An Analysis of the Entertainment and Media Industry in Washington, D.C.

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ECONorthwest
ECONOMICS • FINANCE • PLANNING

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Executive Summary

Washington, D.C. (The District) is the backdrop for many successful movies and TV shows. Although these movies and shows are set in D.C., much of their production occurs outside the District. The absence of a competitive film incentive program may explain this trend.[1]

District officials have expressed an interest in bringing film, television, and digital media producers back to the nation's capital. The mandate of the Washington, D.C. Office of Motion Picture and Television Development (MPTD) is to grow Washington, D.C.'s entertainment and media industry through targeted marketing and stimulating investment and employment. Through conversations with industry experts, the MPTD has identified three elements that may enable to District to grow its film industry base:

1. A competitive incentive program,
2. State-of-the-art facilities, and
3. Other film-related infrastructure.

Consequently, the MPTD engaged ECONorthwest to analyze the viability of a competitive incentive program for the District in a study entitled, "An Analysis of the Entertainment and Media Industry in Washington, D.C." (Study).

Key Findings

The District has a substantial film industry.

Cash incentives do attract out of state production.

Over time, the analysis shows that these incentives support growth in the indigenous film industry.

Therefore, the District should measure the effectiveness of a film incentive through growth in the indigenous film industry over a period of several years.

The viability of an incentive program depends upon the expected return on investment of that program. Traditionally, policy analysts define return on investment narrowly: how does a policy impact government revenues? Economists use a broader measure of return on investment for film incentive programs to reflect the diversity of benefits associated with film & video industry growth.

[1] Freed, B., 2012, "Vincent Orange's Film Incentive Bill Gets Chilly Reviews," *DCist*, November 27, accessed at http://dcist.com/2012/11/vincent_oranges_film_incentive_bill.php.

A successful film incentive program will accomplish two primary goals. In the short-run, it will attract specific productions. These production companies will purchase local goods and services, increasing short-term employment and spending in the District. As the industry grows, local companies will expand and capture a greater share of the market. Having a larger base of local film & video businesses, and the skilled professionals that work for them, reduces the reliance on imported talent for shoots and enhances the District's competitiveness as a location. Thus, a successful incentive program may accomplish a second goal of long-term job creation and income growth in the District.

To capture the long-term benefits of film & video industry development, economists include the following metrics in their evaluation: job creation and in-state spending; government revenues; and the development over time of the film & video industry and related sectors, such as tourism.[2] Economists measure these metrics through economic impact analysis, fiscal impact analysis, and dynamic impact analysis, respectively.

The economic and dynamic impacts of film incentive programs are particularly important in places with limited or no income taxes, like the District. Neither Texas nor Florida has an income tax, but both have large film incentive programs. Consequently, the fiscal impacts of their programs are limited mostly to sales and use taxes.

In a recent study of the Texas Moving Image Industry Incentive Program, researchers from the University of Texas at Austin evaluated the benefits associated with the state's film incentive program. The study begins with an analysis of the fiscal and economic benefits of the program. Then, researchers used case studies to demonstrate other important benefits, namely infrastructure and municipal improvements as well as branding and tourism.

MNP, a major Canadian business consulting and accounting firm, recently published a study on the impact of Florida's film and entertainment industry. This study builds on a fiscal and economic impact analysis released by the Florida Department of Economic Opportunity Office of Film and Entertainment. MNP's report considers the benefits of the industry arising from production and infrastructure spending and film-induced tourism. MNP found that the industry provided a range of community and environmental benefits, such as employee training, "green" production, scholarships, cultural enrichment, and increased tourism.[3]

[2] Andrew Phillips, Robert Cline, and William Fox, 2012, Evaluating the effectiveness of state film tax credit programs: Issues that need to be considered, Ernst & Young, prepared for the Motion Picture Association of America, accessed July 3, 2013 at http://www.ey.com/Publication/vwLUAssetsPI/Evaluating_the_effectiveness_of_state_film_tax_credit_programs/$FILE/1203-1342731%20Motion%20Picture%20assoc.%20film%20credit%20study.pdf.

[3] MNP, 2013, Economic and Social Impacts of the Florida Film and Entertainment Industry Financial Incentive Program, prepared for the Motion Picture Association of America.

Similar to evaluations of other states' entertainment and media industries, this Study describes the range of economic, fiscal, and dynamic impacts of the industry in Washington, D.C. It also includes a dynamic impact analysis of film incentive programs in other states. Based on its findings, The Study concludes with a suite of recommendations for the District's film incentive program.

The Study consists of four components:

1. A comprehensive overview of the entertainment and media industry in the District;
2. Two economic and fiscal impact analyses, one for the industry in fiscal year 2012 (FY12), and a second for the Film D.C. Economic Incentive Fund (FEIF);
3. An analysis of the dynamic impacts of the industry and characteristics of successful incentive programs across the U.S.; and
4. An analysis of incentives – both economic and non-economic – and other actions for the FEIF that would grow the entertainment and media industry in the District.

1 Industry Overview

This chapter provides a comprehensive overview of the District's entertainment and media industry. It consists of three components:

1. Definitions of industry sectors,
2. An explanation of how these sectors are measured and the data sources used, and
3. A size analysis of the industry.

1.1 Sector Definitions

For the purposes of this analysis, we have defined the "entertainment and media industry" as producers of film, video, and digital media (Industry). While that may appear simple, analyzing the Industry is challenging for several reasons.

First, its various elements do not fall comfortably into traditional industry definitions used by government or economists. Traditionally, establishments that produce films and videos are classified under the North American Industry Code (NAICS) 51211, motion picture and video production. Due to changes in Industry technology, this NAICS code no longer captures all sectors of the Industry, namely establishments that produce live and digital action on computers.

Second, the Industry not only consists of local businesses, but also freelancers living in the District and out of state entities that come to D.C. to record film or video. ECONorthwest drew on several data sources to conduct a size analysis of each sector individually.

Finally, some of the data are released after considerable time lags, such as the incomes of self-employed freelancers reported by the Internal Revenue Service (IRS). As a result, the analysis uses some assumptions to scale data to FY12.

Given the three challenges described above, ECONorthwest segmented the Industry by type of production and type of establishment/entity. The Industry consists of three sectors:

1. **Out of state production,** companies based elsewhere that film in D.C;
2. **Indigenous film & video production,** D.C.-based establishments and freelancers that produce film & video; and
3. **Digital media production,** companies not classified as film & video production firms that produce video for online consumption, animation, VFX, and entertainment software.

Five different types of entities comprise these sectors: out of state entities, indigenous film & video production firms, freelancers, intra-business/inter-industry, and digital media entities.

Out of State, organizations without permanent establishments in D.C. that produced film, video, or digital media in the District. These entities comprise the first sector of analysis, out of state production. Within this sector, the analysis only counts spending and employment that occurred in the District.

Local Film & video Production Companies, District-based firms categorized under NAICS code 51211. This segment is one of the three types of entities we classify as indigenous film & video production.

Freelancers, non-employer D.C. businesses that ECONorthwest included in the indigenous film & video production sector.

Intra-business/inter-industry, businesses outside of the film & video production or digital media industries that sometimes do their own film & video production. An advertising firm that produces commercials and a school that makes a documentary are two examples of "inter-industry" activity. Intra-business entities comprise the third segment of the indigenous film & video sector.

Digital media entities, entities outside the film & video industry that produce video for online consumption, animation, VFX, and entertainment software.

1.2 Measuring the Industry

Measuring the size of the visual media sector required assembling and crosschecking data from several sources. In some cases, adjustments and estimates had to be made. The results yielded estimates of FY12 employment, output, wages, and freelancer income. ECONorthwest organized these data by Industry sector and input the final estimates into a model of D.C.'s economy. The model determined the total economic impacts these industries had on the District in FY12. ECONorthwest grouped the results by Industry sector.

