# Issue Paper

PAPERS EXAMINING CRITICAL ISSUES
FACING THE MICHIGAN LEGISLATURE

Senate Fiscal Agency

# FILM INCENTIVES IN MICHIGAN

by

**David Zin**
**Economist**

**September 2010**

Gary S. Olson, Director – Lansing, Michigan – (517) 373-2768 – TDD (517) 373-0543
www.senate.michigan.gov/sfa

# THE SENATE FISCAL AGENCY

The Senate Fiscal Agency is governed by a board of five members, including the majority and minority leaders of the Senate, the Chairperson of the Appropriations Committee of the Senate, and two other members of the Appropriations Committee of the Senate appointed by the Chairperson of the Appropriations Committee with the concurrence of the Majority Leader of the Senate, one from the minority party.

The purpose of the Agency, as defined by statute, is to be of service to the Senate Appropriations Committee and other members of the Senate. In accordance with this charge the Agency strives to achieve the following objectives:

1. To provide technical, analytical, and preparatory support for all appropriations bills.
2. To provide written analyses of all Senate bills, House bills and Administrative Rules considered by the Senate.
3. To review and evaluate proposed and existing State programs and services.
4. To provide economic and revenue analysis and forecasting.
5. To review and evaluate the impact of Federal budget decisions on the State.
6. To review and evaluate State issuance of long-term and short-term debt.
7. To review and evaluate the State's compliance with constitutional and statutory fiscal requirements.
8. To prepare special reports on fiscal issues as they arise and at the request of members of the Senate.

The Agency is located on the 8th floor of the Victor Office Center. The Agency is an equal opportunity employer.

Gary S. Olson, Director
Senate Fiscal Agency
P.O. Box 30036
Lansing, Michigan 48909-7536
Telephone (517) 373-2768
TDD (517) 373-0543
Internet Home Page http://www.senate.michigan.gov/sfa

## ACKNOWLEDGMENTS

The author would like to acknowledge Suzanne Lowe, Senate Fiscal Agency Bill Analysis Coordinator, and Eric Scorsone, Senate Fiscal Agency Chief Economist; as well as Karen Hendrick, Senate Fiscal Agency Executive Secretary, and Linda Scott, Senate Fiscal Agency Bill Analysis Secretary, for their invaluable assistance in completing this project. Appreciation is also extended to Jay Wortley of the Michigan Department of Treasury, Office of Revenue and Tax Analysis, and Jeff Guilfoyle of the Citizen's Research Council for contributions to earlier and alternative versions of the paper.

## TABLE OF CONTENTS

## EXECUTIVE SUMMARY

In April 2008, Michigan enacted numerous incentives to encourage in-State film production. Among the incentives adopted were a production film credit, a media infrastructure credit, a job-training credit, expansion of the Michigan Economic Growth Authority credits, low-interest loans, and free use of various premises and/or equipment controlled by the State and/or local units of government (including school districts). The structure and function of the tax credits differ in important ways, although all are intended to increase activity in Michigan's indigenous film industry as well as increase the importation of film activity from other states and nations.

This paper provides a description of the enacted film incentives, their estimated impact on both the Michigan economy and State tax revenue, and the statutorily required annual report on the incentives. Because numerous analyses exist on film incentives, often reaching very different conclusions about their effectiveness, the paper also addresses issues that arise in the analysis of film incentives and in the comparison of studies.

While the Media Production Credit was initially predicted to reduce revenue by $100.0 million in fiscal year (FY) 2008-09 and rise sharply after that, a combination of the 2008-2009 recession (and subsequent collapse of financial and credit markets) and timing issues associated with the claiming, filing, and processing of tax credits resulted in only $37.5 million in credits being claimed during FY 2008-09. The May 2010 Consensus Revenue Estimating Conference projected that the Media Production Credit would lower revenue by $100.0 million in FY 2009-10 and $125.0 million in FY 2010-11. (As more fully discussed in the paper, these figures do not represent net impacts on State revenue.)

Current information suggests that $37.5 million in credits during FY 2008-09 reflected approximately $97.7 million in private spending, of which an estimated 47.4% ($46.3 million) effectively left Michigan and did not contribute to the State's economic activity. After also accounting for reductions in government expenditures necessary to maintain a balanced budget under the credits, the State spent $37.5 million in FY 2008-09 to generate $21.1 million in private sector activity and will have spent $100.0 million in FY 2009-10 to generate $59.5 million in private sector activity. It is estimated that the additional economic activity from the credits will have generated an additional $3.7 million in tax revenue during FY 2008-09 and $10.3 million in FY 2009-10.

Media productions during 2008 are estimated to have generated approximately 216.0 direct full-time-equated (FTE) jobs and increased total State employment by 937.3 FTE jobs, while Michigan wage and salary employment declined by 198,000 jobs between December 2007 and December 2008. The cost to taxpayers of employment associated with the tax credit ranged from $186,519 per job to $42,991 per job, depending on whether only direct jobs or total employment impacts are examined. In 2009, approximately 355.5 FTE direct positions were created, increasing total State employment by an estimated 1,542.3 FTE jobs, while Michigan wage and salary employment declined by 204,000 jobs between December 2008 and December 2009. The 2009 cost to taxpayers of employment associated with the tax credit ranged from $193,333 to $44,561 per job, depending on whether direct or total employment impacts are examined.

Significant confusion appears to exist regarding the public and private costs and benefits of the credits. Statements in the press regarding the benefits of the Media Production Credit typically highlight the increases in private sector activity and measure them against the public sector cost (often without accounting for the impact of lowering other public expenditures to offset the lost revenue from the credit). This comparison creates confusion about the impact of the credit on the budget. The nature of the credit and the resulting activity is such that under current (and any realistic) tax rate the State will never be able to make the credit "pay for itself" from a State revenue standpoint, even when the credit generates additional private activity that would not have otherwise occurred.

Public discussion of the Media Production Credit also has confused the nature of the credit, often leaving taxpayers with the impression that the credit represents foregone revenue that the State would not have otherwise received. The amount of the Media Production Credit, however, is unrelated to a taxpayer's liability. The credit represents a subsidy for production activity and is unrelated to any provisions in law that impose liability on the taxpayer. Because the credit is refundable, the State not only foregoes the revenue it would have otherwise received but also pays additional money to offset the costs of the production.

Over time, these costs of the Media Production Credit and the other film-related incentives are expected to grow rapidly and will likely have a significant impact on the budget. As with other types of incentives and credits, whether the relationship of costs to benefits is acceptable is a decision for individual policy-makers.

## DESCRIPTION OF FILM INCENTIVES

### Media Production Credit

This credit offsets, or subsidizes, a percentage of a film's actual production costs. For direct production expenses, the taxpayer receives a 42.0% credit for expenditures made in a "core community" and a 40.0% credit for expenditures made elsewhere. (A "core community" is a qualified local government unit as defined under the Obsolete Property Rehabilitation Act, MCL 125.2782.) Eligible direct production expenditures cover a wide array of expenditures, including the cost of purchasing script rights, virtually all production costs, and compensation (limited to $2.0 million per individual) that is not a "qualified personnel expenditure". Under the credit, the taxpayer also receives a 30.0% credit for qualified personnel expenditures. Qualified personnel expenditures are limited to $2.0 million per individual, must be subject to taxation in the State, and are made to a "below the line" crew member who has not been a Michigan resident for at least 60 days.

The portion of the credit that covers compensation made to individuals involved with a film can be complex. The compensation to a below-the-line crew member, such as a camera operator, can vary depending upon where the filming occurred and the characteristics of the individual. For below-the-line work, compensation paid to a Michigan resident is eligible for a 40.0% or 42.0% subsidy, depending on whether the filming occurred in a core community, while compensation to a nonresident qualifies for a 30.0% subsidy no matter where the filming occurred. Compensation paid to an "above the line" individual, such as an actor or director, is eligible for a 40.0% or 42.0% subsidy regardless of residency, depending on whether the filming occurred in a core community. In addition to these limits, only compensation up to $2.0 million per individual is eligible for the subsidy.

To receive the credit, a production company must enter into an agreement with the Michigan Film Office. While the State Treasurer must concur in the agreement, the statute specifies minimal requirements for an agreement. The credit can be transferred and is refundable. The statute places no limits on the size of the credit for individual productions or on the total value of all credits issued during a year.

The credit was enacted by Public Act 77 of 2008 and is codified in MCL 208.1455, Section 455 of the Michigan Business Tax (MBT) Act. While the credit is claimed under the MBT Act, the amount of the credit a taxpayer may receive, as indicated above, is independent of the taxpayer's liability before credits.

Eligible projects include a wide array productions and content: any single media or multimedia entertainment content created in whole or in part in Michigan for distribution or exhibition to the general public in two or more states by any means and media in any digital media format, film, or video tape. The specific types of materials include, but are not limited to, motion pictures, documentaries, television series, television miniseries, television specials, interstitial television programming, long-form television, interactive television, music videos, interactive games, video games, commercials (that are not excluded under the restrictions), internet programming, internet videos, sound recordings, videos, digital animations, and interactive websites. Qualified productions also include any trailer, pilot, video teaser, or demo created primarily to stimulate the sale, marketing, promotion, or exploitation of future investment in a production.

Certain types of productions are ineligible for the credit. Generally, rather than limiting the physical types of productions, the restrictions largely reflect content issues. Eligible productions cannot be:

- A production for which records are required to be maintained with respect to any performer in the production under 18 USC 2257 (i.e., adult sexual productions).
- A production that includes obscene matter or an obscene performance.
- A production that primarily consists of televised news or current events.
- A production that primarily consists of a live sporting event.
- A production that primarily consists of political advertising.
- A radio program.
- A weather show.
- A financial market report.
- A talk show.
- A game show.
- A production that primarily markets a product or service other than a State certified qualified production.
- An awards show or other gala event production.
- A production with the primary purpose of fund-raising.
- A production that primarily is for employee training or in-house corporate advertising or other similar production.

Virtually all expenses related to a production are eligible for some sort of credit under the statute. Expenses can be related to development, preproduction, production, postproduction, or distribution functions as long as the transaction is made in Michigan and is subject to taxation in this State. Unlike in some states, no provisions allow the State to refrain from entering into an agreement with a production company for aesthetic reasons, such as how the production may portray Michigan or its residents or the perceived artistic merit of the production. Aside from the specific content exclusions listed above, the statute does not specify any conditions under which an agreement might be denied, including the fiscal impact on the State budget or the value of credits already authorized, if the requirements for an agreement are met. On the other hand, the statute does not establish a formal entitlement for any production that meets the requirements to receive a credit.

Media Infrastructure Credit

This credit offsets, or subsidizes, 25.0% of investment expenditures in a production or postproduction facility located in Michigan. Expenses on both the structure, as well as movable and immovable property related to the facility, are eligible. The facility does not need to be exclusively used for eligible activities, but the investment must total at least $250,000 to be eligible for the credit.

Credits are not capped for any individual taxpayer, but the total of all credits that may be awarded is capped at $20.0 million per calendar year--although when credits are claimed may cause individual fiscal years to exceed that total. The tax credit is not refundable, but may be transferred and/or carried forward for up to 10 years.

The credit was enacted by Public Act 86 of 2008 and is codified in MCL 208.1457, Section 457 of the Michigan Business Tax Act. Unlike the Media Production Credit, the amount of the Media Infrastructure Credit is not necessarily independent of the taxpayer's liability. If the taxpayer does not have sufficient liability to fully use the credit over the 10 years it may be applied against any MBT liability, the excess will expire, effectively reducing the amount of the actual credit and its impact on State revenue.

Among the tax credits and other media incentives adopted in April 2008, the Media Infrastructure Credit explicitly affects infrastructure projects. The statute provides considerable flexibility for the types of projects that may be eligible for the credit. At a minimum, the following requirements must be met:

- An eligible project must be a film, video, television, or digital media production and postproduction facility located in Michigan, movable and immovable property and equipment related to the facility, and any other facility that is a necessary component of the primary facility. A qualified film and digital media infrastructure project does not include a movie theater or other commercial exhibition facility, or a facility used to produce obscene matter or other selected adult content.
- The taxpayer must invest and spend at least $250,000 for a qualified film and digital media infrastructure project in this State.
- The taxpayer cannot be delinquent in a tax or other obligation owed to this State, or be owned by or under common control of an entity that is delinquent in a tax or other obligation owed to this State.
- The project must provide a detailed description of the qualified film and digital media infrastructure project, a detailed business plan and market analysis, a projected budget, and an estimated start date and completion date.
- The taxpayer must enter into an agreement with the Film Office regarding the project.

Beyond these minimum characteristics, certain limitations are applied to the credit. Some limitations apply to all credits awarded under the section, while other restrictions only affect specific projects:

- The credit is for 25.0% of the base investment in the project, which is defined as the cost, including fabrication and installation, paid or accrued in the taxable year of tangible assets physically located in this State for use in a business activity in Michigan. The assets may not be mobile assets. The investment does not include a direct production expenditure or qualified personnel expenditure eligible for a credit under Section 455 (the Media Production Credit).
- Not more than $20.0 million in credits may be granted each year. If the limit has been reached, no credit is available. While the credits are not refundable, the credits are transferable--which effectively exhibits the same general fiscal impact as a refundable credit.
- Construction on the qualified film and digital media infrastructure project must commence within 180 days of the date of the agreement or the agreement will expire. However, upon request submitted by the taxpayer based on good cause, the Film Office may extend the period for commencement of work for up to an additional 90 days.

- Taxpayers must agree to repay an amount equal to 25.0% of the gross proceeds or benefit derived from the sale or other disposition of equipment subsidized by the credit, if the equipment is sold or otherwise transferred.
- Certain additional limitations apply if the project may be used for purposes unrelated to production or postproduction activities.

