilogy, Forks, Washington’s claim to fame was that it was the rainiest town in the United States. Now the Forks Chamber of Commerce is capitalizing on the intense fan base and success of the film by promoting the town’s role in the film and hosting tours and other special events like Stephenie Meyer Day/Bella’s Birthday weekend, marketed as an annual event with attractions, entertainment, and vendors geared towards celebrating *Twilight*.²⁴
- **The Millennium Effect** – The *Millennium* series, of which *The Girl with the Dragon Tattoo* is the first film of three, has had a significant impact on Sweden once the book was turned into a mega-

¹⁹ Calculated using the proportion of Gross State Product (or Gross Regional Product) method as detailed in *Fiscal Impact of the Film Industry* section below. In calculating tax collections for New York City, we assumed that 93.4% of lost activity would be attributable to New York City, as New York City accounts for that amount of total industry sales.

²⁰ (Mitchell & Stewart, 2012)

²¹ http://www.bu.ac.th/knowledgecenter/epaper/jan_june2009/pdf/Walaiporn.pdf

²² (Belson, 2011)

²³ (Doster, 2014)

²⁴ (Twilight, 2014)



hit blockbuster movie. The majority of the film was shot in the capital city regions and exposed over 20 million people worldwide to the landscapes and architecture of Stockholm and Sweden. The success of this movie has impacted tourism with more than 10,000 tourists a year taking the guided tour and another 6,000 copies of the *Millennium* map being sold.²⁵

- New York State Film Industry Tourism** – New York City is home to both one of the largest film industries and tourism industries in the world and these two industries complement each other well when tourists are able to visit the locations of scenes they are familiar with from television and movies. Tour companies are capitalizing on visitors’ interest in these sites by organizing and promoting various tours to locations made familiar by shows such as *Sex and the City*, *Friends*, *Seinfeld*, and others. Additionally, live shows that film in New York City are also an attraction as people come to see *Saturday Night Live*, *The Tonight Show*, *The Today Show*, and many others filmed live.



It is clear that the robust film industry in NY supports the tourism industry in NYC; however, estimating the degree to which film is the driving factor for visitation is outside the scope of this analysis. In an attempt to better understand how the loss of the film industry would impact the tourism industry we can conduct an order-of-magnitude assessment to provide an estimate for how the tax credit programs impact tourism industry employment. According to a report prepared by NYC & Company, there are over 363,000 jobs in New York City that are associated with the tourism industry.²⁶ If we assume that film-induced tourism accounts for 1%²⁷ of total tourism in New York City, this would support 3,631 tourism jobs. If 15% of the jobs in the film industry are attributable to the tax credit programs (as calculated above), then we can assume that 15% of the 3,631 tourism jobs are also attributable to the tax credit programs. Based on this order-of-magnitude estimate, the tax credit programs account for approximately 545 jobs in the tourism industry in NYC.

Estimate of the Impact of Tax Credit Programs on Film Induced Tourism in NYC	
Total Tourism Related Jobs in NYC (2012)	363,050
Film Induced Tourism Jobs (1% of total)	3,631
Percent of Film Industry Resulting From Tax Credit Programs	15%
Film Induced Tourism Jobs Resulting from Tax Credit Programs	545

Source: New York City Tourism: A Model For Success by NYC & Company

²⁵ (Cloudberry Communications , 2011)

²⁶ (NYC & Company)

²⁷ This is just an estimate to provide an order-of-magnitude analysis. No surveys or other research has been done to qualify this percentage.



FISCAL IMPACT OF THE FILM INDUSTRY

Beyond the economic impacts calculated above, there are also fiscal impacts of the film industry that result from increased economic activity and accrue in the form of additional tax revenue. To estimate tax collections, Camoin Associates calculated the proportion of film production spending associated with credit-eligible products relative to New York State's Gross State Product in 2013. This percentage was then applied to New York State's total tax collections in 2013 for each tax category to determine the portion of tax collections attributable to the film tax credit program.²⁸ This methodology is based on the assumption that the share of credit-related film industry spending relative to the NYS Gross State Product is approximately equal to the share of NYS tax collections attributable to the tax credit program. In other words, the film industry activity makes up a certain percentage of the state's total economic activity and therefore the film industry accounts for a similar percentage of the state's revenue. The table below details this calculation.