1.2.1 Data Sources

This analysis relies on several principal sources of data:

1. Bureau of Labor Statistics (BLS) Census of Employment and Wages (CEW) data on employment and wages;
2. U.S. Department of Labor (DOL) Occupational Employment Statistics (OES) used to estimate (1) spending and employment among intra-business/inter-industry firms in the indigenous film & video production sector, and (2) the amount of digital media work in D.C.;
3. ECONorthwest interviews with companies in D.C. that engage in digital media production used to estimate the number of firms that engage in digital media work;

4. U.S. Census place of work and residency data;
5. Out-of-state production expenditure data from the MPTD, National Parks Service, and the U.S. General Services Administration;
6. Data on business addresses used to identify which productions reported by MPTD were completed by indigenous firms (ECONorthwest excluded the employment and expenditures by these local companies from its assessment of out of state expenditures);
7. U.S. Economic Census data on film & video production; and
8. ECONorthwest budget data for out of state shoots.

1.3 Size Analysis of the Industry

This section provides data on the size of each Industry sector. Table 1 summarizes the dimensions the Industry by sector in FY12. The total direct output of the Industry was more than $275 million. Over 75 percent came from the indigenous film & video sector.

Table 1: Dimensions of the Film & Video Production and Digital Media Industry in Washing, D.C., FY12

Measure	Out of State Entities	Indigenous Entities	Digital Media	Less Inter-Sector Work	FY2012 Total
Output	$23,859,434	$212,552,313	$41,992,796	($3,354,162)	$275,050,382
Total employees (FYE)	123	742	227	(8)	1,084
Local employees (FYE)	89	742	227	(8)	1,050
Proprietors	0	216	0	(64)	152
Employee wages and benefits	$10,935,253	$92,805,113	$19,246,133	($299,829)	$122,686,669
Proprietor income	0	8,049,988	0	(2,383,500)	5,666,488

Source: ECONorthwest, July 2013

The model subtracts a portion of the output, employees and proprietors, wages and benefits, and proprietor income from the total to account for freelancers that do work for out of state entities or indigenous firms. The value of this work is counted in the output of both freelancers and either out of state entities or indigenous film & video firms and, therefore, the Industry output total requires some adjustment to avoid double counting.[4]

[4] Data required to estimate the value of this overlap is not publicly available; ECONorthwest estimated that one-third of output by freelancers is counted in the output of state entities or indigenous film & video firms.

The analysis shows employment in terms of FYEs (full year equivalents). It does so because much of the work in the Industry is project specific and filming projects are usually of short duration. A person may work for three weeks on one project, go onto another for a few days, and than another for several weeks. So, to avoid counting each project as its own job, the analysis compresses jobs into FYEs. One FYE is the same as twelve months of employment. In FY12, the Industry provided work for 1,050 FYEs and 152 proprietors (i.e., freelancers) in D.C.

1.3.1 Out of State Production

Table 2 shows the dimensions of the out of state production sector. Based on data from the MPTD, the National Parks Service, and the U.S. General Services Administration, ECONorthwest estimates that out of state productions generated $23.5 million in output in FY12. Out of state entities employed a total of 115 FYEs and 81 were local residents. Wages and benefits for these employees totaled $10.6 million, at an annualized average of $92,280 per FYE. Actual pay per individual was less, as many jobs lasted for a limited number of days.

Table 2: Dimensions of Film & Video Production Projects Conducted by Out of State Sector in Washington, D.C., FY12

Measure	Out of State Entities	Less Inter-Sector Work	FY2012 Total
Output	$23,859,434	($374,787)	$23,484,647
Total employees (FYE)	123	(8)	115
Local employees (FYE)	89	(8)	81
Total employee wages and benefits	$10,935,253	($299,829)	$10,635,424

Source: ECONorthwest, July 2013

The model subtracts $374,787 from estimated output, 8 employees from the number of total/local FYEs, and $299,829 in employee wages and benefits to avoid double counting the work done by freelancers in the District for out of state entities (their output is part of the indigenous Industry sector).

1.3.2 Indigenous Production

Table 3 presents the dimensions of the indigenous film & video production industry in Washington, D.C. In total and adjusted for inter-sector work, this industry sector generated $209.6 million in output, employed 742 FYEs and 152 proprietors, and generated a combined payroll and proprietor income of $98.5 million.

Table 3: Dimensions of the Indigenous Film & Video Production Industry in Washington, D.C., FY12

Measure	Film and Video Firms	Freelancers	Intra-Business	Less Inter-Sector Work	FY2012 Total
Output	$189,671,194	$10,062,485	$12,818,634	($2,979,375)	$209,572,938
Employees (FYE)	662	0	80	0	742
Proprietors	0	216	0	(64)	152
Employee wages and benefits	$86,930,078	$0	$5,875,035	$0	$92,805,113
Proprietor income	0	8,049,988	0	(2,383,500)	5,666,488

Source: ECONorthwest, July 2013

1.3.1 Digital Media Production

Table 4 summarizes the dimensions of the Digital Media Production Industry in Washington, D.C. in FY12. This sector produced nearly $42 million in output in FY12, employed 227 FYEs, and produce total wages and benefits of $19.2 million.

Table 4: Dimensions of the Digital Media Production Industry in Washington, D.C., FY12

Measure	FY2012 Total
Sub-sector output	$41,992,796
Employees (FYE)	227
Employee wages and benefits	$19,246,133

Source: ECONorthwest, June 2013

2 Industry Impact Analysis

This chapter presents the methodology and findings for the impact analysis of the Industry and FEIF.

2.1 Overview of Economic Impact Analysis

Economic impact analysis is a way of measuring how an industry or group of industries, such as the film & video and digital media sectors, affects D.C.'s economy. It is done through the use of computer models designed to trace the flow of dollars between businesses, consumers, and employees. This section describes ECONorthwest's methodology.

2.1.1 Methodology

Spending and employment by an industry generates economic impacts elsewhere in the economy. Economists measure these upstream effects on suppliers and worker households in terms of output, wages, jobs, and other types of impacts. Economists developed a method called "input-output" modeling to assess these impacts.

An input-output model is a mathematical representation of an economy. It shows how different parts of an economy are linked to one another. Information about linkages comes from various sources, including U.S. Census reports on population and businesses.

ECONorthwest estimates impacts using the economic modeling software IMPLAN (Impact Analysis for Planning). IMPLAN is a widely used economic impact modeling system.[5] The U.S. Department of Agriculture and U.S. Forest Service developed IMPAN as a product of the Rural Development Act of 1972.

In simple terms, the IMPLAN model works by tracing how money made in one sector of an economy is spent and re-spent throughout the rest of the economy. The total impact of this sector increases with each round of local spending and employment it supports.

Impacts do not continue to cycle indefinitely through an economy. They gradually diminish as money leaks of out of the system of spending and earnings. Only expenditures and employment that occur within the District of Columbia are relevant to this analysis. The model assumes that any spending outside of the District is lost to the local economy. Taxes and savings are also sources of leakage. IMPLAN accounts for these.

[5] University of Wisconsin Center for Cooperatives and the Department of Agricultural and Applied Economics at the University of Wisconsin — Madison at http://reic.uwcc.wisc.edu/implan/

Standard IMPLAN models lack data specific to the film & video industry. Through its previous work studying the Industry, ECONorthwest developed a unique IMPLAN model for the Industry that incorporates Industry-specific spending and employment patterns.

2.1.2 Types of Impacts

Impacts are reported using economic measures, such as jobs and income that, while not additive, do provide alternative perspectives for expressing the size of economic effects. The measurements used in this report are:

- **Jobs:** The annual average number of jobs, both of payroll employees and the self-employed, for seasonal, full-, or part-time work done during over the course of 12 months. These jobs are termed "full-year equivalent" (FYE) jobs.
- **Employee wages and benefits:** The sum of wages, salaries, benefits (*i.e.,* health insurance, vacation pay, retirement), and employer paid payroll taxes. Together, these elements comprise an employee's total compensation.
- **Proprietor income:** economic impact models count earnings of self-employed workers as proprietor income.
- **Labor income:** The sum of employee wages and benefits and proprietor income.
- **Output:** The value of a year's worth of production.