The items listed above regarding eligibility for the credit are relatively objective. The most significant area for interpretation may involve the description of eligible assets under the definition of "base investment", which excludes mobile tangible assets. The definition of mobile assets would include "honeywagons" (a type of multiroom trailer used by television and film productions) and "star trailers". Consequently, these items are excluded from the credit. However, many types of personal property that are movable are not counted as mobile assets. Therefore, eligibility for the credit potentially extends to expenses for equipment that will be used in a production or postproduction facility, such as computer equipment; lighting, sound, and camera equipment; and even dolly tracks and collapsible stages.

The Act also provides some subjective criteria regarding eligibility for the credit. These are found in subsection (4) of Section 457. The subsection provides that in determining whether to enter into an agreement under this section, the Michigan Film Office and the State Treasurer must consider all of the following:

- The potential that, in the absence of the credit, the qualified film and digital media infrastructure project will be constructed in a location other than this State.
- The extent to which the qualified film and digital media infrastructure project may have the effect of promoting economic development or job creation in this State.
- The extent to which the credit will attract private investment for the production of motion pictures, videos, television programs, and digital media in this State.
- The extent to which the credit will encourage the development of film, video, television, and digital media production and postproduction facilities in this State.

The statute does not describe criteria to determine whether these conditions are met, or the degree to which they must be met in order for the Film Office to enter into an agreement that will allow a project to receive the credit. Furthermore, largely reflecting the fact that eligibility for a tax credit is not a "right" or "entitlement", the statute does not provide for an appeal process. Applicants are not guaranteed to receive a credit if they pursue projects that meet all the other requirements but are not able to enter into an agreement with the Film Office. Similarly, the statute does not require that the Film Office enter into an agreement for all projects that meet the other requirements, as long as less than $20.0 million in credits has been awarded.

The statute does require new economic activity to occur; this would be the nature of the minimum investment requirements. However, the statute does not require such investment activity to be in a new facility. Renovations to existing property, whether or not currently designed to handle production or postproduction activities, would be eligible under the credit, as would expansions of existing facilities. While the credit is limited to investments within Michigan, it is not limited solely to in-State businesses, out-of-State businesses, or non-Michigan businesses seeking to relocate or expand into Michigan, given that such a limitation would likely raise issues related to the interstate Commerce Clause of the U.S. Constitution (which authorizes Congress to regulate commerce among the states).

Media Job Training Credit

This credit offsets, or subsidizes, 50.0% of qualified job training expenditures. Expenses must be to provide on-the-job training for below-the-line crew members who have been residents of Michigan for at least 12 months and who demonstrate "sufficient prior experience or training" in the film and digital media industry. Qualified individuals may not have less than one or more than four film credits in the same crew position for which the credit is claimed. Because the training is on-the-job, any expenditure used for this credit cannot also be counted toward the film production credit. The credit is not limited, but is not refundable or transferable. Excess credit amounts may be carried forward for 10 years. Eligible production companies receive the credit for the eligible training expenses; vocational schools, colleges and universities, and individual training companies are not eligible to enter into an agreement to receive the credit.

The credit was enacted by Public Act 74 of 2008 and is codified in MCL 208.1459, Section 459 of the Michigan Business Tax Act. Unlike the Media Production Credit, the amount of the Job Training Credit is not necessarily independent of the taxpayer's liability. If the taxpayer does not have sufficient liability to fully use the credit over the 10 years it may be applied against any MBT liability, the excess will expire, effectively reducing the amount of the actual credit and its impact on State revenue.

Individual Income Tax Media Credit

This credit is essentially the same as the Media Production Credit, described above. However, the credit applies against withholding payments made by the production company on wages subject to withholding. Portions of the Media Production Credit claimed under the Individual Income Tax Media Credit cannot also be counted under the Michigan Business Tax portion of the Media Production Credit. The Income Tax Media Credit is limited to the liability of the taxpayer and is not refundable, transferable, or subject to a carry forward. For example, a production company may receive a credit of $1.0 million for production expenses and can apply a portion of that $1.0 million credit against any income tax withholding due on wages paid by the production company. Assuming the company had a withholding liability of $400,000, the company could claim the remaining $600,000 in credit against the MBT. If the company exhibited no MBT liability, the $600,000 would be refunded to the production company.

The credit was enacted by Public Act 79 of 2008 and is codified in MCL 206.367, Section 367 of the Income Tax Act. As indicated, the amount of the credit depends on the taxpayer's liability, although credit amounts in excess of any obligations under the Income Tax Act can be claimed under the MBT and refunded under those provisions, if applicable.

Film and Digital Media Loans

Unlike the incentives described above, this incentive does not take the form of a tax credit. Instead, it provides for three types of loans to film production companies and/or film and digital media private equity funds. The first loan program allows the Michigan Strategic Fund to make loans under the Small Business Capital Access Fund to film production companies and/or film and digital media private equity funds even if the business is not a small business.

The second loan program, called the Michigan Film and Digital Media Investment Loan Program, provides loans of up to $15.0 million per production per company or equity fund. Loan recipients must film entirely or substantially within Michigan and a majority of the below-the-line crew members must be Michigan residents. The loan may not exceed two-thirds of the total production cost and the recipient must provide a guarantee of loan repayment. The loan also must not exceed 80.0% of the value of credits granted under the Media Production Credit, the Media Infrastructure Credit, and the Media Job Training Credit. Loans may be converted to equity investments if approved by the chief compliance officer and the Michigan Film Office. Interest on the loans is assessed at a market rate and earnings are split equally between the Michigan Film and Digital Media Investment Loan Fund and the Michigan Film Promotion Fund.

The third loan program, called the Choose Michigan Film and Digital Media Loan, is allowed to make loans at rates as low as 1.0%. Loans must be for a minimum of $500,000 and may not exceed the discounted value of seven years' worth of Media Production Credits, Media Infrastructure Credits, and Media Job Training Credits. Loans may be for a maximum of 10 years, and payments may be deferred for up to three years. A business may not receive a loan under both this program and the Michigan Film and Digital Media Investment Loan Program, and must also have a loan from some other lender. Interest earnings are divided in the same manner as under the Michigan Film and Digital Media Investment Loan Program.

The incentive was enacted by Public Act 80 of 2008 and amended MCL 125.2088d, Section 88d of the Michigan Strategic Fund Act. As indicated, the incentive does not represent a tax credit, but is a source of capital for the production of qualified films and other qualified media projects.

MEGA (Michigan Economic Growth Authority) Film Credit

This credit allows a film and digital media production company to qualify as an "eligible business" for the purpose of receiving Michigan Business Tax credits under the Michigan Economic Growth Authority Act, especially those provisions regarding "high technology activities". Eligible productions are limited in a manner similar to the Media Production Credit. The MEGA Act allows credits for contributions from one firm to another that meet certain criteria and for a variety of multiyear credit awards to reduce or eliminate the liability of a taxpayer for up to 20 years. The MEGA credit provisions are described in the MBT Act (MCL 208.1431) and include credits for the tax rate times various amounts, including up to 100.0% of payroll and health care benefits. The credits are refundable.

The incentive was enacted by Public Act 87 of 2008 and amended MCL 207.803, Section 3 of the Michigan Economic Growth Authority Act.

Free Use of State and Local Facilities

Several public acts adopted concurrently with the film credits provide for the free use of various types of facilities. Public Act 76 of 2008 allows the Director of the Department of Technology, Management, and Budget to authorize an individual engaged in the production of a film to use any property under the Department's control free of charge. Granting free use of the facilities is optional rather than compulsory, but the criteria for granting or denying permission are virtually nonexistent other than a prohibition regarding obscene matter and other "pornographic" content. Unlike incentives such as the Media Production Credit, commercials are eligible for the free use of the facilities. The definition of eligible activities is quite expansive and includes, either explicitly or implicitly, a variety of types of productions not eligible for many of the tax incentives.

Public Act 81 of 2008 provides similar authority for the Adjutant General to authorize free use of property controlled by the Department of Military and Veterans Affairs. Public Act 82 of 2008 provides the Director of the Department of Natural Resources and Environment with similar authority to authorize free use of property under that Department's control, while Public Act 83 of 2008 provides the authority to the Director of the Department of Transportation and the State Transportation Commission. Public Act 84 of 2008 provides, under the same minimal restrictions, that a local unit of government may authorize free use of any property under the control of the local government. Local government is defined broadly, and includes not only cities, counties, and townships, but also school districts, intergovernmental authorities, and local authorities.

**REVENUE IMPACT OF THE INCENTIVES**

Estimating the revenue impact of the film incentives adopted in 2008 has been difficult and will remain vulnerable to a wide margin of error until the State has enough experience to discern the correlations between projected media activity, the claimed credits, and wider economic conditions. In addition to major uncertainties, such as those created by the current weak economic climate (and associated lending crises), the ever-changing landscape of competing film incentives in other states and countries, and the wide variation in the costs associated with different productions, a variety of more administrative issues have complicated the estimates.

Among the various administrative aspects affecting the initial estimates of the revenue impact of the tax credits, particularly the Media Production Credit, the most significant aspects have been the process for awarding credits and when credits will actually be processed by the State. In order to be eligible for the Media Production Credit, the taxpayer must enter into an agreement with the State. In the course of the agreement, the taxpayer demonstrates what aspects of the production will potentially qualify for the credit and that the taxpayer and the production meet the statute's prerequisites. As a result of the agreement, the State and the taxpayer have an estimate of the amount of credits likely to be claimed. However, after this agreement is reached, the taxpayer has additional obligations, such as commencing production within 90 days (or 180 days if an extension is approved). Some productions are ultimately filmed elsewhere, are unable to obtain sufficient financing to commence operations, are placed on hold or postponed, or for some other reason ultimately do not have credit-eligible activities. Once production is complete, the taxpayer must submit any required information and obtain a postproduction certificate. There are no specified deadlines for how soon after the production is complete that the taxpayer must submit documentation regarding the postproduction certificate, or for how soon after the documentation is supplied that the certificate must be issued. The postproduction certificate provides the final determination of the amount of any credits the taxpayer may be eligible to claim.

As of February 1, 2009, the Michigan Film Office had awarded postproduction certificates of completion totaling approximately $48.0 million. Most of these were expected to be claimed during FY 2008-09, although additional factors could have caused the credits to be claimed later. First, taxpayers may not claim the credits until an annual MBT return is filed. Generally, a taxpayer will file an annual return at the end of the taxpayer's fiscal year (usually the end of the calendar year). Because the MBT was first effective for calendar year 2008, annual MBT forms were not available until January 2009. As a result, even though the legislation providing for the film credits was effective April 8, 2008, no taxpayers would have been able to claim a credit during FY 2007-08 (which ended September 30, 2008).

Second, the MBT Act requires that any taxpayer that is part of a "unitary group" (e.g., a taxpayer that is a subsidiary) file a return reflecting the unitary activity. As a result, if a production company had a fiscal year that ended in December 2008 but was part of a unitary group with a fiscal year that ended in July 2009, the annual return would not have been due until November 30, 2009. If the taxpayer requested an extension, the return might not have been filed until July 31, 2010. Under this example, it is possible that a taxpayer could have received a postproduction certificate in November 2008 and not be able to receive the credit until some time in the latter half of 2010, more than 18 months after the certificate was issued.

Third, the date the postproduction certificate is issued determines the tax year's return under which the credit will be claimed. The dates of the actual production activity are not relevant to determining the applicable tax year. As a result, if a production company with a calendar-year fiscal year filmed a production between June and August 2008 (covering a time period in the State FY 2007-08) but did not receive a postproduction certificate until February 2009, the tax return on which the credit would have been claimed would not have been due until April 30, 2010 (assuming no extension was requested) and could be due as late as December 31, 2010 (assuming all allowable extensions). As indicated in the preceding paragraph, issues relating to unitary business operations could potentially delay the claim even longer. In this example, however, with a return filed under an extension, the film production activity could have occurred during the State FY 2007-08 and the credit might not be claimed until FY 2010-11.

The May 2010 consensus revenue estimates are the most current estimates regarding the impact of the film incentives. Table 1 shows the estimated impacts of the various incentives, including any expected revenue gains from incentive-induced increases in economic activity. As indicated in the table, the Media Production Credit represents the most costly incentive, totaling $37.5 million during FY 2008-09, $100.0 million in FY 2009-10, and $125.0 million in FY 2010-11. The total cost of all the incentives is estimated at $37.5 million in FY 2008-09, $110.0 million in FY 2009-10, and $135.0 million in FY 2010-11. The incentives are expected to generate additional tax revenue to the State, estimated at $6.7 million in FY 2008-09, $18.6 million in FY 2009-10, and $23.2 million in FY 2010-11. As a result, the net revenue impact on the State is an estimated cost of $30.8 million in FY 2008-09, $91.4 million in FY 2009-10, and $111.8 million in FY 2010-11. Because the full cost of the tax credits is carried by reductions in General Fund/General Purpose (GF/GP) revenue, while much of the revenue increase expected is directed toward the School Aid Fund, the reduction in GF/GP revenue is even larger, totaling $28.2 million in FY 2008-09, $100.7 million in FY 2009-10, and $125.7 million in FY 2010-11.

Revenue losses attributable to the credits have a significant potential to increase markedly in the near future. Expansion of Louisiana's film incentives caused the value of credits to rise from a few million dollars in FY 2001-02 to almost $35.0 million in FY 2002-03. By FY 2005-06 and FY 2006-07, Louisiana's credits were averaging roughly $75.0 million per year, despite exhibiting a narrower base of eligible expenditures and lower credit rate than allowable in Michigan. Similarly, expansion of New Mexico's film credits caused the value of credits to increase from a few million dollars each year through FY 2004-05 to nearly $20.0 million in FY 2006-07 and over $60.0 million in FY 2008-09. The value of credits associated with film incentives increased from slightly less than $20.0 million in Massachusetts during FY 2005-06 to almost $140.0 million during FY 2007-08, while in Connecticut the costs rose from slightly less than $20.0 million in FY 2006-07 to nearly $90.0 million projected for FY 2008-09. As with Louisiana, even after expansion of the credits, these other states offer less generous credits than those offered by Michigan.