Project Spending as a Percent of Gross State Product (GSP)		
NYS 2013 Gross State Product (GSP)	\$	1,310,712,000,000
	Project Spending	Percent of GSP
Production Credit	\$	9,564,573,166 0.73%
Post-Production Credit	\$	277,700,251 0.02%

Source: Bureau of Economic Analysis, Empire State Development, Camoin Associates

Camoin Associates estimates total tax collections by New York State in 2013 and 2014 resulting from the Production Tax Credit to be about \$538 million, and tax collections resulting from the Post-Production Credit to be about \$16 million.

Fiscal Impact on New York State			
	A	B	C
	2013 NYS Tax Collections	Tax Collections Attributable to Production Credit (Col. A × 0.73%)	Tax Collections Attributable to Post-Production Credit (Col. A × 0.02%)
Individual Income Tax	\$ 40,230,379,000	\$ 293,570,520	\$ 8,523,601
Corporate Income Tax	\$ 4,920,605,000	\$ 35,906,810	\$ 1,042,527
General Sales Tax	\$ 12,117,579,000	\$ 88,424,819	\$ 2,567,349
Selective Sales Tax	\$ 11,099,912,000	\$ 80,998,664	\$ 2,351,736
License Taxes	\$ 1,952,367,000	\$ 14,246,880	\$ 413,648
Other Taxes	\$ 3,346,329,000	\$ 24,418,948	\$ 708,986
Total	\$ 73,667,171,000	\$ 537,566,641	\$ 15,607,847

Source: 2013 Annual Survey of State Government Tax Collections, Camoin Associates

To determine the Return on Investment of the tax credit program, Camoin Associates compared total New York State tax collections in 2013 and 2014 attributable to the credit programs to the total credit amount projected to be issued for projects initiated during this period. New York State will issue an estimated \$1.2 billion in production and post-production tax credits to projects initiated in 2013 and 2014, as shown in the table to the right.

Tax Credits Issued	
Production Credits	\$ 1,131,345,215
Post-Production Credits	\$ 38,340,968
Total	\$ 1,169,686,183

Source: Empire State Development

²⁸ New York State total tax collections obtained from 2013 Annual Survey of State Government Tax Collections.



Tax credits are paid out according to the following schedule: for distributions of less than \$1 million, the credit is typically paid out in the year following project completion. For distributions valued between \$1 and \$5 million, the Credit is paid out in equal sums over the two years following project completion. For distributions of over \$5 million dollars, the credit is paid out in equal sums over the three years following project completion. Applying a discount rate of 1.5%²⁹ to the payout schedule results in a net present value (NPV) of \$1,086,080,854 for the production credit and \$37,114,507 for the post-production credit.

Estimated Credit Payouts for 2013 and 2014 Projects						
	2014	2015	2016	2017	2018	NPV of Payout
Production Credit	\$ 154,346,841	\$ 337,417,710	\$ 348,578,530	\$ 216,837,809	\$ 74,164,324	\$ 1,086,080,854
Post-Production Credit	\$ 4,891,987	\$ 21,400,603	\$ 12,048,378	\$ -	\$ -	\$ 37,114,507

Source: Empire State Development, Camoin Associates

As shown in the tables below, Camoin Associates estimates the return on investment (ROI) ratio of the Production Credit for the State of New York to be 0.49. In other words, for every \$1 of tax credits paid out on an NPV basis, the State receives \$0.49 in return in the form of tax collections. The State's ROI for the Post-Production tax credit is \$0.42 for every dollar of incentive.