2.1.3 Impact Levels

Transactions (and employment) occur at three different levels depending on how removed they are from the initial source. For this analysis, those levels are:

- **Direct impacts:** The impacts directly caused by the Industry.
- **Indirect impacts:** The impacts caused by other industries as a result of the film & video industry. Indirect impacts result from business-to-business transactions. For example, when a film production company pays a local advertising firm to produce an ad, its spending causes a first round indirect impact on the local economy. If the advertising firm then pays the Washington Post for an ad on behalf of the film production company, that spending also represents an indirect impact (specifically a second round impact). Impacts can continue for many rounds; the impact analysis will count them as long as they occur inside the District.
- **Induced impacts:** An induced impact comes from household spending. For example, when a camera operator employed by a production company in D.C. spends a portion of his paycheck at a restaurant in the District, this spending represents a first round induced impact. If the waitress at the restaurant spends the tip she earned from the camera operator at a local hardware store, that spending is a second round of induced impact. Because induced impacts originate from household spending, they often are called "consumption-driven" effects.

2.2 Overview of Fiscal Impact Analysis

Fiscal impact analysis measures the affect of an industry or group of industries on government costs and revenues. For the scope of this analysis, ECONorthwest analyzed the revenues to the District as a result of the Industry. These revenues consist of District taxes as well as permits and fees paid to various government agencies. The analysis assumes that government taxes, fees, and systems development charges cover the costs associated with providing services to Industry establishments and their workers. This section summarizes the methodology.

ECONorthwest used data from IMPLAN and the D.C. Office of Tax and Revenue to estimate the fiscal impacts of the Industry on the District government. Below, is a list of the key taxes and fees ECONorthwest analyzed, including any special data adjustments.

- **Sales and Use Tax.** The model weights output data for some sectors to account for rate variations. For example, the model accounts for higher rates imposed on hotels and restaurants, as compared to retail stores.
- **Property Tax.** ECONorthwest used the Industry's contribution to total labor income as an indicator of property taxes.
- **Individual income tax.** The model assumes all labor income, including proprietor income, is subject to individual income taxes. It adjusts the number of taxable FYEs to account for the portion of individuals that work in D.C. but are residents of other states and do not pay income taxes to the District.
- **Corporate franchise tax.** ECONorthwest assumed that out of state entities would not pay any corporate franchise taxes to the District. For establishments in the district, their taxes are a function of their output, relative to all private sector industries.
- **Other taxes.** The analysis assumes that the ratio of other taxes to "known taxes" (those analyzed above) is proportional between the District and the Industry.
- **Film permit fees.** Permit fees paid by production companies, as reported by the MPTD.

2.3 Economic and Fiscal Impacts of the Industry in FY12

This section presents the findings from both the economic and fiscal impact analyses for the Industry in FY12. It concludes with a return on out of state spending analysis.

2.3.1 Economic Impact Findings

Summing all three impact levels (direct, indirect, and induced) reveals that, altogether, the District Industry sectors supported $460.4 million in output, $205.2 million in labor income, and 2,456 FYE jobs in FY12. This job figure includes direct employment among Industry entities, including film crew employees, as well as jobs in other industries supported by film & video production, like food service and retail. These sector totals account for inter-sector overlap.

Table 5: Summary of Total Impacts, FY12

Source	Total Output	Total Labor Income	FYEs
Out of state film and video production	$41,820,080	$18,499,565	266
Indigenous sector	362,931,813	160,946,149	1,877
Digital media production	55,624,641	25,726,136	314
Total	$460,376,534	$205,171,850	2,456

Source: ECONorthwest using IMPLAN software

Out of State Production

Production companies from outside the District also have an impact on the D.C. economy. Data from MPTD and others show, net of locally produced shoots, that out of state productions spent about $24.1 million in D.C. in FY12.

Out of state production companies were directly responsible for $23.5 million in output in FY12. They also generated $10.6 million in labor income and supported 115 jobs. Their direct spending and payrolls stimulated additional economic activity in D.C. In total, the District gained $42.8 million in output, $18.5 million in labor income, and 266 FYE jobs.

Table 6: Impacts of Out-of-State Film & Video Production in D.C., FY12

Type	Output	Labor Income	FYEs
Out of state entities			
Direct	$23,859,434	$10,935,253	123
Indirect and induced	18,481,657	7,922,102	152
Segment total	$42,341,091	$18,857,355	275
Less inter-sector work			
Direct	($374,787)	($299,829)	(8)
Indirect and induced	(146,225)	(57,961)	(1)
Segment total	(521,011)	(357,790)	(9)
Out of state sector total			
Direct	23,484,647	10,635,424	115
Indirect and induced	18,335,432	7,864,141	151
Total	**41,820,080**	**18,499,565**	**266**

Source: ECONorthwest using IMPLAN software

Indigenous Film & Video Production

Table 7 summarizes the impacts of the indigenous sector. In total, the sector supported $362.9 million in output, 1,877 FYE jobs, and $160.9 million in labor income in the District of Columbia in FY12, net inter-sector work.

Table 7: Impacts of the Indigenous Sector by Sector in D.C., FY12

Type	Output	Labor Income	FYEs
Local film & video production			
Direct	$189,671,194	$86,930,078	662
Indirect and induced	146,230,106	59,571,193	937
Segment total	$335,901,301	$146,501,271	1,599
Freelancers			
Direct	$10,062,485	$8,049,988	216
Indirect and induced	3,925,925	1,556,167	25
Segment total	$13,988,410	$9,606,155	242
Intra-Business			
Direct	$12,818,634	$5,875,035	80
Indirect and induced	4,365,261	1,807,950	28
Segment total	$17,183,894	$7,682,985	108
Less inter-sector work			
Direct	($2,979,375)	($2,383,500)	(64)
Indirect and induced	($1,162,417)	($460,761)	(7)
Segment total	(4,141,792)	(2,844,262)	(72)
Indigenous sector total			
Direct	$209,572,938	$98,471,601	894
Indirect and induced	153,358,875	62,474,548	982
Sector total	**$362,931,813**	**$160,946,149**	**1,877**

Source: ECONorthwest using IMPLAN software

Local film & video firms have the greatest economic impact among the Industry sectors. These firms directly employed 662 FYE workers who earned a total of $86.9 million in labor income. They accounted for $189.7 million in direct annual output and $335.0 million in total output in the District. Spending by local film & video firms and their employees supported an additional 937 jobs and $59.6 million in labor income in the District. In 2012 a total of 1,599 FYE jobs in the District could be traced back to local film & video companies.

There were 216 freelancers based in D.C. during FY12 and they made about $8.0 million, net of business expenses. Accounting for inter-sector work, ECONorthwest estimates there were 152 FYE proprietors that earned $5.7 million and generated an output of $7.1 million. Net of inter-sector work, their work contributed an additional $2.8 million in output, 18 jobs, and $1.1 million in labor income.

Intra-business production employs approximately 80 people that do film & video production work. These jobs contributed $12.8 million in output in D.C., with $5.9 million in labor income. This activity supported an additional 28 workers with $1.8 million in labor income.

Digital Media Entities

In FY12, digital media production, outside of the film & video industry, accounted for 227 direct jobs in D.C. These jobs contributed nearly $42 million to the District's gross economic output, directly generating $19.2 million in labor income. Through their indirect and induced impacts, this sector further supported $13.6 million in output, $6.5 million in labor income, and 87 FY jobs elsewhere in D.C.

Table 8: Impacts of Digital Media Production Outside of the Film & Video Industry, FY12

Type	Output	Labor Income	FYEs
Direct	$41,992,796	$19,246,133	227
Indirect and induced	13,631,845	6,480,003	87
Total	$55,624,641	$25,726,136	314

Source: ECONorthwest using IMPLAN software

2.3.2 Fiscal Impact Analysis Findings

Film & video production, and the activity it supports in the area economy, also yields fiscal impacts in the forms of local taxes and fees. Akin to the economic impact analysis presented in the previous section, the fiscal impact analysis counts direct, indirect, and induced impacts and summarizes them in total.

Fiscal Impacts of the Industry

Table 9 shows the tax and fee revenues generated by the Industry in FY12 by source. Four taxes generated nearly 85 percent of the tax revenues from the Industry: the sales and use tax, the real property tax, the individual income tax, and the corporate franchise tax. The sales and use tax generated an estimated $4.5 million, nearly 35 percent of total revenues. Real property taxes, at $3.3 million, accounted for 26 percent of total tax revenues. Direct and indirect employees of the Industry paid about $2.6 million in individual income taxes. Local businesses paid $459,468 in taxes on their business income.