**Table 1**

| BREAKDOWN OF MAY 2010 CONSENSUS REVENUE ESTIMATES RELATED TO FILM/MEDIA INCENTIVES (Dollars in Millions) | FY 2008-09 Estimates | FY 2009-10 Estimates | FY 2010-11 Estimates |
|---|---|---|---|
| Film/Media Production Expenses | $93.8 | $250.0 | $312.5 |
| | | | |
| "New" Economic Activity (Private) | $112.5 | $300.0 | $375.0 |
| Percent of Production Expense | 60.00% | 60.00% | 60.00% |
| Multiplier | 2.00 | 2.00 | 2.00 |
| | | | |
| New Wages | $70.9 | $180.0 | $225.0 |
| Share of Activity | 63.00% | 60.00% | 60.00% |
| New Income Tax | $1.9 | $5.4 | $6.8 |
| Effective Income Tax Rate | 2.75% | 3.00% | 3.00% |
| New Sales Tax from Wages | $1.5 | $3.8 | $4.7 |
| Share Spent on Taxable Items | 35.00% | 35.00% | 35.00% |
| | | | |
| Film/Business Spending on Taxable Items | $41.6 | $120.0 | $150.0 |
| Sales Tax from Spending | 2.5 | 7.2 | 9.0 |
| | | | |
| Increased MBT from Direct/Spinoff Activity | $0.8 | $2.2 | $2.7 |
| | | | |
| **Tax/Revenue Detail** | | | |
| Media Production Credit | ($37.5) | ($100.0) | ($125.0) |
| Media Infrastructure Credit | 0.0 | (6.0) | (6.0) |
| Media MEGA Credit | 0.0 | (1.6) | (1.6) |
| Media Job Training Credit | 0.0 | (2.4) | (2.4) |
| Subtotal Film Credit Direct Impact | ($37.5) | ($110.0) | ($135.0) |
| | | | |
| Media Incentives Secondary Impact | $6.7 | $18.6 | $23.2 |
| Sales Tax | 4.0 | 11.0 | 13.7 |
| Income Tax | 1.9 | 5.4 | 6.8 |
| MBT | 0.8 | 2.2 | 2.7 |
| | | | |
| Net MBT Impact | ($36.7) | ($107.8) | ($132.3) |
| | | | |
| Total Net State Revenue Impact (Public) | ($30.8) | ($91.4) | ($111.8) |
| General Fund (GF/GP) Impact | (28.2) | (100.7) | (125.7) |
| | | | |
| **Total Net Impact on State (Public & Private)** | **$81.7** | **$208.6** | **$263.2** |

**Source:** May 2010 Consensus Revenue Estimates

## ANALYSIS OF FILM INCENTIVES ON INDIVIDUAL PRODUCTIONS

Table 2a and Table 3a estimate the impact of various individual film productions that had received a Media Production Credit as of February 3, 2009. Table 2b and Table 3b provide similar estimates for the productions that received a Media Production Credit during the remainder of 2009. The data for each individual production are highly speculative because the individual effects are estimated based on averages derived from aggregate figures.

## Employment Impacts

On an employment basis, the productions for which data were supplied accounted for approximately 2,350 hires in 2008 and 3,867 in 2009, as indicated in Tables 2a and 2b. Due to the part-time nature of film production work, the 2,350 jobs equate to just 216 jobs on a full-time-equivalent basis, while the 3,867 equate to 355.5 full-time jobs. As identified in a report regarding the 2008 film incentives by Michigan State University's (MSU's) Center for Economic Analysis[1], these production hires also create a "direct" impact on the firms that transact business with the film production. These firms include costume rental shops, caterers, vehicle rental, hotels and motels, etc. Higher levels of employment in these sectors, as well as general spending by members of the production crew, generate additional "indirect" jobs, estimated at an additional 411 jobs in 2008. (The report defines them as direct jobs because they represent employment resulting from the initial spending on media production, rather than employment generated as a result of any multiplier effects as that spending is transmitted through the economy. Tables 2a and 2b identify these jobs as direct induced employment.) When the "spin-off" activity (reflecting the multipliers) from this activity is incorporated into the analysis, the identified productions in 2008 account for approximately 937 full-time-equated positions (out of the 1,102 total FTE positions estimated in the report).

The credits were awarded for activity that would have occurred between April 2008, when the credits were adopted, and February 3, 2009, when the report was prepared. While the productions did create additional jobs for the economy, an additional 937 FTE jobs represented a negligible change in Michigan employment. Between April 2008 and January 2009, Michigan wage and salary employment declined by 210,900 jobs. The total increase in employment attributed to the film production activity would represent an offset of 0.4% of the change in Michigan wage and salary employment over the relevant period. The total change in employment over the April-to-January period from film productions also would appear negligible when compared with monthly swings in employment in individual months. The 937 additional jobs attributed to the film production activity over the April-to-January period would represent only 2.8% of the *change* in Michigan wage and salary employment between just November and December 2008. Similarly, an estimated total of 1,542 jobs during 2009 would represent 0.8% of the change in wage and salary employment experienced over the year.

The tax credit cost for these jobs is significant. When the cost of the credits is measured against the hires made by the productions, the average cost per job was $186,519 in 2008 and $193,333 in 2009. If the employment contribution is broadened to include all of the spin-off employment attributed to the film activity, the average cost per job was $42,991 in 2008 and $44,561 in 2009. The U.S. Bureau of Labor Statistics reports that in 2008, the average Michigan wage across all occupations totaled $42,890. As a result, even when spin-off jobs are included, the tax credit impact of the employment attributable to those credits is approximately 100.2% of the average wage in Michigan.

## Revenue Impacts

On a revenue basis, as indicated previously, the film production activity does generate revenue to offset partially the cost of the credits but the impact of those offsets does not result in a net increase in revenue to the State. The Senate Fiscal Agency estimates that the individually listed productions received approximately $40.3 million in tax credits in 2008 and $68.7 million in 2009, as indicated in Tables 3a and 3b. Direct tax revenue from these productions is estimated at a likely maximum of $3.3 million in 2008 and $5.4 million 2009, while spin-off economic activity generated another $1.2 million in revenue in 2008 and $2.2 million in 2009. As a result, the $40.3 million in tax credits in 2008 is estimated to have been offset by an increase in revenue of $4.6 million, leaving the State with a net revenue loss of $35.7 million, while in 2009 the $68.7 million in credits were offset by $7.6 million in revenue, leaving the State with a net revenue loss of $61.2 million.

---

[1] "The Economic Impact of Michigan's Motion Picture Production Industry and the Michigan Motion Picture Production Credit", Miller, S. and Abdulkadri, A., February 6, 2009.

## Table 2a

### ESTIMATED EMPLOYMENT IMPACTS FROM FILM CREDITS ISSUED AS OF FEBRUARY 3, 2009 (CREDITS FOR 2008)

| | | Expenditures Eligible for Credit | | | | | | | | Induced Employment | | | Tax Credit Cost Per Job | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Project | Total | Goods | Services | Salaries/ Wages | Production Hires | Estimated Credit | Estimated Spending to MI Economy | FTE Production Hires | Direct | Indirect | Total Employment Impact | Production Hires | Total Employ. |
| 1 | Youth in Revolt | $11,902,120 | $5,255,792 | $130,597 | $6,515,731 | 130 | $4,569,652 | $6,257,224 | 12.0 | 19.3 | 20.6 | 51.8 | $382,373 | $88,133 |
| 2 | The Job | 1,284,427 | 384,386 | 77,821 | 822,220 | 192 | 493,138 | 675,253 | 17.7 | 28.6 | 30.4 | 76.6 | 27,939 | 6,440 |
| 3 | Prince of Motor City | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 4 | Street Boss | 652,629 | 251,175 | 9,067 | 392,387 | 80 | 250,568 | 343,102 | 7.4 | 11.9 | 12.7 | 31.9 | 34,071 | 7,853 |
| 5 | Gran Torino | 12,304,028 | 3,886,454 | 315,916 | 8,101,658 | 126 | 4,723,959 | 6,468,516 | 11.6 | 18.7 | 19.9 | 50.3 | 407,833 | 94,002 |
| 6 | All's Faire | 6,574,504 | 994,502 | 748,448 | 4,831,554 | 210 | 2,524,189 | 3,456,371 | 19.3 | 31.2 | 33.2 | 83.8 | 130,752 | 30,137 |
| 7 | The Pentagon Memorial | 353,043 | 98,495 | 0 | 254,898 | 14 | 135,546 | 185,603 | 1.3 | 2.1 | 2.2 | 5.6 | 105,319 | 24,275 |
| 8 | Regional Roots | 90,000 | 21,486 | 1,194 | 67,320 | 12 | 34,554 | 47,315 | 1.1 | 1.8 | 1.9 | 4.8 | 31,323 | 7,220 |
| 9 | Red and Blue Marbles | 427,606 | 113,765 | 90,639 | 223,202 | 73 | 164,173 | 224,803 | 6.7 | 10.9 | 11.5 | 29.1 | 24,464 | 5,639 |
| 10 | Tug | 637,352 | 144,391 | 197,452 | 295,509 | 47 | 244,702 | 335,071 | 4.3 | 7.0 | 7.4 | 18.7 | 56,635 | 13,054 |
| 11 | Virgin on Bourbon Street | 3,653,507 | 454,085 | 264,442 | 2,934,980 | 104 | 1,402,713 | 1,920,734 | 9.6 | 15.5 | 16.4 | 41.5 | 146,718 | 33,817 |
| 12 | Prayers for Bobby | 5,465,424 | 904,157 | 533,774 | 4,027,493 | 132 | 2,098,373 | 2,873,302 | 12.1 | 19.6 | 20.9 | 52.6 | 172,924 | 39,857 |
| 13 | Come On Over | 498,447 | 50,409 | 101,206 | 346,832 | 63 | 191,372 | 262,045 | 5.8 | 9.4 | 10.0 | 25.1 | 33,043 | 7,616 |
| 14 | Whip It | 12,385,212 | 2,465,390 | 2,088,855 | 7,831,967 | 229 | 4,755,129 | 6,511,197 | 21.1 | 34.1 | 36.2 | 91.3 | 225,878 | 52,063 |
| 15 | Rothbury Music Festival | 387,568 | 136,173 | 16,203 | 235,192 | 100 | 148,801 | 203,754 | 9.2 | 14.9 | 15.8 | 39.9 | 16,187 | 3,731 |
| 16 | Demoted | 13,158,461 | 2,594,026 | 224,804 | 10,339,631 | 77 | 5,052,007 | 6,917,712 | 7.1 | 11.5 | 12.2 | 30.7 | 713,708 | 164,502 |
| 17 | Art House | 69,586 | 11,978 | 12,493 | 45,115 | 45 | 26,717 | 36,583 | 4.1 | 6.7 | 7.1 | 17.9 | 6,458 | 1,489 |
| 18 | Intent | 1,890,934 | 238,215 | 18,207 | 1,640,311 | 36 | 725,998 | 994,108 | 3.3 | 5.4 | 5.7 | 14.4 | 219,371 | 50,563 |
| 19 | Kevorkian | 193,774 | 39,239 | 1,834 | 152,701 | 5 | 74,397 | 101,872 | 0.5 | 0.7 | 0.8 | 2.0 | 161,857 | 37,306 |
| 20 | 3rd and Bird | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 21 | Steam | 2,926,887 | 1,135,830 | 59,198 | 1,731,858 | 95 | 1,123,737 | 1,538,733 | 8.7 | 14.1 | 15.0 | 37.9 | 128,673 | 29,658 |
| 22 | Miss January | 4,048,114 | 1,151,426 | 164,089 | 2,732,599 | 124 | 1,554,217 | 2,128,189 | 11.4 | 18.4 | 19.6 | 49.5 | 136,344 | 31,426 |
| 23 | Offspring | 405,404 | 109,269 | 62,868 | 233,267 | 45 | 155,649 | 213,130 | 4.1 | 6.7 | 7.1 | 17.9 | 37,625 | 8,672 |
| 24 | High School | 15,195,964 | 1,799,884 | 1,781,340 | 11,614,740 | 140 | 5,834,278 | 7,988,875 | 12.9 | 20.8 | 22.1 | 55.8 | 453,321 | 104,486 |
| 25 | Gifted Hands | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 26 | Hung | 3,362,869 | 656,335 | 516,502 | 2,220,528 | NA | 1,291,126 | 1,767,939 | NA | NA | NA | NA | NA | NA |
| 27 | Wedding Day | 1,281,784 | 181,824 | 232,113 | 867,847 | 47 | 492,123 | 673,864 | 4.3 | 7.0 | 7.4 | 18.7 | 113,900 | 26,253 |
| 28 | Butterfly Effect 3: Revelations | 4,433,101 | 853,619 | 968,845 | 2,610,637 | 105 | 1,702,027 | 2,330,585 | 9.7 | 15.6 | 16.6 | 41.9 | 176,329 | 40,642 |
| 29 | Horse Crazy | 144,219 | 23,674 | 39,875 | 80,670 | 10 | 55,371 | 75,819 | 0.9 | 1.5 | 1.6 | 4.0 | 60,232 | 13,883 |
| 30 | Cherry | 771,495 | 362,147 | 23,570 | 385,778 | 54 | 296,205 | 405,593 | 5.0 | 8.0 | 8.5 | 21.5 | 59,669 | 13,753 |
| 31 | Wonder Pets | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 32 | Cyrus | 395,819 | 119,301 | 69,786 | 206,732 | 17 | 151,969 | 208,091 | 1.6 | 2.5 | 2.7 | 6.8 | 97,242 | 22,413 |
| 33 | Hey Josh | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 34 | Raised Alone | 56,451 | 17,959 | 13,557 | 24,935 | 38 | 21,674 | 29,678 | 3.5 | 5.7 | 6.0 | 15.2 | 6,204 | 1,430 |
| 35 | America | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| | Total | $104,950,729 | $24,455,386 | $8,764,695 | $71,768,292 | 2,350 | $40,294,363 | $55,175,062 | 216.0 | 349.6 | 371.7 | 937.3 | $186,519 | $42,991 |

**Notes:** Data on expenditures eligible for credit and production hires from Michigan Film Office. Estimated credit computed using average figures from Michigan Film Office February 2009 Annual Report to estimate an average effective credit rate. Estimated spending to Michigan economy and other employment figures based upon average data provided in MSU's Center for Economic Analysis report. Tax credit cost per job computed by dividing the estimated credit by the full-time-equated (FTE) employment estimates.