Production Credit - Return on Investment	
New York State Tax Collections	\$ 537,566,641
NPV of Estimated Production Credit Payout	\$ 1,086,080,854
Return on Investment Ratio	0.49

Source: Empire State Development, Camoin Associates

Post-Production Credit - Return on Investment	
New York State Tax Collections	\$ 15,607,847
NPV of Estimated Post-Production Credit Payout	\$ 37,114,507
Return on Investment Ratio	0.42

Source: Empire State Development, Camoin Associates

To arrive at the amount of taxes collected by New York City as a result of the film credit program, Camoin Associates used the same methodology that was used for NYS.³⁰ As detailed in the tables below, an estimated \$543 million in taxes were collected that can be attributed to the program. Note that we imputed NYC post-production spending under the assumption that the NYC share of NYS post-production spending was similar to its share of production spending (about 89%).³¹

Project Spending as a Percent of NYC Gross Regional Product (GRP)		
NYC 2013 Gross Regional Product (GRP)	\$	638,500,000,000
	Project Spending	Percent of GRP
Production Credit	\$ 7,582,738,621	1.19%
Post-Production Credit	\$ 247,154,427	0.04%

Source: EMSI, Empire State Development, Camoin Associates

²⁹ Corresponds to the 5-year treasury yield.

³⁰ New York City GRP was obtained from EMSI, and total New York City tax collections were obtained from the New York Independent Budget Office.

³¹ Post-production spending figures are not directly available for New York City, as post-production spending is divided into Upstate and Downstate spending.



Fiscal Impact on New York City			
	A	B	C
	2013 NYC Tax Collections	Tax Collections Attributable to Production Credit (Col. A × 1.19%)	Tax Collections Attributable to Post-Production Credit (Col. A × 0.04%)
Property Tax	\$ 18,969,610,477	\$ 225,280,498	\$ 7,342,871
Income Tax	\$ 9,814,898,044	\$ 116,560,386	\$ 3,799,210
Sales Tax	\$ 6,149,880,182	\$ 73,035,135	\$ 2,380,533
Corporate Tax	\$ 4,815,821,447	\$ 57,192,036	\$ 1,864,137
Other Taxes	\$ 5,971,573,274	\$ 70,917,587	\$ 2,311,513
Total	\$ 45,721,783,424	\$ 542,985,643	\$ 17,698,263

Source: New York Independent Budget Office, Camoin Associates

Camoin Associates also estimated tax collections by local taxing jurisdictions in New York State other than New York City. This includes counties, cities, towns, special districts, and school districts outside of NYC. Over \$110 million in tax revenues can be attributed to these jurisdictions.³²

Project Spending as a Percent of Gross Regional Product (GRP) of NYS outside of NYC		
NYS (balance) 2013 Gross Regional Product (GRP)	\$	672,212,000,000
	Project Spending	Percent of GRP
Production Credit	\$ 1,981,834,545	0.295%
Post-Production Credit	\$ 30,545,823	0.005%

Source: EMSI, Empire State Development, Camoin Associates

Fiscal Impact on NYS outside of NYC			
	A	B	C
	2013 Tax Collections by NYS Local Governments (except NYC)	Tax Collections Attributable to Production Credit (Col. A × 0.295%)	Tax Collections Attributable to Post-Production Credit (Col. A × 0.005%)
All Taxes	\$ 36,774,585,236	\$ 108,419,879	\$ 1,671,065

Source: US Census State and Local Government Finances, Camoin Associates

When combining the tax benefits accrued to NYS and local jurisdictions, the ROI ratio for the production credit is 1.09. In other words, for every \$1 NYS pays in incentives, NYC receives about \$0.50, other local governments receive \$0.10 and NYS receives \$0.49 in tax revenue.

Production Credit - Return on Investment	
New York State Tax Collections	\$ 537,566,641
New York City Tax Collections	\$ 542,985,643
All Other NYS Local Govt Tax Collections	\$ 108,419,879
Combined Tax Collection	\$ 1,188,972,162
NPV of Estimated Production Credit Payout	\$ 1,086,080,854
Return on Investment	1.09

Source: Camoin Associates

The ROI for the post-production credit is 0.94, meaning that for every \$1 of tax credits issued, NYC receives \$0.48, other local jurisdictions receive \$0.04, and NYS receives \$0.42 in tax revenue.