Table 9: Fiscal Impacts of the Industry on D.C., FY12, 2013$

Source	Revenue Generated
Tax revenues	
Sales and use tax	$4,457,662
Property tax	3,303,786
Individual income tax	2,599,567
Corporate franchise tax	459,468
Other taxes	2,019,059
Total District tax revenues	$12,839,542
Permits and fees	105,751
Total	$12,945,293

Source: ECONorthwest with data from IMPLAN and the D.C. Office of Tax and Revenue

Fiscal Impact Analysis of Out of State Productions

An analysis of local tax revenues stimulated by out of state productions is necessary for an assessment of the net cost of film incentives. Table 10 summarizes the fiscal impacts of out of state production on the District.

Table 10: Fiscal Impacts of Out of State Production on D.C., FY12

Source	Revenue Generated
Tax revenues	
Sales and use tax	$869,099
Property tax	170,028
Individual income tax	133,786
Other taxes	218,860
Total District tax revenues	$1,391,773
Permits and fees	78,459
Total	$1,470,232

Source: ECONorthwest with data from IMPLAN and the D.C. Office of Tax and Revenue

In FY12, taxes and fees paid by out of state production companies generated an estimated $1.5 million for the District government. $78,459 arrived from permit fees paid by film & video production companies to the MPTD. The remaining $1.4 million were tax revenues. Sales and use taxes generated the majority (62 percent) of the total tax revenue collected. Property and income taxes paid by local hires and indirect employees generated an additional $303,814. We note that, although out of state productions directly pay little if any property taxes, the economic activity they stimulate locally does result in higher earnings, which indirectly causes higher property tax receipts.

2.3.3 FY12 Fiscal Return on Out of State Spending

ECONorthwest conducted a return on spending analysis for out of state crews working on projects in D.C. The purpose of this analysis is to assess the potential benefits to the District associated with attracting out of state film, video, and digital media production to D.C.

When an out-of-state crew comes to the District and spends money filming a production, it hires local labor, rents cars, fills hotel rooms, and spends at local stores and restaurants. This activity stimulates the economy because the origin of these dollars is outside the District and would not have been spent locally had the production not come to D.C. As described in the previous sections, this spending, which totaled $24,125,580 in FY12, affects the local economy.

Based on the data in Table 10, every million in out of state production spending yielded $60,064 in revenues to the District government. Therefore, the District could spend six cents per dollar of out of state production attracted to the District and be net revenue neutral in the year the filming is done.

This analysis is different from a return on investment analysis for an incentive program. The latter measures the benefits to the District per dollar spent by the District government on film incentives. Refer to section 2.4.4 for a return on investment analysis of the District's FEIF.

2.4 Impacts of the FEIF

Using the same impact analysis methodology describe in 2.1and 2.2, ECONorthwest calculated the impacts and return on investment of the FEIF. This section presents an overview of the FEIF and the analysis findings.

2.4.1 Program Overview

Established in 2006, the FEIF offered eligible production companies a rebate for up to:

- 42 percent of qualified production expenditures subject to taxation in the District,
- 21 percent of qualified production expenditures not subject to taxation in the District,
- 30 percent of qualified personnel expenditures,
- 50 percent of qualified job training expenditures, and
- 25 percent of qualified base infrastructure development.

The FEIF provided incentives to three feature films:

- *National Treasure: Book of Secrets* (2007), received $211,432 in sales tax reimbursements on qualified District spending;
- *State of Play* (2009), received $183,606 in sales tax reimbursements; and
- *How Do You Know* (2010), received a fixed grant of $2 million, based on expected local expenditures of $8.5 million.[6]

[6] Crystal Palmer, e-mail message to Alexandra Reese with production expenditure reports, June 3, 2013.

Table 11 shows the expenditure profiles or each of the three films that received funding from the FEIF. In sum, these projects spent $10.8 million in the District, $4.1 million of which the production companies paid in wages and benefits to District residents. These 3 films received incentive valued at $2.4 million.

Table 11: Expenditure Profiles

Film	Year	Total Expenditures	Total Local Expenditures	Resident FYEs	Total Resident Labor Income	Incentive
How Do You Know	2009	$8,500,000	$1,500,392	8	$321,359	$2,000,000
State of Play	2008	7,065,437	5,367,320	58	2,431,259	183,606
National Treasure: Book of Secrets	2007	3,894,250	3,894,250	31	1,350,000	211,432
Total		$19,459,687	$10,761,962	96	$4,102,618	$2,395,038

Source: ECONorthwest with data from the MPTD

2.4.2 Economic Impacts of the FEIF

Table 12 shows the sum of economic impacts attributable to the three films that received incentives. Filming for these three projects occurred from 2007 through 2009. Therefore, the model distributes the spending and impacts over the same three-year period. Values are expressed in 2013 dollars, so to account for differences attributable to inflation over the years studied.

Table 12: Economic Impacts of the FEIF, 2007-2009, 2013$

Source	Direct	Indirect	Total
National Treasure: Book of Secrets			
Output	$4,359,302	$3,704,417	$8,063,719
Labor Income	$1,511,217	$1,395,824	$2,907,041
FYEs	31	22	53
State of Play			
Output	$5,787,496	$3,666,889	$9,454,385
Labor Income	$2,621,588	$1,510,803	$4,132,391
FYEs	58	24	82
How Do You Know			
Output	$1,623,035	$1,688,853	$3,311,887
Labor Income	$347,627	$674,777	$1,022,404
FYEs	8	12	19
Total			
Output	$12,290,422	$9,502,542	$21,792,964
Labor Income	$4,660,903	$3,748,095	$8,408,998
FYEs	96	58	154

Source: ECONorthwest using IMPLAN software

These films generated a total of $21.8 million in direct and indirect output for the District. They created 154 jobs and paid these employees $8.4 million in wages and benefits.

2.4.3 Fiscal Impacts of the FEIF

Table 13 summarizes the fiscal impacts of the three productions that received incentives from the FEIF. These productions generated total tax revenues of $553,177, net of $395,038 in sales tax rebates.

Table 13: Fiscal Impacts of FEIF-Funded Productions, 2007-2009, 2013$

Source	Revenue Generated
Tax revenues	
Sales and use tax	$604,274
Property tax	130,079
Individual income tax	95,992
Other taxes	117,869
Total taxes due	$948,215
Less sales tax rebate	(395,038)
Total	$553,177

Source: ECONorthwest with data from the MPTD, IMPLAN, and the D.C. Office of Tax and Revenue

Based on an incentive disbursement of $2.4 million and tax revenues of $553,177 the FEIF had a net revenue cost to the District of $1.8 million.

2.4.4 Return on Investment Analysis for the FEIF

Table 14 summarizes the quantifiable benefits of the FEIF. Using data from the economic and fiscal impact analyses of the FEIF, ECONorthwest determined that it generated:

1. $4.49 in direct local spending and $9.10 in total local spending per incentive dollar, which flowed primarily to accommodation and food service establishments and finance, insurance, and real estate entities;
2. 154 direct and indirect jobs at a cost to the District of $11,960 per job;
3. Tax revenues of $553,177, which equates to a return of 23 cents in tax revenue per incentive dollar spent (this calculation does not include the value of the rebated sales taxes); and
4. Tax revenues to the District equal 5.1 cents per dollar spent by the film companies, which is similar to the previous finding in 2.3.3 that the District gains about six cents in tax revenues per dollar of local expenditures by out of state crews.

Table 14: Return on Investment for the FEIF

Metric	Total Benefit	Return on Investment
Direct local expenditures	$10,761,962	$4.49 in direct local expenditures per incentive dollar
Direct, indirect, and induced local expenditures	$21,792,964	$9.10 in total local expenditures per incentive dollar
FYEs	154	$15,551 per FYE
Tax revenues	$553,177	23 cents in tax revenues per incentive dollar

Source: ECONorthwest

3 Film Incentive Program History and An Analysis of Their Dynamic Impacts

This chapter describes the dynamic impacts of the Industry through the lens of incentive programs across the United States. The chapter consists of three sections:

1. An overview of incentive programs, including what incentives are available and who offers them,
2. A dynamic impact analysis of the film & video industry, and
3. A discussion of characteristics of successful incentive programs.