**Source:** Michigan Film Office, MSU Center for Economic Analysis, Senate Fiscal Agency

## Table 2b

### ESTIMATED EMPLOYMENT IMPACTS FROM FILM CREDITS ISSUED DURING 2009 (CREDITS FOR 2009)

| | | Expenditures Eligible for Credit | | | | | | | | Induced Employment | | | Tax Credit Cost Per Job | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Project | Total | Goods | Services | Salaries/ Wages | Production Hires | Estimated Credit | Estimated Spending to MI Economy | FTE Production Hires | Direct | Indirect | Total Employment Impact | Production Hires | Total Employ. |
| 1 | Betty Ann Waters | $10,799,006 | $973,641 | $1,846,676 | $7,978,689 | 332 | $4,210,927 | $5,677,291 | 30.5 | 49.4 | 52.5 | 132.4 | $137,971 | $31,801 |
| 2 | Irishman | 7,001,779 | 1,090,895 | 547,992 | 5,362,892 | 205 | 2,994,357 | 3,681,000 | 18.8 | 30.5 | 32.4 | 81.8 | 158,890 | 36,623 |
| 3 | Up in the Air | 1,335,843 | 252,838 | 151,951 | 931,054 | 90 | 519,719 | 702,284 | 8.3 | 13.4 | 14.2 | 35.9 | 62,816 | 14,479 |
| 4 | Alleged | 4,073,010 | 618,273 | 944,704 | 2,510,033 | 143 | 1,119,677 | 2,141,277 | 13.1 | 21.3 | 22.6 | 57.0 | 85,173 | 19,632 |
| 5 | Annabelle and the Bear | 94,354 | 55,953 | 28,415 | 9,986 | 2 | 38,039 | 49,604 | 0.2 | 0.3 | 0.3 | 0.8 | 206,893 | 47,687 |
| 6 | Best Girlfriends | 59,343 | 13,723 | 8,135 | 37,485 | 27 | 23,014 | 31,198 | 2.5 | 4.0 | 4.3 | 10.8 | 9,272 | 2,137 |
| 7 | Caught in the Crossfire | 428,709 | 107,426 | 49,646 | 271,637 | 40 | 177,335 | 225,382 | 3.7 | 6.0 | 6.3 | 16.0 | 48,226 | 11,116 |
| 8 | Clark Family Christmas | 66,000 | 12,500 | 3,500 | 50,000 | 20 | 27,090 | 34,698 | 1.8 | 3.0 | 3.2 | 8.0 | 14,734 | 3,396 |
| 9 | Confidentiality Request 1 | 6,854,395 | 2,440,713 | 858,980 | 3,554,703 | 134 | 2,686,624 | 3,603,516 | 12.3 | 19.9 | 21.2 | 53.4 | 218,097 | 50,269 |
| 10 | Daisy Tells a Secret | 93,836 | 1,636 | 35,454 | 56,746 | 8 | 36,974 | 49,332 | 0.7 | 1.2 | 1.3 | 3.2 | 50,275 | 11,588 |
| 11 | Fitful | 409,105 | 26,107 | 128,816 | 254,182 | 25 | 169,748 | 215,076 | 2.3 | 3.7 | 4.0 | 10.0 | 73,860 | 17,024 |
| 12 | Confidentiality Request 2 | 10,664,996 | 2,799,820 | 1,169,664 | 6,695,512 | 215 | 4,016,748 | 5,606,839 | 19.8 | 32.0 | 34.0 | 85.8 | 203,228 | 46,842 |
| 13 | Confidentiality Request 3 | 11,966,423 | 1,244,480 | 1,874,945 | 8,846,998 | 188 | 3,683,328 | 6,291,029 | 17.3 | 28.0 | 29.7 | 75.0 | 213,123 | 49,123 |
| 14 | Genesis Code | 4,508,335 | 476,013 | 1,807,151 | 2,225,171 | 118 | 1,749,796 | 2,370,138 | 10.8 | 17.6 | 18.7 | 47.1 | 161,307 | 37,180 |
| 15 | Grey Skies | 117,279 | 9,946 | 29,869 | 77,464 | 14 | 46,470 | 61,656 | 1.3 | 2.1 | 2.2 | 5.6 | 36,107 | 8,322 |
| 16 | Highland Park | 3,676,697 | 663,575 | 553,723 | 2,459,399 | 160 | 1,443,010 | 1,932,926 | 14.7 | 23.8 | 25.3 | 63.8 | 98,106 | 22,613 |
| 17 | Confidentiality Request 4 | 3,914,485 | 565,857 | 579,487 | 2,769,141 | 143 | 1,443,325 | 2,057,937 | 13.1 | 21.3 | 22.6 | 57.0 | 109,793 | 25,306 |
| 18 | Hunting Blind | 106,289 | 16,145 | 10,772 | 79,372 | 26 | 41,567 | 55,879 | 2.4 | 3.9 | 4.1 | 10.4 | 17,391 | 4,008 |
| 19 | Confidentiality Request 5 | 56,694 | 16,189 | 11,690 | 28,815 | 24 | 23,363 | 29,805 | 2.2 | 3.6 | 3.8 | 9.6 | 10,589 | 2,441 |
| 20 | Jerusalem Countdown | 550,015 | 117,290 | 66,499 | 366,226 | 27 | 220,006 | 289,156 | 2.5 | 4.0 | 4.3 | 10.8 | 88,638 | 20,430 |
| 21 | John the Revelator | 204,891 | 27,265 | 18,360 | 159,266 | 14 | 84,641 | 107,716 | 1.3 | 2.1 | 2.2 | 5.6 | 65,766 | 15,158 |
| 22 | Jump Shipp | 197,740 | 40,909 | 21,960 | 134,871 | 11 | 82,386 | 103,957 | 1.0 | 1.6 | 1.7 | 4.4 | 81,472 | 18,778 |
| 23 | Master Class | 9,099,899 | 1,457,789 | 511,496 | 7,130,614 | 54 | 3,506,987 | 4,784,031 | 5.0 | 8.0 | 8.5 | 21.5 | 706,460 | 162,832 |
| 24 | Meltdown | 325,979 | 88,536 | 109,267 | 128,176 | 41 | 136,227 | 171,375 | 3.8 | 6.1 | 6.5 | 16.4 | 36,143 | 8,331 |
| 25 | Mooz-lum | 1,549,141 | 126,955 | 241,228 | 1,180,958 | 84 | 617,400 | 814,420 | 7.7 | 12.5 | 13.3 | 33.5 | 79,953 | 18,428 |
| 26 | Motor City Motors | 2,758,757 | 623,140 | 560,842 | 1,574,775 | 33 | 1,101,943 | 1,450,343 | 3.0 | 4.9 | 5.2 | 13.2 | 363,239 | 83,723 |
| 27 | Naked Angel | 62,909 | 15,854 | 15,086 | 31,969 | 8 | 25,432 | 33,073 | 0.7 | 1.2 | 1.3 | 3.2 | 34,581 | 7,971 |
| 28 | Oogieloves | 11,300,795 | 1,107,587 | 2,247,967 | 7,945,241 | 184 | 4,039,167 | 5,941,093 | 16.9 | 27.4 | 29.1 | 73.4 | 238,793 | 55,039 |
| 29 | Red Dawn | 44,482,335 | 11,141,827 | 6,968,497 | 26,372,011 | 430 | 16,749,731 | 23,385,408 | 39.5 | 64.0 | 68.0 | 171.5 | 423,727 | 97,665 |
| 30 | Stone | 14,801,421 | 799,724 | 2,079,799 | 11,921,898 | 186 | 6,136,774 | 7,781,454 | 17.1 | 27.7 | 29.4 | 74.2 | 358,901 | 82,723 |
| 31 | The Next Great Mission | 485,975 | 18,627 | 98,803 | 368,545 | 14 | 203,089 | 255,488 | 1.3 | 2.1 | 2.2 | 5.6 | 157,799 | 36,371 |
| 32 | Tractors | 75,560 | 32,444 | 4,573 | 38,543 | 4 | 34,800 | 39,724 | 0.4 | 0.6 | 0.6 | 1.6 | 94,638 | 21,813 |
| 33 | Trivial Pursuits | 431,337 | 149,135 | 44,682 | 237,520 | 45 | 166,567 | 226,764 | 4.1 | 6.7 | 7.1 | 17.9 | 40,265 | 9,281 |
| 34 | Trust | 7,684,695 | 582,015 | 3,681,762 | 3,420,918 | 169 | 3,024,223 | 4,040,025 | 15.5 | 25.1 | 26.7 | 67.4 | 194,659 | 44,867 |
| 35 | Vanishing on 7th Street | 6,686,125 | 729,986 | 515,432 | 5,440,707 | 120 | 2,652,789 | 3,515,053 | 11.0 | 17.9 | 19.0 | 47.9 | 240,474 | 55,427 |
| 36 | Confidentiality Request 6 | 4,174,451 | 810,967 | 487,132 | 2,876,352 | 153 | 1,630,045 | 2,194,607 | 14.1 | 22.8 | 24.2 | 61.0 | 115,893 | 26,712 |
| 37 | What If | 404,088 | 74,990 | 43,590 | 285,508 | 26 | 163,438 | 212,439 | 2.4 | 3.9 | 4.1 | 10.4 | 68,380 | 15,761 |
| 38 | Confidentiality Request 7 | 4,650,766 | 1,044,657 | 1,135,670 | 2,470,439 | 198 | 1,811,685 | 2,445,017 | 18.2 | 29.5 | 31.3 | 79.0 | 99,532 | 22,941 |
| 39 | Wooden Boats | 148,466 | 45,833 | 12,318 | 90,315 | 7 | 59,140 | 78,052 | 0.6 | 1.0 | 1.1 | 2.8 | 91,903 | 21,183 |
| 40 | Confidentiality Request 8 | 3,735,456 | 331,557 | 1,155,209 | 2,248,690 | 79 | 1,466,028 | 1,963,817 | 7.3 | 11.8 | 12.5 | 31.5 | 201,866 | 46,528 |
| 41 | Confidentiality Request 9 | 945,734 | 146,643 | 66,698 | 732,393 | 66 | 364,249 | 497,195 | 6.1 | 9.8 | 10.4 | 26.3 | 60,035 | 13,837 |
| | Total | $180,983,113 | $30,899,460 | $30,728,440 | $119,355,214 | 3,867 | $68,727,858 | $95,147,071 | 355.5 | 575.2 | 611.6 | 1,542.3 | $193,333 | $44,561 |

**Notes:** Data on expenditures eligible for credit and production hires from Michigan Film Office. Estimated credit computed using average figures from Michigan Film Office March 2010 Annual Report to estimate an average effective credit rate. Estimated spending to Michigan economy and other employment figures based upon average data provided in MSU's Center for Economic Analysis report. Tax credit cost per job computed by dividing the estimated credit by the full-time-equated (FTE) employment estimates.