³² 2013 total tax collections by local governments was estimated by adjusting the 2012 value from the US Census of Governments to reflect the change in NYS tax collections between 2012 and 2013.



Post-Production Credit - Return on Investment	
New York State Tax Collections	\$ 15,607,847
New York City Tax Collections	\$ 17,698,263
All Other NYS Local Govt Tax Collections	\$ 1,671,065
Combined Tax Collection	\$ 34,977,175
NPV of Estimated Post-Production Credit Payout	\$ 37,114,507
Return on Investment	0.94

Source: Camoin Associates

CONCLUSION

In conclusion, during the 2013–2014 period New York State has invested a total of \$1,123,135,361 (NPV) in incentives through the Production Tax Credit and the Post-Production Tax Credit to be paid out over a period from 2014–2018. In exchange, NYS and local jurisdictions will receive \$1,223,949,337 in total tax revenue while supporting over 30,000 jobs per year, \$1.7 billion in earnings per year, and nearly \$5 billion in spending throughout New York State per year.



ATTACHMENT A: WHAT IS AN ECONOMIC IMPACT ANALYSIS?

The purpose of conducting an economic impact study is to ascertain the total cumulative changes in employment, earnings and output in a given economy due to some initial “change in final demand”. To understand the meaning of “change in final demand”, consider the installation of a new widget manufacturer in Anytown, USA. The widget manufacturer sells \$1 million worth of its widgets per year exclusively to consumers in Canada. Therefore, the annual change in final demand in the United States is \$1 million because dollars are flowing in from outside the United States and are therefore “new” dollars in the economy.

This change in final demand translates into the first round of buying and selling that occurs in an economy. For example, the widget manufacturer must buy its inputs of production (electricity, steel, etc.), must lease or purchase property and pay its workers. This first round is commonly referred to as the “Direct Effects” of the change in final demand and is the basis of additional rounds of buying and selling described below.

To continue this example, the widget manufacturer’s vendors (the supplier of electricity and the supplier of steel) will enjoy additional output (i.e. sales) that will sustain their businesses and cause them to make additional purchases in the economy. The steel producer will need more pig iron and the electric company will purchase additional power from generation entities. In this second round, some of those additional purchases will be made in the US economy and some will “leak out.” What remains will cause a third round (with leakage) and a fourth (and so on) in ever-diminishing rounds of spending. These sets of industry-to-industry purchases are referred to as the “Indirect Effects” of the change in final demand.

Finally, the widget manufacturer has employees who will naturally spend their wages. As with the Indirect Effects, the wages spent will either be for local goods and services or will “leak” out of the economy. The purchases of local goods and services will then stimulate other local economic activity; such effects are referred to as the “Induced Effects” of the change in final demand.

Therefore, the total economic impact resulting from the new widget manufacturer is the initial \$1 million of new money (i.e. Direct Effects) flowing in the US economy, plus the Indirect Effects and the Induced Effects. The ratio between Direct Effects and Total Effects (the sum of Indirect and Induced Effects) is called the “multiplier” and is often reported as dollar-of-impact per dollar-of-change. Therefore, a multiplier of 2.4 means that for every dollar (\$1) of change in final demand, an additional \$1.40 of indirect and induced economic activity occurs for a total of \$2.40.

Key information for the reader to retain is that this type of analysis requires rigorous and careful consideration of the geography selected (i.e. how the “local economy” is defined) and the implications of the geography on the computation of the change in final demand. If this analysis wanted to consider the impact of the widget manufacturer on the entire North American continent, it would have to conclude that the change in final demand is zero and therefore the economic impact is zero. This is because the \$1 million of widgets being purchased by Canadians is not causing total North American demand to increase by \$1 million. Presumably, those Canadian purchasers will have \$1 million less to spend on other items and the effects of additional widget production will be cancelled out by a commensurate reduction in the purchases of other goods and services.