3.1 An Overview of Incentives and State Programs

This section provides an overview of what incentives are available to film, video, and digital media producers and where.

3.1.1 Types of incentives

States, territories, and even some cities offer a variety of incentive programs. This section describes the different incentives that comprise these programs. For the purposes of the Study, we have split the incentives into two groups, cash incentives and non-cash incentives. Below we define each mechanism and describe some of their benefits and drawbacks.

Cash Incentives

Cash incentives include: tax credits, rebates, and loans and grants. States and jurisdictions generally offer scaled cash incentives for in-state expenditures, resident wages, and non-resident wages.

Tax credits are a cash incentive based on the tax liability of a production company. Most states have minimum spending requirement to qualify for tax credits. The minimum may differ by production type (*e.g.*, commercials often have lower minimums than feature productions).

Although a tax credit is a cash incentive in that it can be monetized, transaction costs decrease its real value. Generally, production companies opt to monetize their tax credits when possible by transferring, selling, or refunding them. When a production company monetizes its tax credits, it normally receives 70 to 90 cents on the dollar.[7]

[7] Will Luther, 2010, "Movie Production Incentives: Blockbuster Support for Lackluster Policy," Special Report, Tax Foundation, no. 173; Conrad, 2012, "Film Incentives 101: They Have Little to Do With Taxes," Film This News, Film This, accessed June 25, 2013 at http://www.filmthis.net/film-this-news/film-incentives-101-they-have-little-to-do-with-taxes…/.

Rebates return cash payments to production companies based on eligible in state spending on goods and services and wages. Like tax credits, rebates normally have minimum spending requirements. Unlike tax credits, rebates are not tied to a company's tax liability.

Loans and grants provide production companies with up-front funding for projects. These incentives are uncommon.

Non-cash incentives

Non-cash incentives include tax exemptions and fee-free locations.

Tax exemptions on sales tax and lodging tax (for stays longer than 30 days) are offered by many states. Some states offer a refund on taxes paid, while others allow production companies to purchase goods and services without paying the tax. Generally states offer tax exemptions in conjunction with cash incentives.

Fee-free locations refer to state-owned locations production companies may use at no charge. Similar to sales and lodging tax exemptions, states generally offer this incentive alongside cash incentives.

3.1.2 State Programs and Trends

This section provides an overview of the incentive programs offered by each state. Refer to Appendix A for a description of each program.

Fast Facts from the Analysis

- 42 states offer incentive programs, 41 of which include cash incentives.

- 27 states offer tax credits and 14 offer rebates.

- The value of tax credits and rebates differ for (1) in state expenditures, (2) resident labor, and (3) non-resident labor.

-17 states offer tax exemptions specifically for Industry production, while an additional 9 states have no income or sales tax.

-Nine states offer fee-free locations.

-Most states have a minimum spending requirement. The threshold is between $25k and $1M. The requirement often varies by production type.

-32 states have no project incentive cap and 10 states have no annual program cap. Eight states have no cap at all.

Cash incentives are the cornerstone of most states' programs. Table 15 lists the range of cash incentive values by type and qualified expenditure for the 41 states and territories that currently offer them. Tax credits have slightly higher values than rebates. Once production companies factor in transaction costs, the average values for the two mechanisms are likely equal.

Table 15: Cash Incentive Program Values of States and U.S. Territories with Cash Incentives, FY13

	Minimum	Maximum	Average
Tax Credit			
Expenditures	9%	40%	25%
Resident wages	10%	45%	28%
Non-resident wages	10%	35%	25%
Rebate			
Expenditures	5%	37%	21%
Resident wages	10%	37%	23%
Non-resident wages	10%	10%	19%

Source: ECONorthwest with data from Cast & Crew Entertainment Services

States offer the greatest incentive for hiring resident employees. In-state expenditures garner the second highest incentive. Most states offer a smaller incentive for non-resident wages; nonresident employees must have taxable revenue in the state for their wages to qualify.

States have used cash incentives to lure out of state production since the 1980s. According to the Arkansas Production Alliance, Arkansas was the first state to enact a cash incentive program in the mid '80s – the "nickel rebate."

As the number of states offering cash incentives increased, so did the value of these incentives. Table 16 shows trends in the number of incentives and the average value of cash incentives from 2001 to 2011. During the early 2000s' the number of states offering incentives and the average value of the maximum cash incentive offered increased steadily. The number of cash incentive programs and the value of these programs stabilized in 2009.

Table 16: Number of States and Territories with Programs and Incentive Values Over Time, 2001 to 2011

Year	Numer of States with Incentives	Numer of Non-Cash Incentives	Number of Cash Incentives	Average Maximum Cash
2001	15	11	5	19%
2002	16	12	6	20%
2003	16	12	6	23%
2004	19	15	8	25%
2005	24	19	12	24%
2006	35	28	26	23%
2007	41	31	32	23%
2008	44	32	38	23%
2009	46	35	41	23%
2010	46	35	41	23%
2011	45	35	40	23%

Source: ECONorthwest

The growth in incentive programs coincided with growth in the film & video industry. Table 17 lists of the number of states and territories that had cash incentives each year from 2001 to 2011. The number of states and territories offering these incentives rose from 5 in 2001 to 40 in 2011. As shown, total employment in the film industry grew in parallel, rising at a compound annual rate of 1.44 percent. In contrast, total employment in the U.S. fell slightly.

Table 17: Cash Incentives, Film & Video Employment, and Total Employment Over Time, 2001 - 2011

Year	Number of Cash Incentives	US Film & Video Employment	Total US Employment
2001	5	172,822	130,678,138
2002	6	187,502	129,261,962
2003	6	176,504	128,851,521
2004	8	192,906	130,356,900
2005	12	189,930	132,653,072
2006	26	190,686	134,904,500
2007	32	194,065	136,416,780
2008	38	202,368	135,841,215
2009	41	184,973	129,594,734
2010	41	197,676	128,784,931
2011	40	199,439	130,367,770
Compound Annual Growth Rate		1.44%	-0.02%

Source: ECONorthwest with data from the U.S. Bureau of Labor Statistics

It is important to note that domestic film & video employment is not a zero sum game. It is certainly true that, when one state offers an incentive, it can take production away from other states. Collectively, however, incentives have a positive impact on the industry nationally in other ways.

First, they pull production back into the United States. The domestic industry sometimes calls television shows and movies filmed in Canada and other countries as a result of generous incentives "runaway productions." Incentive by states, territories, and cities in the U.S. help "bring back" runaway productions.

Less obvious, but likely important, is that incentives lower the marginal cost to film. That lowers the costs and risks of investment. More productions are created and total industry employment, as suggested (albeit the cause not confirmed) by the data in Table 17, is higher than it would otherwise be without incentives.

3.2 Dynamic Impacts of the Industry and Incentive Programs

Dynamic impacts are one of the most important measures of success for an incentive program. The most important dynamic impact is long-term job creation, specifically through the stimulation of the indigenous film & video industry.[8] Other states, such as Texas and Florida, have also considered the dynamic impacts of the film & video industry on tourism development.

Dynamic impact forecasting is speculative and, although there are some techniques and models available, their predictive capabilities are weak. Since incentive programs are a fairly recent phenomenon, ECONorthwest could obtain data that allowed it to statistically measure dynamic impacts of the Industry over time.

ECONorthwest used econometric analysis to look back and statistically measure whether film & video incentive programs, which primarily benefit out of state production, have had dynamic impacts on the indigenous film & video and tourism industries. It took the analysis one step further by asking: what characteristics define successful incentive programs? This section summarizes the analysis methodology and findings.

3.2.1 Methodology

The analysis looks at a variable of incentive program variables and their relationships with film & video employment, as reported by the BLS for NAICS 51211. The dataset includes annual observations for all 50 states, the District, and Puerto Rico, for 2001 through 2011.