**Source:** Michigan Film Office, MSU Center for Economic Analysis, Senate Fiscal Agency

## Table 3a

### ESTIMATED REVENUE IMPACT FROM FILM CREDITS ISSUED AS OF FEBRUARY 3, 2009 (CREDITS FOR 2008)

| | | | | | Estimated Direct Tax Revenue | | | | Estimated Net Indirect Tax Revenue | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Project | Total Expenditures Eligible for Credit | Estimated Credit | Estimated Spending to MI Economy | Sales/Use | MBT | Income | Total | Sales/Use | MBT | Income | Total | Estimated Total Tax Revenue | Estimated Net Revenue Impact |
| 1 | Youth in Revolt | $11,902,120 | $4,569,652 | $6,257,224 | $317,306 | $60,984 | $136,830 | $515,121 | $58,083 | $28,823 | $53,407 | $140,313 | $655,434 | ($3,914,218) |
| 2 | The Job | 1,284,427 | 493,138 | 675,253 | 24,230 | 4,260 | 17,267 | 45,757 | 6,268 | 3,110 | 5,763 | 15,142 | 60,899 | (432,239) |
| 3 | Prince of Motor City | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 4 | Street Boss | 652,629 | 250,568 | 343,102 | 15,207 | 2,659 | 8,240 | 26,106 | 3,185 | 1,580 | 2,928 | 7,694 | 33,800 | (216,768) |
| 5 | Gran Torino | 12,304,028 | 4,723,959 | 6,468,516 | 237,926 | 36,412 | 170,135 | 444,472 | 60,045 | 29,796 | 55,210 | 145,051 | 589,524 | (4,134,436) |
| 6 | All's Faire | 6,574,504 | 2,524,189 | 3,456,371 | 70,897 | 9,658 | 101,463 | 182,017 | 32,084 | 15,921 | 29,501 | 77,506 | 259,524 | (2,264,665) |
| 7 | The Pentagon Memorial | 353,043 | 135,546 | 185,603 | 5,910 | 613 | 5,353 | 11,875 | 1,723 | 855 | 1,584 | 4,162 | 16,037 | (119,508) |
| 8 | Regional Roots | 90,000 | 34,554 | 47,315 | 1,307 | 109 | 1,414 | 2,830 | 439 | 218 | 404 | 1,061 | 3,891 | (30,663) |
| 9 | Red and Blue Marbles | 427,606 | 164,173 | 224,803 | 8,185 | 2,403 | 4,687 | 15,276 | 2,087 | 1,036 | 1,919 | 5,041 | 20,317 | (143,856) |
| 10 | Tug | 637,352 | 244,702 | 335,071 | 11,625 | 4,307 | 6,206 | 22,138 | 3,110 | 1,543 | 2,860 | 7,514 | 29,652 | (215,051) |
| 11 | Virgin on Bourbon Street | 3,653,507 | 1,402,713 | 1,920,734 | 31,212 | 492 | 61,635 | 93,338 | 17,829 | 8,848 | 16,394 | 43,071 | 136,409 | (1,266,304) |
| 12 | Prayers for Bobby | 5,465,424 | 2,098,373 | 2,873,302 | 62,256 | 7,814 | 84,577 | 154,648 | 26,672 | 13,235 | 24,524 | 64,431 | 219,079 | (1,879,294) |
| 13 | Come On Over | 498,447 | 191,372 | 262,045 | 4,543 | 1,112 | 7,283 | 12,938 | 2,432 | 1,207 | 2,237 | 5,876 | 18,814 | (172,558) |
| 14 | Whip It | 12,385,212 | 4,755,129 | 6,511,197 | 179,256 | 42,968 | 164,471 | 386,696 | 60,441 | 29,993 | 55,574 | 146,008 | 532,704 | (4,222,425) |
| 15 | Rothbury Music Festival | 387,568 | 148,801 | 203,754 | 8,413 | 1,537 | 4,939 | 14,889 | 1,891 | 939 | 1,739 | 4,569 | 19,458 | (129,343) |
| 16 | Demoted | 13,158,461 | 5,052,007 | 6,917,712 | 159,014 | 6,274 | 217,132 | 382,420 | 64,214 | 31,865 | 59,044 | 155,124 | 537,544 | (4,514,463) |
| 17 | Art House | 69,586 | 26,717 | 36,583 | 906 | 220 | 947 | 2,073 | 340 | 169 | 312 | 820 | 2,893 | (23,823) |
| 18 | Intent | 1,890,934 | 725,998 | 994,108 | 14,566 | 0 | 34,447 | 49,013 | 9,228 | 4,579 | 8,485 | 22,292 | 71,305 | (654,693) |
| 19 | Kevorkian | 193,774 | 74,397 | 101,872 | 2,382 | 84 | 3,207 | 5,672 | 946 | 469 | 869 | 2,284 | 7,957 | (66,440) |
| 20 | 3rd and Bird | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 21 | Steam | 2,926,887 | 1,123,737 | 1,538,733 | 69,038 | 12,471 | 36,369 | 117,878 | 14,283 | 7,088 | 13,133 | 34,505 | 152,382 | (971,355) |
| 22 | Miss January | 4,048,114 | 1,554,217 | 2,128,189 | 71,547 | 10,672 | 57,385 | 139,603 | 19,755 | 9,803 | 18,165 | 47,723 | 187,326 | (1,366,891) |
| 23 | Offspring | 405,404 | 155,649 | 213,130 | 7,499 | 1,856 | 4,899 | 14,254 | 1,978 | 982 | 1,819 | 4,779 | 19,033 | (136,616) |
| 24 | High School | 15,195,964 | 5,834,278 | 7,988,875 | 134,713 | 13,601 | 243,910 | 392,223 | 74,158 | 36,800 | 68,187 | 179,144 | 571,367 | (5,262,910) |
| 25 | Gifted Hands | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 26 | Hung | 3,362,869 | 1,291,126 | 1,767,939 | 47,128 | 10,312 | 46,631 | 104,071 | 16,411 | 8,144 | 15,090 | 39,645 | 143,715 | (1,147,411) |
| 27 | Wedding Day | 1,281,784 | 492,123 | 673,864 | 14,391 | 3,328 | 18,225 | 35,944 | 6,255 | 3,104 | 5,752 | 15,111 | 51,055 | (441,068) |
| 28 | Butterfly Effect 3: Revelations | 4,433,101 | 1,702,027 | 2,330,585 | 65,750 | 19,131 | 54,823 | 139,705 | 21,634 | 10,735 | 19,892 | 52,261 | 191,966 | (1,510,061) |
| 29 | Horse Crazy | 144,219 | 55,371 | 75,819 | 2,019 | 705 | 1,694 | 4,418 | 704 | 349 | 647 | 1,700 | 6,118 | (49,253) |
| 30 | Cherry | 771,495 | 296,205 | 405,593 | 22,082 | 4,666 | 8,101 | 34,850 | 3,765 | 1,868 | 3,462 | 9,095 | 43,945 | (252,260) |
| 31 | Wonder Pets | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 32 | Cyrus | 395,819 | 151,969 | 208,091 | 8,205 | 2,222 | 4,341 | 14,768 | 1,932 | 959 | 1,776 | 4,666 | 19,435 | (132,534) |
| 33 | Hey Josh | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 34 | Raised Alone | 56,451 | 21,674 | 29,678 | 1,281 | 406 | 524 | 2,210 | 275 | 137 | 253 | 665 | 2,876 | (18,798) |
| 35 | America | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| | Total | $104,950,729 | $40,294,363 | $55,175,062 | $1,598,794 | $261,277 | $1,507,134 | $3,367,204 | $512,169 | $254,156 | $470,930 | $1,237,255 | $4,604,459 | ($35,689,904) |

**Notes:** Data on expenditures eligible for credit from Michigan Film Office. Estimated credit computed using average figures from Michigan Film Office February 2009 Annual Report to estimate an average effective credit rate. Estimated spending to Michigan economy and other employment figures based upon average data provided in MSU's Center for Economic Analysis report. Estimated direct sales tax revenue assumes 25% of expenditures on services and 100% of expenditures on goods are subject to sales/use taxes. Estimated direct MBT revenue assumes 100% of expenditures on goods and services are subject to the gross receipts taxes, and the compensation credit is applied to wages. MBT revenue also assumes firms make a profit equal to 10% of the spending on goods and services, which is then subject to the income tax portion of the MBT. MBT revenue also assumes taxpayers are not eligible for other credits, including the alternate tax rate or the filing threshold credit, and includes the impact of the surcharge. Estimated direct income tax revenue assumes wage expenditures are taxed at an average effective rate of 2.1%. Estimated indirect revenue is estimated on a "balanced-budget" basis (net of the impact of the credit) and is based upon average aggregate multiplier effects from the Center for Economic Analysis report. Estimated indirect sales tax revenue assumes 40% of "multiplier" expenditures are subject to sales/use taxes. Estimated indirect MBT revenue and income tax revenue are based on assumptions similar to the direct revenue.

**Source:** Michigan Film Office, MSU Center for Economic Analysis, Senate Fiscal Agency

## Table 3b

### ESTIMATED REVENUE IMPACT FROM FILM CREDITS ISSUED DURING 2009 (CREDITS FOR 2009)

| | | | | | Estimated Direct Tax Revenue | | | | Estimated Net Indirect Tax Revenue | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Project | Total Expenditures Eligible for Credit | Estimated Credit | Estimated Spending to MI Economy | Sales/Use | MBT | Income | Total | Sales/Use | MBT | Income | Total | Estimated Total Tax Revenue | Estimated Net Revenue Impact |
| 1 | Betty Ann Waters | $10,799,006 | $4,210,927 | $5,677,291 | $86,119 | $15,033 | $167,552 | $268,704 | $50,470 | $25,045 | $46,406 | $121,921 | $390,625 | ($3,820,302) |
| 2 | Irishman | 7,001,779 | 2,994,357 | $3,681,000 | $73,674 | $6,048 | $112,621 | $192,342 | $23,633 | $11,728 | $21,730 | $57,091 | $249,433 | ($2,744,924) |
| 3 | Up in the Air | 1,335,843 | 519,719 | $702,284 | $17,450 | $2,950 | $19,552 | $39,952 | $6,284 | $3,118 | $5,778 | $15,179 | $55,131 | ($464,588) |
| 4 | Alleged | 4,073,010 | 1,119,677 | $2,141,277 | $51,267 | $15,404 | $52,711 | $119,382 | $35,162 | $17,448 | $32,331 | $84,941 | $204,323 | ($915,354) |
| 5 | Annabelle and the Bear | 94,354 | 38,039 | $49,604 | $3,783 | $1,296 | $210 | $5,289 | $398 | $198 | $366 | $962 | $6,251 | ($31,788) |
| 6 | Best Girlfriends | 59,343 | 23,014 | $31,198 | $945 | $207 | $787 | $1,939 | $282 | $140 | $259 | $680 | $2,620 | ($20,394) |
| 7 | Caught in the Crossfire | 428,709 | 177,335 | $225,382 | $7,190 | $1,476 | $5,704 | $14,371 | $1,654 | $821 | $1,521 | $3,995 | $18,366 | ($158,969) |
| 8 | Clark Family Christmas | 66,000 | 27,090 | $34,698 | $803 | $68 | $1,050 | $1,920 | $262 | $130 | $241 | $633 | $2,553 | ($24,537) |
| 9 | Confidentiality Request 1 | 6,854,395 | 2,686,624 | $3,603,516 | $159,327 | $38,975 | $74,649 | $272,951 | $31,558 | $15,660 | $29,017 | $76,235 | $349,186 | ($2,337,438) |
| 10 | Daisy Tells a Secret | 93,836 | 36,974 | $49,332 | $630 | $376 | $1,192 | $2,198 | $425 | $211 | $391 | $1,027 | $3,225 | ($33,749) |
| 11 | Fitful | 409,105 | 169,748 | $215,076 | $3,499 | $1,507 | $5,338 | $10,343 | $1,560 | $774 | $1,435 | $3,769 | $14,112 | ($155,636) |
| 12 | Confidentiality Request 2 | 10,664,996 | 4,016,748 | $5,606,839 | $185,534 | $37,935 | $140,606 | $364,075 | $54,728 | $27,158 | $50,322 | $132,208 | $496,283 | ($3,520,465) |
| 13 | Confidentiality Request 3 | 11,966,423 | 3,683,328 | $6,291,029 | $102,793 | $16,546 | $185,787 | $305,126 | $89,753 | $44,538 | $82,526 | $216,817 | $521,943 | ($3,161,385) |
| 14 | Genesis Code | 4,508,335 | 1,749,796 | $2,370,138 | $55,668 | $27,836 | $46,729 | $130,232 | $21,351 | $10,595 | $19,632 | $51,578 | $181,811 | ($1,567,985) |
| 15 | Grey Skies | 117,279 | 46,470 | $61,656 | $1,045 | $342 | $1,627 | $3,014 | $523 | $259 | $481 | $1,263 | $4,277 | ($42,193) |
| 16 | Highland Park | 3,676,697 | 1,443,010 | $1,932,926 | $48,120 | $10,131 | $51,647 | $109,898 | $16,862 | $8,368 | $15,504 | $40,734 | $150,632 | ($1,292,378) |
| 17 | Confidentiality Request 4 | 3,914,485 | 1,443,325 | $2,057,937 | $42,644 | $7,848 | $58,152 | $108,644 | $21,154 | $10,497 | $19,451 | $51,102 | $159,746 | ($1,283,579) |
| 18 | Hunting Blind | 106,289 | 41,567 | $55,879 | $1,130 | $132 | $1,667 | $2,929 | $493 | $244 | $453 | $1,190 | $4,119 | ($37,448) |
| 19 | Confidentiality Request 5 | 56,694 | 23,363 | $29,805 | $1,147 | $334 | $605 | $2,086 | $222 | $110 | $204 | $536 | $2,621 | ($20,742) |
| 20 | Jerusalem Countdown | 550,015 | 220,006 | $289,156 | $8,035 | $1,548 | $7,691 | $17,274 | $2,380 | $1,181 | $2,188 | $5,749 | $23,023 | ($196,983) |
| 21 | John the Revelator | 204,891 | 84,641 | $107,716 | $1,911 | $131 | $3,345 | $5,387 | $794 | $394 | $730 | $1,919 | $7,306 | ($77,335) |
| 22 | Jump Shipp | 197,740 | 82,386 | $103,957 | $2,784 | $494 | $2,832 | $6,110 | $742 | $368 | $683 | $1,793 | $7,904 | ($74,482) |
| 23 | Master Class | 9,099,899 | 3,506,987 | $4,784,031 | $95,140 | $4,727 | $149,743 | $249,610 | $43,954 | $21,811 | $40,415 | $106,180 | $355,789 | ($3,151,198) |
| 24 | Meltdown | 325,979 | 136,227 | $171,375 | $6,951 | $2,651 | $2,692 | $12,293 | $1,210 | $600 | $1,112 | $2,922 | $15,216 | ($121,011) |
| 25 | Mooz-lum | 1,549,141 | 617,400 | $814,420 | $11,236 | $1,447 | $24,800 | $37,483 | $6,781 | $3,365 | $6,235 | $16,381 | $53,864 | ($563,536) |
| 26 | Motor City Motors | 2,758,757 | 1,101,943 | $1,450,343 | $45,801 | $12,878 | $33,070 | $91,749 | $11,991 | $5,951 | $11,026 | $28,968 | $120,717 | ($981,226) |
| 27 | Naked Angel | 62,909 | 25,432 | $33,073 | $1,178 | $370 | $671 | $2,219 | $263 | $131 | $242 | $635 | $2,855 | ($22,577) |
| 28 | Oogieloves | 11,300,795 | 4,039,167 | $5,941,093 | $100,175 | $23,613 | $166,850 | $290,637 | $65,461 | $32,484 | $60,190 | $158,136 | $448,773 | ($3,590,394) |
| 29 | Red Dawn | 44,482,335 | 16,749,731 | $23,385,408 | $773,037 | $188,525 | $553,812 | $1,515,374 | $228,389 | $113,334 | $210,000 | $551,723 | $2,067,097 | ($14,682,634) |
| 30 | Stone | 14,801,421 | 6,136,774 | $7,781,454 | $79,180 | $1,379 | $250,360 | $330,919 | $56,607 | $28,090 | $52,049 | $136,747 | $467,666 | ($5,669,108) |
| 31 | The Next Great Mission | 485,975 | 203,089 | $255,488 | $2,600 | $492 | $7,739 | $10,831 | $1,804 | $895 | $1,658 | $4,357 | $15,187 | ($187,902) |
| 32 | Tractors | 75,560 | 34,800 | $39,724 | $2,015 | $442 | $809 | $3,267 | $169 | $84 | $156 | $409 | $3,676 | ($31,124) |
| 33 | Trivial Pursuits | 431,337 | 166,567 | $226,764 | $9,618 | $2,183 | $4,988 | $16,789 | $2,072 | $1,028 | $1,905 | $5,005 | $21,794 | ($144,773) |
| 34 | Trust | 7,684,695 | 3,024,223 | $4,040,025 | $90,147 | $54,700 | $71,839 | $216,687 | $34,962 | $17,349 | $32,147 | $84,459 | $301,146 | ($2,723,077) |
| 35 | Vanishing on 7th Street | 6,686,125 | 2,652,789 | $3,515,053 | $51,531 | $0 | $114,255 | $165,785 | $29,678 | $14,727 | $27,288 | $71,693 | $237,478 | ($2,415,311) |
| 36 | Confidentiality Request 6 | 4,174,451 | 1,630,045 | $2,194,607 | $55,965 | $9,864 | $60,403 | $126,233 | $19,431 | $9,642 | $17,867 | $46,940 | $173,173 | ($1,456,872) |
| 37 | What If | 404,088 | 163,438 | $212,439 | $5,153 | $817 | $5,996 | $11,966 | $1,687 | $837 | $1,551 | $4,074 | $16,040 | ($147,398) |
| 38 | Confidentiality Request 7 | 4,650,766 | 1,811,685 | $2,445,017 | $79,714 | $25,304 | $51,879 | $156,897 | $21,798 | $10,817 | $20,043 | $52,658 | $209,556 | ($1,602,129) |
| 39 | Wooden Boats | 148,466 | 59,140 | $78,052 | $2,935 | $584 | $1,897 | $5,416 | $651 | $323 | $599 | $1,572 | $6,988 | ($52,152) |
| 40 | Confidentiality Request 8 | 3,735,456 | 1,466,028 | $1,963,817 | $37,222 | $15,167 | $47,222 | $99,611 | $17,133 | $8,502 | $15,754 | $41,389 | $141,000 | ($1,325,028) |
| 41 | Confidentiality Request 9 | 945,734 | 364,249 | $497,195 | $9,799 | $660 | $15,380 | $25,840 | $4,576 | $2,271 | $4,207 | $11,054 | $36,893 | ($327,356) |
| | Total | $180,983,113 | $68,727,858 | $95,147,071 | $2,314,894 | $532,421 | $2,506,459 | $5,353,775 | $909,306 | $451,228 | $836,090 | $2,196,624 | $7,550,399 | ($61,177,459) |