Changes in final demand, and therefore Direct Effects, can occur in a number of circumstances. The above example is easiest to understand: the effect of a manufacturer producing locally but selling globally. If, however, 100% of domestic demand for a good is being met by foreign suppliers (say, DVD players being imported into the US from Korea and Japan), locating a manufacturer of DVD players in the US will cause a change in final demand because all of those dollars currently leaving the US economy will instead remain. A situation can be envisioned whereby a producer is serving both local and foreign demand, and an impact analysis would have to be careful in calculating how many “new” dollars the producer would be causing to occur domestically.



ATTACHMENT B: REFERENCES

- Adkisson, R. (2013, June). Policy Convergence, State Film-Production Incentives and Employment: A Brief Case Study. *Journal of Economic Issues*, 445-453.
- Belson, K. (2011, October 30). New Dreams for Field. *The New York Times*. Retrieved from http://www.nytimes.com/2011/10/30/sports/baseball/field-of-dreams-setting-tourist-magnet-in-iowa-is-to-be-sold.html?pagewanted=all&_r=1&
- California Film Commission. (2013). *Progress Report : Film and Television Film Credit Program & Competition for California's Entertainment Industry*.
- Cloudberry Communications . (2011). *The Millennium effect*.
- Doster, A. (2014, March 19). Fighting Over the Field of Dreams. *The Atlantic*. Retrieved from <http://www.theatlantic.com/magazine/archive/2014/04/field-of-schemes/358624/>
- Ernst & Young. (2009). *Estimated Impacts of the New York State Film Credit*.
- Ernst & Young. (2012). *Evaluating the Effectiveness of State Film Tax Credit Programs*.
- Henchman, J. (2011, June 2). *More States Abandon Film Tax Incentives as Programs' Ineffectiveness Becomes More Apparent*. Retrieved from Tax Foundation: <http://taxfoundation.org/article/more-states-abandon-film-tax-incentives-programs-ineffectiveness-becomes-more-apparent>
- HR&A Advisors, Inc. (2012). *Economic and Fiscal Impacts of the New York State Film Production Tax Credit*.
- Kemp, S. (2012, September 17). *U.K. Tax Credit Vital to Film Industry Health: Study*. Retrieved from The Hollywood Reporter: <http://www.hollywoodreporter.com/news/british-tax-credit-film-industry-oxford-economics-370646>
- Lester, J. (2013). *Tax Credits for Foreign Location Shooting of Films: No Net Benefit for Canada*. Canadian Public Policy.
- Mitchell, H., & Stewart, M. F. (2012). Movies and holidays: the empirical relationship between movies and tourism. *Applied Economics Letters*, 1437-1440.
- MNP, LLP. (2014). *Economic Impacts of the Florida Film and Entertainment Industry Financial Incentive Program: Supplementary Report on Film Induced Tourism*.
- National Conference of State Legislatures. (2014). *State Film Production Incentives & Programs*.
- New York State Department of Labor, Division of Research and Statistics, Bureau of Labor Market Information. (2014). *New York's Motion Picture Industry: A Statewide and Regional Analysis*. NYC & Company. (n.d.). *New York City Tourism: A Model for Success*. 2013. Retrieved from http://www.nycgo.com/assets/files/pdf/New_York_City_Tourism_A_Model_for_Success_NYC_and_Company_2013.pdf
- Oxford Economics. (2012). *The Economic Impact of the UK Film Industry*.
- Preston, P. (2013). State Tax Incentives and the Motion Picture Industry. *Journal of the Music & Entertainment Industry Educators Association*, 181-205.



Robert Handfield, P. (2014). *A Supply Chain Study of the Economic Impact of the North Carolina Motion Picture and Television Industry*.

Salama, M. (2009, Summer). State Film Tax Incentives and the Related Potpourri of Federal Income Tax and Tax Accounting Considerations. *Tax Lawyer*, p. 1085.

The Boston Consulting Group. (2012). *Evaluating NYC Media Sector Development and Setting the Stage for Future Growth*.

Twilight. (2014). Retrieved from Discover Forks Washington: <http://forkswa.com/twilight/>

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