ECONorthwest used a fixed-effects regression model to analyze incentive and employment data. This model is particularly suited for data with repeated events for each individual, as it controls for all stable individual characteristics, even when those characteristics are not measurable.[9] In this case, the geographies are the individuals and the incentive program offered each year is the repeated event.

The findings presented in this chapter are statistically significant. That means there is a good chance the relationship between the dependent variable (e.g. program duration or incentive value) and the independent variable (film & video employment) exists and is not coincidental.

[8] Andrew Phillips, Robert Cline, and William Fox, 2012.

[9] Paul Allison and Nicholas Christakis, "Fixed-Effects Methods for the Analysis of Nonrepeated Events," accessed July 1, 2013 at http://humannaturelab.net/wp-content/themes/human-nature-lab/media/pdf/publications/articles/075.pdf.

Statisticians use several procedures to test for significance, depending on the type of analysis. For the purposes of the Study, ECONorthwest used the t-test. It is a statistical examination of population means. Based on the comparison of population groups, the t-test provides the analyst with a t-statistic that indicates the probability that the two means for the populations have a significant difference. If the t-statistic for the analysis is higher than the base t-statistic for a population with the same number of observations and a specific error rate, than the relationship between the two populations is statistically significant.

Given the dataset used for the analysis and an error rate of 5 percent, ECONorthwest required minimum t-statistics of around 2.0. The threshold varied slightly for regressions with fewer observations.

The findings are also practically significant. Statistical significance simply means that there is a relationship between two variables. It does not imply causality or indicate that the relationship has some practical application. ECONorthwest examined each statistically significant relationship through the lens of industry research, to determine if it has logical implications for the District.

3.2.2 Findings

This section describes the dynamic impacts of the Industry and incentive programs on indigenous Industry development and branding and tourism.

Dynamic Impacts on the Industry

It is commonly believed that, if one attracts a substantial amount of out of state productions, over time, the indigenous industry would see a larger flow of work. In time, local business owners would expand. Their investment in new assets and the workforce would increase their productivity, allowing them to capture more benefits from out of state productions and stimulate their own book of work. The very structure of the industry and, to a lesser extent, the rest of the local economy would change as a result.

States with incentive programs have more substantial dynamic impacts. The analysis indicates a statistically significant relationship between incentive programs and higher film & video employment. Controlling for other variables, states that implement incentive programs experience an average increase of nine percent in local film & video employment.

Two factors explain this relationship. First, when a state offers an incentive, it decreases the cost of production in its region, relative to other states. In doing so, it will draw production and employment from places.

Second, lowering production costs will enable companies to produce film & video that would otherwise not "pencil" without the incentive. By increasing marginal production, incentives generate net new activity in the Industry.

Dynamic Impacts on Tourism

A number of states including Florida, Washington, Alabama, and North Carolina have reported a direct link between film & video production and tourism. In Florida, industry leaders estimate that film-induced tourism accounts for about 11 percent of total tourism each year.[10] This activity supports employment growth and infrastructure, which, over time, shapes the fundamental development and growth of the tourism industry.

Blockbuster films, particularly those for children and young adult audiences, have a track record of increasing tourism where they were filmed. According to the CEO of U.S. Space and Rocket Center, the movie *A Smile as Big as the Moon*, which was filmed in Alabama, stimulated public interest in Alabama, specifically Space Camp, as a tourism destination.[11] North Carolina expects a comparable wave of tourism from fans of the recently released *Hunger Games.*[12]

Tourism-related benefits appear to be greatest when the film's storyline is set in the state where filming occurred. Travel features written about film locations provide a branding and marketing benefit. Washington reported a spike in tourism at following the *Twilight* series, which was set in the state.[13] Though Brokeback Mountain was filmed in Canada, the Department of Travel and Tourism in Wyoming, the state where the movie was set, estimated that features about the state published in the wake of the movie would have cost the state $3.5 million to purchase.[14] The Georgia Convention and Visitor Bureaus cited ongoing benefits to the tourism industry in Savannah from advertising for films set in the city.[15]

States are working with film producers to maximize film-induced tourism. The Department of Commerce Division of Tourism in North Carolina developed travel tools to guide visitors to filming sites, star hangouts, and other locations that connect fans with the novel. The Department has also worked with partners to develop tourism infrastructure.[16]

[10] MNP, 2013.

[11] Targeted News Service, 2013, "Film Activity Increases in 2012 Throughout State," March 5.

[12] States News Service, 2012, "State tourism Office Expects Economic Boost from 'Hunger Games' Fans," March 14.

[13] States News Service, 2012.

[14] Kevin Wingert, 2006, "Wyoming, you should be in pictures; After 'Brokeback,' 'Unfinished,' lawmakers look into incentives for filmmakers," Wyoming Tribune-Eagle, July 11.

[15] Vicky-Eckenrode, 2004, "Movie spotlight fading in state; Other states, nations have caught on to incentives that once gave Peach State a competitive edge," Florida Times-Union, August 30.

[16] States News Service, 2012.

3.3 Characteristics of Successful Incentive Programs

The long-term purpose of an incentive program is to grow the indigenous Industry. And, although there is a relationship between incentives and Industry development, the statistics presented in the last sections don't tell us the "why" or the "how." To understand the link between incentive programs and Industry growth, ECONorthwest used the data and methodology described to determine what types of incentive programs lead to higher film & video employment. This section describes the findings.

ECONorthwest analyzed various incentive programs to ascertain whether they had statistically significant impacts on state and territory level employment in their indigenous industries. Below, are the key findings from ECONorthwest's analysis.

Cash incentives were more effective than non-cash incentives

ECONorthwest compared three types of incentive programs to determine which exhibited a stronger link with film & video employment: (1) cash incentive only programs, (2) non-cash incentive only programs, and (3) programs with both cash and non-cash incentives.

States that offered cash incentives alone had statistically significant, higher levels of industry employment than states that offered non-cash incentives alone or in combination with cash incentives. In fact, states that offered non-cash incentives alone exhibited no industry employment benefits during the Study period, 2001 through 2011.

This finding may be due to the fact that two-thirds of the states that only had cash incentives were able to afford generous incentives. Given finite program funding, this finding suggests that a state achieves higher indigenous film & video employment when it concentrates its resources in a competitive cash incentive.

Both tax credits and rebates worked effectively

The data indicates no statistically significant difference in film & video employment between states with tax credit programs and states with rebate programs. On average, tax credit systems offered a higher percentage rate. But their impact on stimulating local film & video industry employment was no better than cash incentive programs. This finding suggests the high transaction costs of tax credit programs dilute their effectiveness.

Successful programs offered competitive cash incentives

There is a statistically significant relationship between the values of cash incentives and indigenous film & video employment. States that offered higher-value cash incentives had larger indigenous industries. Although the t-score tells us that the relationship is statistically significant, it also shows that the relationship is nonlinear: as the incentive value increased, it did not correspond to an equal change in employment. This finding indicates that it was important for states to offer competitive incentives, but that they did not necessarily have to offer the highest incentive.

To test this hypothesis, ECONorthwest analyzed the value of cash incentive programs, relative to the national average for that year. The analysis indicates that, when an incentive offered by a state or territory exceeded the national average, its impact on industry employment was stronger than otherwise. A state did not have to compete with the most aggressive states to achieve higher indigenous employment – it could realize this goal by offering an incentive program that marginally exceeded the national average.

Incentive program duration was an important success factor

The duration of a state's cash incentive program had a significant relationship with the size of its indigenous industry. All else equal, for each additional year that a state had an incentive program, its indigenous industry's employment was 3.5 percent higher than it would have been without an incentive program. The longer a state or territory maintained a cash incentive program over the period of the Study, the higher industry employment was.