**Notes:** Data on expenditures eligible for credit and estimated credit from Michigan Film Office. Estimated spending to Michigan economy and other employment figures based upon average data provided in MSU's Center for Economic Analysis report. Estimated direct sales tax revenue assumes 25% of expenditures on services and 100% of expenditures on goods are subject to sales/use taxes. Estimated direct MBT revenue assumes 100% of expenditures on goods and services are subject to the gross receipts taxes, and the compensation credit is applied to wages. MBT revenue also assumes firms make a profit equal to 10% of the spending on goods and services, which is then subject to the income tax portion of the MBT. MBT revenue also assumes taxpayers are not eligible for other credits, including the alternate tax rate or the filing threshold credit, and includes the impact of the surcharge. Estimated direct income tax revenue assumes wage expenditures are taxed at an average effective rate of 2.1%. Estimated indirect revenue is estimated on a "balanced-budget" basis (net of the impact of the credit) and is based upon average aggregate multiplier effects from the Center for Economic Analysis report. Estimated indirect sales tax revenue assumes 40% of "multiplier" expenditures are subject to sales/use taxes. Estimated indirect MBT revenue and income tax revenue are based on assumptions similar to the direct revenue.

**Source:** Michigan Film Office, MSU Center for Economic Analysis, Senate Fiscal Agency

**FILM OFFICE REPORT**

Reporting Requirements

While the MBT Act provides for three types of credits associated with the production of motion pictures and other selected entertainment media, the Media Production Credit, the Media Infrastructure Credit, and the Media Job Training Credit, in addition to the other incentives described earlier, only the statute providing for the Media Production Credit includes an explicit requirement to report on the activity of any of the incentives. Under MCL 208.1455, the Michigan Film Office is required to report on various aspects of the Media Production Credit by March 1 of each year. The first report regarding the Media Production Credit was released in February 2008 and covered activity from the inception of the credit (April 8, 2008) through February 3, 2009. Concurrently, the Michigan Film Office also released the study by MSU's Center for Economic Analysis, assessing the economic impact of the credit. The Michigan Film Office released a second report, for 2009, on March 1, 2010. However, the 2009 report did not include any analytic report assessing the economic or revenue impact of the credit.

Section 455 of the MBT Act, MCL 208.1455(11), specifies that the Michigan Film Office must provide an annual report regarding the value of the credits awarded under that section (Media Production Credits). The reporting requirements are fairly minimal, indicating the report must provide:

- A brief assessment of the overall effectiveness of the credit at attracting qualified productions to this State during the immediately preceding calendar year.
- The number of qualified productions for which the eligible production company applied for a tax credit during the immediately preceding year, the names of the qualified productions produced in this State for which credits were begun or completed in the preceding year, and the locations in this State that were used in the production of qualified productions in the preceding year.
- The amount of money spent by each eligible production company identified above to produce each qualified production in this State and a breakdown of all production spending by all companies classified as goods, services, or salaries and wages in the preceding year.
- An estimate of the number of people employed in this State by eligible production companies that qualified for the credit in the preceding year.
- The value of all tax credit certificates of completion issued in the preceding year.

The statute does not specify what information must be provided in the "brief assessment of the overall effectiveness" or define the term. The report is not required to assess the effectiveness of the credit at meeting specific economic or fiscal goals (although the language asks how effective the credit has been at attracting productions). Such goals could include evaluating the effectiveness at creating permanent jobs employing Michigan residents, or altering the average wage level of individuals within specific sectors, and requiring the analysis to present "net" figures--i.e., the difference between the effect of having more film activity and the effect of using a refundable tax credit to create the activity. Furthermore, the statute does not specify basics regarding the treatment of data in the report, such as requiring employment counts to be expressed as annualized FTE positions.

The Film Office provided information regarding the type of project (feature film, television production, documentary, animation, etc.) despite no statutory requirement to provide such information. The statute also does not require the report to separate the list of productions into categories such as "in-process", "completed", and "expired", nor does it require the name of the production company associated with the projects. When requesting company-specific expenditures, the statute does refer in subsection (11)(c) to the listing of production companies in subsection (11)(b), although subsection (11)(b) does not require such a listing. The expenditure data specified by the statute do not differentiate between total expenditures, expenditures eligible for the credit, and expenditures made to Michigan entities. The only division of expenditures is by type of function: goods, services, and wages and salaries.

As mentioned above, while the statute requires employment data to be supplied in the report, it does not require the employment data to be on an annualized FTE basis. The law also does not require the employment figures to be associated with specific productions or production companies. In addition, employment figures required under the statute must specify only "employment in this state" and not employment of Michigan residents, although the employment impact on Michigan residents is often raised in discussion of the credit.

The statute requires the report to provide very little data regarding the actual credit. Despite requesting some production-specific data for other factors, the statute does not require the report to provide the value of certificates of completion by production company or production. Instead, the report must provide an aggregate value for all credits awarded a certificate of completion. Furthermore, credit certificates can be transferred. While the Department of Treasury manages those transfers, the statute requires no information regarding transfers, such as which taxpayers may be purchasing the credits or at what price. The report is not required to indicate whether any production company or credit recipient exhibited an MBT liability or other Michigan tax obligation.

As indicated above, the statute contains no reporting requirements regarding the Media Infrastructure Credit, the Job Training Credit, or any other credit or incentive designed to focus on the film industry. While the Film Office report did include selected information related to activities associated with some of these other incentives, it was not required to by statute and there are no parameters placed on such reporting.

Confidentiality Issues

One particularly difficult area of the statute, in terms of the report required by MCL 208.1455, is the issue of confidentiality. Subsection (6) specifies:

> Information, records, or other data received, prepared, used, or retained by the Michigan film office under this section that are submitted by an eligible production company and considered by the taxpayer and acknowledged by the office as confidential shall not be subject to the disclosure requirements of the freedom of information act, 1976 PA 442, MCL 15.231 to 15.246. Information, records, or other data shall only be considered confidential to the extent that the information or records describe the commercial and financial operations or intellectual property of the company, the information or records have not been publicly disseminated at any time, and disclosure of the information or records may put the company at a competitive disadvantage.

These confidentiality provisions require not only that the taxpayer request confidentiality, but that the Film Office agree that confidentiality is warranted. The statute allows the Film Office to grant the confidentiality only if three conditions are met: 1) the information describes the commercial and financial operations or intellectual property of the company, 2) the information has not been publicly disseminated at any time, and 3) disclosure would put the company at a competitive disadvantage. The Film Office's implementation of these conditions is unclear. Companies appear to be granted confidentiality upon request and the extent to which the other conditions specified in statute have been met is not known. Regardless, the Film Office's reports provided limited information on a number of aspects of the credit, apparently as a result of the confidentiality provisions in subsection (6).

The confidentiality issue is further complicated by the language in subsection (11), the section that requires the report, which states:

> The requirements of section 28(1)(f) of 1941 PA 122, MCL 205.28, do not apply to disclosure of tax information required by this subsection.

The section referred to in this exclusion, MCL 205.28, covers the confidentiality rules to be followed in the administration of taxes. Subsection (1)(f) concerns a number of different circumstances, but the relevant aspect of the subsection is that current and former Treasury employees, and anyone connected with the Department of Treasury, are prohibited from divulging any information obtained through the administration of a tax or information that reveals processing or audit criteria, or otherwise examining tax information unless specifically required by their official duties, subject to certain exceptions.

As a result, subsection (11) appears to remove the confidentiality protections granted under subsection (6), as least in regard to the information in the annual report required under subsection (11). A variety of additional factors confuse the issue, ranging from the fact that Treasury does not compile the report while the Film Office does not process the tax return, to the issue that the information requested in the report (and/or protected by the confidentiality provisions) is not information on a tax return. Changing the confidentiality exemption to address potential inconsistencies or conflicts with the confidentiality protections under subsection (6) could potentially eliminate much of the confusion that has occurred as various entities have attempted to obtain data on the program.

Adequacy of the 2008 Film Office Report

The 2008 Annual Report generally adhered to the minimal statutory requirements, although some news media and others highlighted deficiencies in the report. As suggested above, the statutory requirements exhibit some vagueness, incompleteness, and internal contradiction. As a result, the magnitude of deficiencies in the report mentioned by the media may have been due more to unrealized expectations than to any true deficiency in the information provided. Similarly, the MSU report issued concurrently with the Michigan Film Office report apparently was intended to address some of the statutory requirements. For example, the Film Office report actually did not evaluate the credit's effectiveness, as required by subsection (11)(a), and while the MSU report evaluated the impact of increased film activity on Michigan, it did not evaluate how effective the credit had been at attracting activity or do any evaluation of the credit. The Film Office report asserted the credit had been effective because of a ranking among "top incentive states" and an increase in expenditures experienced during 2008. While the correlation certainly supports the claim, there is not much "assessment" to the statement. In summary, the report probably met the letter of the requirement, but that also might depend upon the interpretation of "brief assessment of the overall effectiveness of the credit under this section at attracting qualified productions to this state". As indicated earlier, none of the terms in that phrase are defined in the statute.

The 2008 report did not actually provide any information pursuant to (11)(c), which requires a breakdown of each production company's expenses, but because of the inconsistency about the language (addressed above), it is somewhat hard to fault the report. Subsection (11)(c) also requires not only that the identified spending be broken out by each production company, but that it be further broken out into three categories: goods, services, and wages and salaries. The report did not do that breakdown, even for expenditures in aggregate. However, the MSU report did provide a detailed breakout--although the detail reflected only the spending on approved expenditures, not the total. The degree to which the Film Office met this requirement depends on the extent to which one "incorporates" the full MSU report into the Film Office report. This issue is also relevant to other requirements in the statute, addressed elsewhere; that is, the Film Office report lacked the information but some aspect of the requested information was presented in the MSU report. The MSU report was reportedly commissioned by the Film Office or the Michigan Strategic Fund but is a separate document from the Film Office report. Technically, the MSU report, as a separate document, should not suffice to meet the terms of the statute.

The employment figures in the Film Office report suffered from several of the data problems previously discussed as well as additional issues that are more thoroughly described below. For example, the

Film Office report attributed 2,800 jobs to the Media Production Credit--but these jobs were not annualized or adjusted to an FTE basis. The MSU report addressed this issue--but the employment figures were model-based and derived from expenditures (rather than actual counts) and the report presented no corroborating information, such as might be obtained from U.S. Bureau of Labor Statistics surveys or other sources. The MSU report, at least for 2008, did identify the actual employment, on an annualized basis, attributable to the documentation from the production companies.

Analytic Comments Regarding the Film Office and MSU Reports

Many of the comments in this section reflect information contained in the MSU report, rather than either Film Office report. As indicated earlier, there is minimal information--particularly quantitative information--in the Film Office reports. As a result, the focus of the following discussion is on the Media Production Credits for 2008.

In 2008, approximately 47.3% of expenditures that qualified for the Media Production Credit did not affect the Michigan economy--primarily because the expenditures were made to individuals and firms outside of Michigan. The law allows such expenditures to qualify for the credit under a variety of circumstances. As a result, approximately $22.7 million of the $48.0 million in approved credits provided no contribution to the Michigan economy.

The Film Office reported employment of 2,800 people associated with the productions. However, the MSU report indicated that the typical 2008 production filmed for 23 days--reducing the job count to 254 jobs on an annualized basis. The remaining 411 "direct" jobs the MSU report identified for 2008 were estimated based on a REMI (Regional Economic Modeling Incorporated) model simulation. The accuracy of this estimate is essentially unverifiable; it includes factors such as the employment "created" for a catering company when the production company pays money for a caterer. As the income of film-related "direct" employment spreads through the economy, additional jobs are created. The MSU study used the REMI model to estimate a total of 1,102 additional jobs in 2008.

Regardless of the employment figure one associates with the film credits, the estimated job creation represents a negligible impact on the Michigan economy. For more than a decade, the monthly change in employment has averaged approximately 11,000 jobs and, over the same period, annual payroll employment has changed by an average of 66,400 jobs per year. (During the 1983-2008 period, it varied by an average of 80,800 jobs per year.) The annual employment figures identified in the MSU report would not be distinguishable from the "noise" in the monthly employment series, let alone the annual figures. The 2008 gain represented a 0.016% increase in 2008 wage and salary employment.

The MSU report estimated average earnings of $49,000 for these positions. Using the employment figure of 665 "direct" jobs and the reported credit cost of $48.0 million, the Media Production Credit would equate to paying $72,180 per job. The MSU analysis estimated, inclusive of multiplier effects, that the production company expenditures created a total of 1,102 jobs and provided $53.8 million of wages and salaries. Using these figures, the credit would have equated to providing $43,600 of an average $48,800 job, meaning the Media Production Credit would have subsidized 89.2% of the cost of each new job.

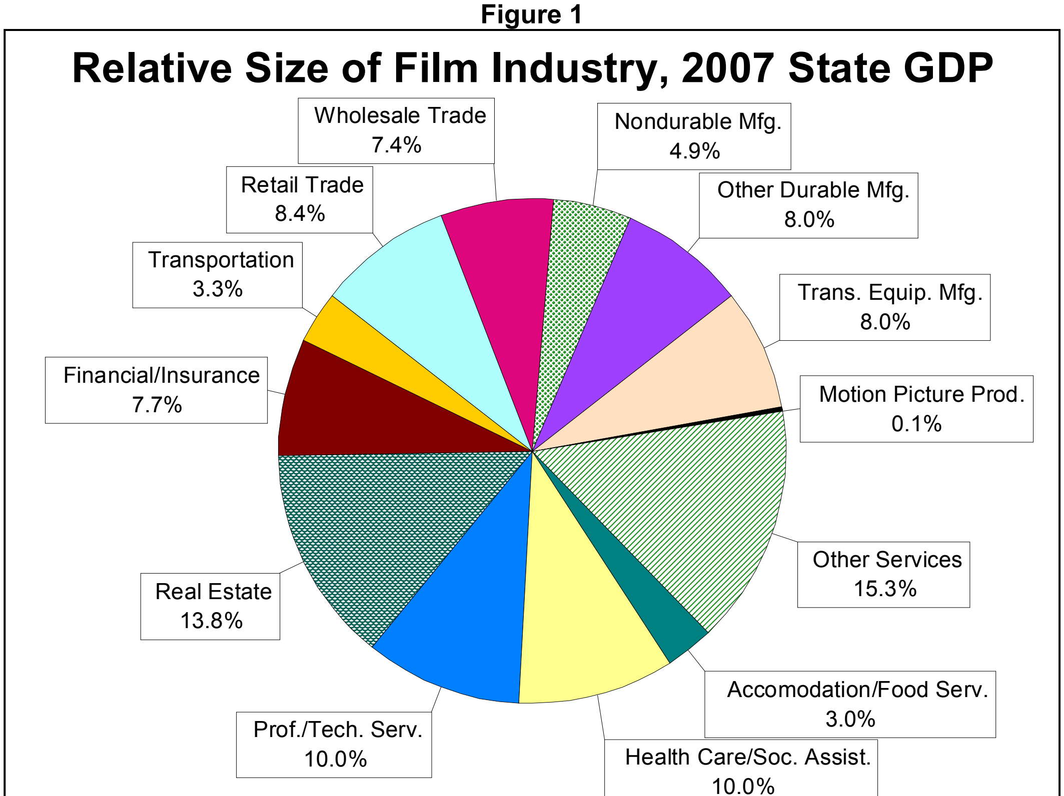
Assuming all of the $93.8 million in increased output (inclusive of multiplier effects) estimated by the MSU report was subject to sales and use taxes, as well as the MBT, the total "feedback" in tax revenue to the State from the credit can be estimated. Sales and use taxes would total $5.6 million. Assuming all of the affected firms had nexus to Michigan and thus were taxable, if firms averaged 10.0% profit on the output, the maximum MBT liability (excluding the effect of any compensation credits, investment tax credits, etc.) would total another $1.2 million. (If any firms were eligible for the small business provisions but still large enough to require filing, the total could be as low as $0.2 million in MBT revenue.) Income tax revenue on the $53.8 million in wages would be expected to generate $1.6

million. State tax revenue thus would total a maximum of approximately $8.4 million to offset the $48.0 million in credits, a gross return of 17.5%, or a total net return of a negative 82.5%.

As discussed in more detail below, the MSU report analyzed a fairly narrow question. The report evaluated what a larger motion picture industry would imply economically to Michigan, assuming it "just happened". The report did not evaluate the credit or the incentives. Furthermore, no subtractions were made for the cost of the credits--which still would have provided stimulus to the State economy either through State expenditures or through tax reductions. Similarly, the MSU report derived the estimates of the impact on jobs, output, and wages by running a limited amount of data through a model. The estimates were not based on thorough surveys of specific employers or economic sectors. As a result, the figures in the MSU report should not be taken as absolute. The figures are meant to be indicative, not determinative.

One aspect omitted from comparison in the MSU report is a perspective of the changes with respect to the Michigan economy as a whole. As indicated in Figure 1, based on Gross Domestic Product by State data for 2007 (which measures the value of all goods and services produced in Michigan during a given year), motion picture and sound recording industries in Michigan accounted for 0.1% of the Michigan economy, about $340.0 million. While the $125.0 million in expenditures identified in the Film Office report represented a substantial (approximately 36.8%) increase in activity within the sector, it represented 0.03% of the Michigan economy as a whole. Examining the impact on wage earnings or employment produces similar results: The sector is so small relative to the rest of the economy that even if the incentive increases activity in the sector by several orders of magnitude, it represents a negligible portion of the State economy. If the $125.0 million is reduced to reflect the balanced-budget implications (an issue discussed later), the impact would represent a smaller portion of the Michigan economy.

**Figure 1**




Source: Bureau of Economic Analysis, U.S. Department of Commerce

## ANALYZING THE STATE REVENUE IMPACT OF FILM INCENTIVES

Table 4 illustrates the various impacts of the Media Production Credit. Data are provided to illustrate the impacts under two sets of estimates: 1) the data presented in the Michigan Film Office's 2008 and 2009 Annual Reports, 2) the May 2010 consensus revenue estimates for FY 2008-09, FY 2009-10, and FY 2010-11. Some of the figures related to the consensus estimates differ from those presented in Table 1. Table 1 reflects the actual May 2010 consensus revenue estimates for all of the film incentives, while Table 4 only reflects the Media Production Credit. Additionally, Table 4 incorporates data from the MSU study that were not incorporated into the May 2010 consensus estimates. The value of the Media Production Credit is kept at the May 2010 consensus forecast level, but where the MSU report offered a different value for a factor assumed in the consensus estimates, the value from the MSU report is used. As a result, many of the estimates in Table 4 are not strictly comparable with those in Table 1. Despite these differences, the data support the previously indicated concept that there is a private impact that differs substantially from the impact on the State budget.

Because the economy is not a controlled laboratory, all of the impacts related to the production credit are based on estimates. The revenue impacts forecasted at the Consensus Revenue Estimating Conference are estimates, just as are the impacts estimated by the Michigan Film Office and the study presented by Michigan State University's Center for Economic Analysis. Similarly, estimates for related incentives in other states are also based on estimates, whether performed by private, public, or academic entities and whether or not their conclusions portray the incentives favorably. As a result, the figures presented in Table 4 should be regarded as indicative of the general directions and magnitudes of the effects, not as fixed, certain amounts.

In estimating the impacts of any tax policy, a variety of effects must be included and assumptions made regarding economic behavior. What follows is a description of the major analytical considerations, using the figures presented in the Michigan Film Office's 2008 and 2009 Annual Reports. According to the 2008 report, through February 3, 2009, approved projects had made $125.0 million in expenditures eligible for the credit and received credits totaling $47,992,000, while the 2009 report indicated $223.6 million in expenditures receiving $68.7 million in credits. These figures are shown in the first two columns of data on lines 1 and 2 in Table 4.

### Balanced Budget Issues

One of the most important considerations in the analysis of relevant tax policy is to recognize that the nearly $48.0 million in Media Production Credits for 2008 (and $68.7 million in 2009) otherwise would have represented either tax reductions or State spending that would have benefited the people of Michigan. Had the money associated with the credit been spent on Medicaid, it would have gone to compensate doctors and medical personnel for their services and that income, in turn, could have been spent on consumer goods and services. Had the money been spent on corrections, it would have purchased goods and services, as well as paid wages to individuals associated with the corrections system who, in turn, could have spent money in the Michigan economy. Had the revenue been foregone through a reduction in business taxes or income taxes, affected taxpayers would have realized an increase in their after-tax income, which could have been spent on additional goods and services. Recognizing these trade-offs is sometimes termed a "balanced-budget" analysis, because it recognizes that the funds for tax reductions or spending increases have an opportunity cost associated with them.

**Table 4**

**DETAILED COMPUTATION OF FILM PRODUCTION CREDIT ESTIMATES**
**WITH REVISED ESTIMATES USING DATA FROM MSU/CEA STUDY OF MICHIGAN FILM INCENTIVES**
**(Dollars in Millions)**

| Line | | 2008 Film Report Figures | 2009 Film Report Figures | May 10 Cons. Est., FY 2008-09[a)] | May 10 Cons. Est., FY 2009-10[a)] | May 10 Cons. Est., FY 2010-11[a)] |
|---|---|---|---|---|---|---|
| 1 | Film Production Expenses | $125.00 | $223.60 | $97.67 | $260.46 | $325.58 |
| 2 | MBT Cost | ($47.99) | ($68.73) | ($37.50) | ($100.00) | ($125.00) |
| 3 | Net Initial New Expenses to State | $77.01 | $154.87 | $60.17 | $160.46 | $200.58 |
| 4 | Multiplier | 1.43 | 1.61 | 1.52 | 1.61 | 1.70 |
| 5 | Total New Economic Activity to State | $110.12 | $249.34 | $91.46 | $258.34 | $340.98 |
| 6 | Spinoff Activity | $33.11 | $94.47 | $31.29 | $97.88 | $140.40 |
| 7 | New wages | $66.07 | $149.61 | $54.88 | $155.00 | $204.59 |
| 8 | Share of total new activity | 60.00% | 60.00% | 60.00% | 60.00% | 60.00% |
| 9 | New income tax on new wages | $1.98 | $4.49 | $1.65 | $4.65 | $6.14 |
| 10 | New sales tax from wages | $1.59 | $3.59 | $1.32 | $3.72 | $4.91 |
| 11 | Film spending on taxable items | $44.05 | $99.74 | $36.58 | $103.34 | $136.39 |
| 12 | New sales tax from film spending | $2.64 | $5.98 | $2.20 | $6.20 | $8.18 |
| 13 | Total State Revenue Impact | ($41.78) | ($54.66) | ($32.34) | ($85.43) | ($105.77) |
| | **Costs and Benefits** | | | | | |
| | Private | | | | | |
| 14 | Cost | ($68.63) | ($110.65) | ($57.00) | ($161.00) | ($212.50) |
| 15 | Benefit | $178.75 | $360.00 | $148.46 | $419.34 | $553.48 |
| 16 | Net Private Impact | $110.12 | $249.34 | $91.46 | $258.34 | $340.98 |
| | Public (State) | | | | | |
| 17 | Cost | ($47.99) | ($68.73) | ($37.50) | ($100.00) | ($125.00) |
| 18 | Benefit (Revenue) | $6.21 | $14.06 | $5.16 | $14.57 | $19.23 |
| 19 | Net Public (State) Impact | ($41.78) | ($54.66) | ($32.34) | ($85.43) | ($105.77) |
| | **Adjusted to Reflect Credit-Eligible Expenses Made to Out-of-State Entities** | | | | | |
| 20 | Net Initial New Expenses Contributing to State Economy | $17.72 | $48.82 | $13.85 | $36.93 | $46.16 |
| 21 | Total New Economic Activity to State | $25.34 | $78.61 | $21.05 | $59.46 | $78.48 |
| 22 | Spinoff Activity | $7.62 | $29.78 | $7.20 | $22.53 | $32.31 |
| | New Income Tax on New Wages | | | | | |
| 23 | Direct Film | $1.39 | $2.79 | $1.08 | $2.89 | $3.61 |
| 24 | Spinoff | $0.23 | $0.89 | $0.22 | $0.68 | $0.97 |
| 25 | New sales tax from wages | $0.18 | $0.71 | $0.17 | $0.54 | $0.78 |
| 26 | New sales tax from film spending | $2.64 | $5.98 | $2.20 | $6.20 | $8.18 |
| 27 | Total State Revenue Impact | $4.44 | $10.38 | $3.67 | $10.30 | $13.54 |
| | **Costs and Benefits** | | | | | |
| | Private | | | | | |
| 28 | Cost | ($68.63) | ($110.65) | ($57.00) | ($161.00) | ($212.50) |
| 29 | Benefit (Michigan Only) | $93.97 | $189.26 | $78.05 | $220.46 | $290.98 |
| 30 | Net Private Impact | $25.34 | $78.61 | $21.05 | $59.46 | $78.48 |
| | Public (State) | | | | | |
| 31 | Cost | ($47.99) | ($68.73) | ($37.50) | ($100.00) | ($125.00) |
| 32 | Benefit (Revenue) | $4.44 | $10.38 | $3.67 | $10.30 | $13.54 |
| 33 | Net Public (State) Impact | ($43.55) | ($58.35) | ($33.83) | ($89.70) | ($111.46) |

[a)] The figures presented keep line 2 consistent with the May 2010 consensus revenue estimates. Due to differing assumptions for many lines, other revenue and expenditure figures will differ from the May 2010 estimates.