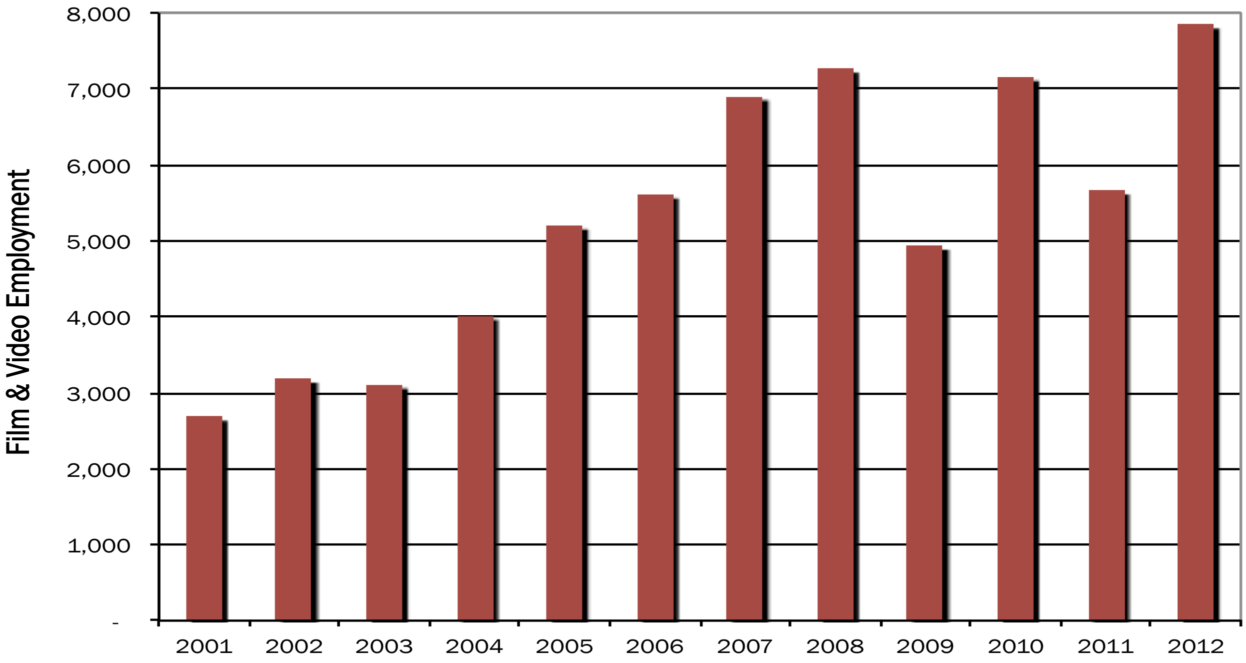
The 2001 to 2011 data show that the dynamic impacts of cash incentives were statistically insignificant in the first two years of incentive programs. However, indigenous film & video industry job growth among states and territories with incentive programs grew significantly in the third year of their programs. Employment increased at a rapid rate from years three through seven, and then began to level out.

Competition Levels the Playing Field

The leveling out observed in the historical data may be attributable to growing competition between states for productions, the inclusion of a recession that began in year eight, or wider use of digital over live action filming in motion pictures and television.

Figure 1 illustrates how local film & video industry employment has changes in the five states and territories with the longest running cash incentives for out of state producers. The Figure includes preliminary employment data for 2012. The five places with continuous cash incentives are: Louisiana, 1992; Hawaii, 1997; Missouri, 1999; Puerto Rico, 1999; and New Mexico, 2002. Employment in these states increased rapidly for the first six years of the time series at an annual rate of about 16 percent. Employment growth slowed in the last six years; it rose by less than one percent per year.

Figure 1: Total Film & Video Employment in Louisiana, Hawaii, Missouri, Puerto Rico, and New Mexico, 2001 through 2012.



Source: ECONorthwest with data from the BLS.

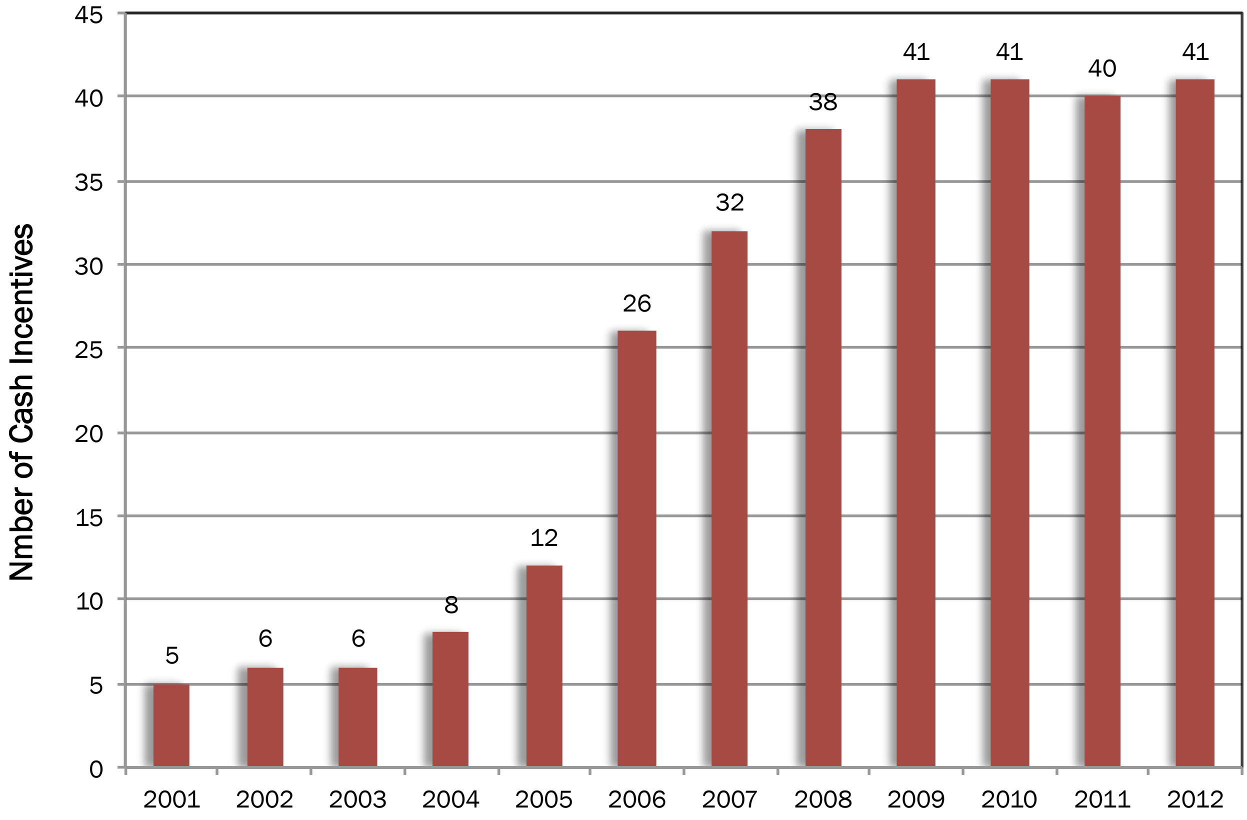
Note: 2012 data are preliminary.

Three factors explain these employment trends. The recession caused a substantial drop in film & video employment from 2008 to 2009. Employment decreased in accordance with the nation.

Second, the nature of the Industry has changed in recent years. As technology advances and the types of jobs that comprise the Industry change, film & video employment reported by the BLS for NAICS code 51211 will capture only one segment of Industry employment.

Finally, competition affected the playing field. Figure 2 shows the number of cash incentives over the same 12-year period. When only a few states had cash incentives, the five states with established programs had a strong competitive edge. Consequently, these states drew a higher share of out of state production and, as a result, grew their indigenous film & video segments.

Figure 2: The Number of Cash Incentives in the United States, 2001 through 2012



Source: ECONorthwest

In the last six years, competition has grown fierce. As the number of states with cash incentives rose rapidly, established states lost some of their competitive edge. Consequently, they drew a smaller share of out of state production compared to the first six years of the time series. Growth in their indigenous film & video industries slowed as a result.

Although the rate of employment growth slowed among states with long-standing incentive programs, the data indicate that cash incentives provided, and subsequently protected, a net gain in terms of indigenous film & video employment. Despite the increase in competition these last 6 years, these states have held onto the employment gains they made since 2001.

4 Recommendations

This section sets forth recommendations for the FEIF. A successful incentive program will accomplish two goals:

1. In the short-term, it will increase out of state production in the District; and
2. In the long-term, local spending and filming by out of state production companies will support economic development in the District.

These recommendations are based on the analysis of incentive programs presented in the last chapter and are designed to work within the unique opportunities and constraints of the District.

The unparalleled history of the District ensures that it will always have a strong base of Industry activity. Film, video, and other media with storylines set in Washington, D.C. will likely arrive to do some shooting in the District. ECONorthwest recommends an incentive program that targets productions with storylines set in the District, as these films will require a marginally lower incentive to do more production there. Furthermore, these types of productions will add branding and marketing value.

Below, is a list of specific recommendations for the FEIF.

Create a long-term incentive program

Longevity is arguable the most important determinants of success for an incentive program aimed at long-term economic development. The analysis shows that states with incentive programs do not see significant, measurable gains in their indigenous Industry employment until year three of the program. States with long-term incentive programs see statistically significant employment gains in year three and beyond of their programs.

Focus resources on a cash incentive, specifically a rebate

ECONorthwest recommends that the District offer a cash incentive. ECONorthwest studied programs throughout the U.S. and found states that offer only cash incentives have more growth in their indigenous industries. States that split their resources between cash and non-cash incentives do not do as well. And those with only non-cash incentives are ineffective.

Among the cash incentive options, a rebate is the most direct and cost-effective option. Tax credits have transaction costs for producers and states. Furthermore, producers often have to wait until the end of production to receive the incentive. Therefore, a rebate offers clear advantages that the MPTD can market to make its program more desirable.

Offer a competitive incentive program

Both ECONorthwest' analysis and case studies of other incentive programs indicate that having a competitive incentive – one that is near the average value for that type of incentive – is an important factor in drawing business.

Here are the median values by incentive type for programs across the United States:

- Tax credit on expenditures: 25 percent,
- Tax credit on resident wages: 28 percent,
- Tax credit on non-resident wages: 25 percent,
- Rebate on expenditures: 21 percent,
- Rebate on resident wages: 23 percent, and
- Rebate on non-resident wages: 19 percent.

Offer scaled incentives

The primary purpose of the District's incentive program is economic development. With that objective in mind, the MPTD may incentivize specific types of spending through scaling production incentives. Some suggestions include:

- Offer a higher cash incentive for resident training and employment programs;
- Provide an incentive specifically for post-production and digital media work in the District; and
- Reward productions that invest in key infrastructure, such as a soundstage in the District or streetscape improvements in a target area.

Target productions with storylines set in Washington, D.C.

Some observers say there is an arms race in incentives for film productions. The tax structure in the District makes it difficult to justify competing with the most aggressive states. The District may not be able to compete with other jurisdictions for films that have flexible location requirements and are looking for the best "deal."

Therefore, the District should provide incentives to productions that may already arrive to do some on-location filming for establishing shots. Incentives lower the marginal production costs, allowing these productions to do more of their filming, digital, and post-production work in the District. We recommend targeting these opportunities, which can be accomplished through a review panel.

An incentive for productions with storylines set in the District would have the dual effect of marketing the region and supporting tourism.

Work with other stakeholders to establish non-economic incentives

Although the largest "bang for the buck" comes from a cash rebate, there are some low cost ways to facilitate growth in the Industry. The MPTD already offers several valuable programs for Industry entities, notably a concierge service that assists production companies in identifying locations; obtaining permits; and sourcing local goods, services, and talent. It also sponsors networking and business development events.

To expand its non-cash incentives, the MPTD could work with local community colleges and trade schools to establish workforce development programs aimed at target sectors of the Industry, such as digital media.

Conduct regular program evaluations

A period, rigorous review process is key to maintaining a successful incentive program. Pew Center on the States identified three key characteristics of successful evaluations:

1. Considers a range of benefits and types of impacts,
2. Evaluates incentive programs in comparison to one another, and
3. Provides actionable conclusions.[17]

The first point is particularly important with reference to film incentives in the District. Film incentives provide a range of benefits that are not captured in a fiscal return on investment analysis. The tax structure of the district presents a unique challenge for making an incentive program that "pencils" from solely a fiscal impact standpoint. The District cannot tax the personal income of non-resident employees that work in the District. Therefore, the return on investment in terms of tax revenue will be lower, compared to other states. As such, tax revenues alone would likely be an insufficient justification for an incentive program.

Similar to other states with limited taxing capabilities, ECONorthwest recommends that the District monitor the ongoing progress and impact of the program not only in terms of tax revenues, but also in terms of economic and dynamic impacts.

In terms of economic impacts, the District should consider in-state spending and job creation. How many dollars of spending are attributable to productions that receive incentives? How many District jobs do these productions support and what is the per-job cost to the District? As recommended by the Pew Center on the States, the District should compare these figures with other incentive programs aimed at job creation to see which incentives give the most "bang for the buck."

[17] Pew Center on the States, 2012, Evidence Counts: Evaluating State Tax Incentives for Jobs and Growth, accessed July 3, 2013 at http://www.pewstates.org/uploadedFiles/PCS_Assets/2012/015_12_RI%20Tax%20Incentives%20Report_web.pdf.

Dynamic impacts are best measured by comparing the covered employment and payroll data for film & video production in D.C. versus the rest of the United States. An effective incentive program should demonstrably exhibit significant employment and payroll growth by the third year, and continued improvement thereafter. For digital media, the DOL OES should reveal statistically significant growth in the number of multimedia occupations in the District versus the rest of the United States within three years.

Other areas for potential evaluation include private money spent on film & video infrastructure, municipal infrastructure, and tourism marketing and at what savings to the District; and film-induced tourism to movie sets or locations in the District.

Appendix A. Incentive Program Database, FY13

Overview			Cash Incentives				Non-Cash Incentives				
State, District, or Territory	Incentive Start, End	Has Program	Tax Credit	Rebate	Value	Qualified Expenditure	Tax Exemptions	Fee-Free Location	Minimum Spending	Project Cap	Annual Cap
Alabama	2009	X		X	25% 35%	Spending & NR labor Resident labor	X	X	$500k	None	$15M
Alaska	2008	X	X		30 - 34% 40 - 44%	Spending & NR labor Resident labor	No income/ sales tax		$100k	None	$100M
Arizona	2006, 2011										
Arkansas	1986	X		X	15% 25%	Spending & NR labor Resident labor		X	$50k	None	$5M
California	2009	X	X		20 - 25%	Spending & labor			$500k - $1M	None	$100M
Colorado	2006	X		X	20%	Spending & labor			$100k - $1M	None	$3M
Connecticut	2006	X	X		10 - 30%	Spending & labor	X		$100k	None	None
Delaware							No sales tax				
District of Columbia	2006, 2007										
Florida	2004	X	X		20 - 30%	Spending & resident labor	No income tax		$100k - $625k	$500k - $8M	$296M
Georgia	2008	X	X		20 - 30%	Spending & labor			$500k	None	None
Hawaii	1997	X	X		15 - 20%	Spending & labor			$200k	$15M	None
Idaho											
Illinois	2004	X	X		30% 30 - 45%	Spending &NR labor Resident labor			$50k - $100k	None	None
Indiana	2005, 2012	X					X				
Iowa	2007, 2009										
Kansas	2007	X	X		30%	Spending & labor			$50k - $100k	None	$2M
Kentucky	2008	X	X		20%	Spending & labor	X		$50k - $500k	None	None
Louisiana	1992	X	X		30% 35%	Spending & NR labor Resident labor			$300k	None	None
Maine	2006	X	X	X	5% 10% 12%	Spending NR labor Resident labor	X	X	$75k	None	None
Maryland	2008	X	X		25 - 27%	Spending & labor	X		$500k	None	$25M
Massachusetts	2006	X	X		25%	Spending & labor	X		$50k	None	None
Michigan	2007	X		X	27% 10 - 27% 27 - 32%	Spending NR labor Resident labor			$100k	None	$50M
Minnesota	1997	X		X	20 - 25%	Spending & labor			$1M	None	$10M
Mississippi	2004	X		X	25% 30%	Spending & NR labor Resident labor	X		$50k	$8M	$20M

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Source: ECONorthwest with data from Cast & Crew Entertainment Services