**Note:** See comments in accompanying text for explanation of figures. Data are not strictly comparable to the figures in Table 1.

In Table 4, line 3 illustrates the net impact of the increased film activity, taking into account the cost of the financial incentives. As a result, using the data for 2008, the $125.0 million in film spending directly added only a net $77.0 million in economic activity to the Michigan economy. This activity would represent the first line of expenditures: wages for cast and crew, expenditures on set materials, costumes, catering, hotel rooms, etc.

Multiplier Effects

Economic activity does not exist in a vacuum or function as a single transaction. Consistent with the flow of funds in the economy, additional spending at one point is transmitted through the economy. Wages paid to an extra in a movie production are spent by the individual to purchase food, housing, apparel, etc. Those expenditures in turn become wages in another layer of economic activity, where they are spent again. The magnitude of the effect of this flow of expenditures depends upon a wide variety of factors, including the degree of openness in the economy being considered, but the total of these effects is termed a "multiplier". The multiplier represents the amount of total economic activity generated by a change, divided by the amount of the initial change. So a multiplier of 2.5 means that if $100 is initially introduced into the economy, it will ultimately generate a total of $250 worth of economic activity. Different industries and different economies have different multipliers.

The MSU report estimated that during 2008, the relevant multiplier for the film industry in Michigan was 1.43, meaning that $100 of initial activity would generate a total of $143 in economic activity. The consensus estimates assumed, based on other literature, that the multiplier would approximately equal 2.0. The multiplier values estimated in the MSU report are shown in line 4 of Table 4, and the total impact is listed on line 5. Table 4 also shows what is sometimes referred to as "spin-off" activity. Spin-off activity is simply the additional activity beyond the initial set of transactions. In Table 4, line 6 indicates the spin-off activity associated with the additional film activity. The $33.1 million shown under the Film Report column for 2008 represents, for example, additional activity created by actors spending their wages at a place such as Target, the purchases a tailor might make with the money he or she received for supplying costumes to a production, or the expenditures hotel employees might make with their wages from staffing a hotel where cast members stayed during the production.

Revenue Effects

All of the additional activity described above will generate tax revenue at various levels, depending on the nature of the expenditures. In terms of initial expenditures, some spending, such as for hair-styling, makeup, and tailor services, is not subject to taxation, while other spending, such as wages paid to a cast member, is taxed. The spin-off activity also generates tax revenue. While hiring a stylist does not result in sales or use tax liability for the production company, the income becomes business income for the stylist and will be subject to the Michigan Business Tax and/or the individual income tax. Line 7 in Table 4 estimates the total of additional wages created by both initial and spin-off activity. The estimate is based on an assumption that wages represent 60.0% of expenditures, as indicated in line 8.

Because of exemptions, deductions, and other tax provisions, additional income will not be taxed at the marginal statutory tax rate of 4.35%, on average. Assuming an average effective rate of 3.0%, line 9 of Table 4 indicates the additional income tax revenue received on wages from both initial and spin-off activity. Historically, approximately 40.0% of wages are spent on items subject to the sales tax. Line 10 indicates the additional sales tax revenue received as a result of initial and spin-off wages being spent on taxable goods and services under the sales and use taxes.

The initial nonwage spending by a production company also can generate sales and use tax revenue, and these amounts are illustrated in Table 4 on lines 11 and 12. The total net effect of the increases in income and sales tax revenue, as offset by the cost of the MBT credit, is shown on line 13 of Table 4.

## Other Factors to Consider

Many of the taxes the State levies are not listed in Table 4. Some potentially relevant taxes, such as cigarette and liquor taxes, are omitted, as are hotel/occupancy taxes, as well as less relevant taxes, such as oil and gas severance taxes, insurance taxes, and property taxes. Compared with the impact on other tax revenue, the effect of the increased activity on these taxes is less significant and more unclear, since it depends upon individual behaviors. While not included in Table 4, the consensus revenue estimates did account for any positive revenue effects under the MBT, in terms of higher MBT revenue for business such as caterers, tailors, and stylists. The analysis used in making the consensus estimates included the effects under the individual income tax, the sales tax, and the MBT, which together are estimated to account for almost 85.0% of total General Fund/General Purpose and School Aid Fund revenue for FY 2009-10. As a result, the omission of the lesser taxes does not meaningfully alter the estimates.

Despite these omissions, the revenue estimates in Table 4 likely overstate the identified positive revenue effects. The estimates assume that all nonwage expenditures are subject to sales or use tax. As indicated earlier, a substantial array of services--particularly many associated with media production --are exempt from sales and use taxes. Furthermore, for the wage levels for many of the positions, particularly those in spin-off activities, the assumed effective rate of 3.0% under the individual income tax is likely too high. In addition, the sales tax estimates assume spending from the additional wages occurs entirely in Michigan. To the extent that additional wages are spent on goods and services from other states, or on goods purchased through the internet and mail order, the estimates will also overstate the sales taxes received.

## Credit-Eligible Expenses Made to Out-of-State Entities

An important factor not included in the analysis above or in the consensus revenue estimates is the extent to which expenditures that are eligible for the Media Production Credit essentially contribute nothing to the State's economic activity. Generally, the statute requires only that the expenditures occur in Michigan in order to be eligible for the credit, although higher credit amounts are available for certain wages paid to Michigan residents and wage payments must also be subject to tax in the State to be eligible for the credit. Other states with similar credits have confronted the same issue and it appears to be a significant one for Michigan. If an out-of-state film production company hires the services of an out-of-state mobile postproduction unit, and the expenditure occurs in Michigan, it will be eligible for the credit. However, none of the money will contribute to the State's economic activity: The transaction is between two out-of-State entities and simply occurs within the boundaries of Michigan. The transaction generates a tax liability for the postproduction company (in this example, it would create nexus under the MBT, although such transactions might not be sufficient to meet the filing threshold for the tax), but the funds for the transaction essentially flow out of the State immediately. According to the MSU report, approximately 47.4% of the production expenditures eligible for the credit conform to these characteristics and contribute nothing to economic activity within Michigan.

In Table 4, lines 20 through 33 repeat the analysis discussed above, but adjust for the fact that approximately 47.4% of the production spending does not add to the Michigan economy. As indicated in the previous paragraph, the official May 2010 consensus revenue estimates do not account for this issue (due to data availability issues) and thus understate the cost of the film credits. (An offsetting omission in the official estimates is that timing related to the actual claiming of credits, at least for FY 2008-09 and FY 2009-10, also appears to be an issue. This timing issue is discussed in more detail later in this report.)

Interpreting Analytical Claims

In a July 15, 2009, *Detroit Free Press* article, in response to a question about the State paying out more than it gains, the director of the Michigan Film Office was quoted as saying, "They are just counting sales and income taxes. They don't count spending on hotels, rental cars, lumber yards, florists, etc… The gain far exceeds the cost." Table 4 indicates two problems with the statement: 1) the analysis incorporated into the consensus revenue estimates does take this spending into account, and 2) the statement conflated the public and private impacts.

As indicated in both line 16 and line 30 of Table 4, the net private impact (the economic change in the private sector from production spending, less the impact of the credits) is positive under both lines of analysis. Lines 16 and 30 also essentially reflect the impact to which the Film Office director was referring. Those involved in estimating the impact of the credits for the consensus revenue estimates have contended since the adoption of the credits that there is a definite positive impact of the incentives on the private sector. That impact is illustrated on those lines. The "benefits" listed on lines 16 and 30 reflect not only the benefits from the film production but also the spin-off activity, even beyond the hotels, lumber yards, etc.

However, those involved in estimating the impact of the credits for the consensus revenue estimates also have argued that the private impact of the incentives differs substantially from the public impact on the State budget. Table 4 illustrates that difference, in lines 19 and 33. While the private sector receives a positive net benefit, the State faces a negative net benefit in that the "feedback" in additional tax revenue from all of those hotels, rental cars, lumber yards, florists, etc. does not exceed the cost of the tax credits. In fact, when the adjustment is made for credit-eligible expenses that do not contribute to Michigan economic activity, the loss to the State exceeds the gain to the private sector. Using the figures from the 2008 Annual Report, the State spent $43.6 million to generate $25.3 million in private sector benefit.

In the case based on the official consensus revenue estimates (the three right-hand columns of the table), the State loses revenue as a result of the film credits--even including the effects that the Film Office director inaccurately claimed were omitted. The credit yields a positive private benefit, as identified by the Film Office director, but the private benefit does not provide a net positive benefit to the State's revenue. Lines 20 to 33 indicate that if the consensus revenue estimates are further refined to reflect credit-eligible expenditures that flow out-of-State, in FY 2010-11, the State is expected to lose $111.5 million in order to create $78.5 million in private activity.

**COMPARING STUDIES OF STATE FILM INCENTIVES**

As the preceding analysis suggests, estimating the impact of film incentives can be difficult. A number of states, including Michigan, that have enacted substantial incentives have attempted to evaluate the effects of those incentives The conclusions of these studies have varied, however, causing many to wonder why studies could reach such different conclusions when evaluating the same basic issue. This section summarizes the aspects of the various film-related incentives and common issues that arise when their economic and revenue impacts are estimated. Rather than discuss the specifics of each of the many studies available regarding state film incentives, or even a subset of them, the section highlights criticisms that tend to be characteristic of the reports and their varying conclusions, also identifying the nature of how the conclusions would potentially be changed if the criticisms were addressed. In addition, the section addresses a few issues that have arisen specifically in regard to the Michigan incentives.

## General Estimation Issues

Most other states offer some sort of incentives to encourage film production, with incentives ranging from exemptions from the lodging tax to refundable, transferable credits that pay for a percentage of the production costs. Some states offer additional credits related to the construction of film-related infrastructure. Other incentives also include wage subsidies and/or credits against a company's liability for income tax withholding, as well as credits for training, low-interest loans, investment capital or even production grants. Since 2002, several states have offered comparatively aggressive incentives: Connecticut, Georgia, Louisiana, Michigan, New Mexico, and New York. These more aggressive incentives generally have credits that cover a higher percentage and/or wider range of production costs, impose either no caps or high caps on significant expenditure items (such as actor wages), and impose few (if any) limits on the aggregate value or cost of the incentives.

As competition between states to attract film activity has increased, a number of studies have attempted to evaluate the impact of these incentives. Most frequently, these studies have been performed by either government agencies or consulting firms. Regardless of the entity performing the analysis, studies affiliated with or commissioned by the film industry or state film offices generally have produced more favorable evaluations of the incentive programs than have studies affiliated with other executive branch agencies, legislative agencies, or relatively independent analysts.

Analysis of the any type of tax or expenditure incentive is often hampered by three significant factors: 1) An accurate analysis would need to know what would happen in the absence of the incentive; 2) the incentives cannot be evaluated in laboratory conditions but occur in the "real world" where confounding circumstances occur, preventing analysts from isolating the effects of the incentives because "other things" are not held constant; and 3) many of the theoretical impacts are not readily observable or measurable. Analysts generally address the first factor by assuming that absent the incentive any (positive) incremental change in activity would not have occurred and/or that any negative incremental change would have continued or declined more rapidly. While this assumption is convenient, it is likely unrealistic given the wide array of factors affecting the viability and location of media productions. Michigan's experience over the last year has illustrated that even with the most generous incentives in the nation, many production companies have chosen to film elsewhere--with some making that choice even after receiving the preproduction approvals for the Michigan incentives.

Analysts traditionally address the second factor by evaluating the impact of incentives through the use of an economic/statistical model. These models generally are built upon detailed labor data that are then linked to broader economic variables. As with all models of this sort, the history of the data used to determine the relationships constrains the predictive ability of a model. Often the models are used to evaluate changes that represent a mathematically significant departure from the events upon which the equations are based, which can cause the model to generate extreme results that are overly sensitive and frequently inaccurate. The models also generally involve relatively detailed equations for a specific local geography and more general equations for the "rest of the world". When evaluating changes in economic circumstances or policies, the models focus extensively on key labor factors compared with the "rest of the world", which is assumed to remain unchanged. Many key variables in these models are not specified in a detailed fashion. As with all economic models, the limitations and sensitivities of a model's construction can lead it to produce results that do not appear to be reasonable. Effective use of any model requires the analyst to view the results in the context of the "real world" to conclude what additional modifications may need to be made to the analysis. As a result, even "objective" use of such models ultimately requires some level of subjective involvement, and what constitutes a "reasonable" result will vary by analyst.

The third factor is generally dismissed when the analysis is performed, in favor of an examination of the output of a controlled experiment (where the policy changes do not occur) with the computer model. Policy-makers generally desire to know the effects of their policy changes but, given the observation and measurement problems, there is no feasible way to verify the figures with data that reflect the real world. A model may indicate that a certain policy action, in the controlled environment of the model, generated a certain number of jobs or amount of income, but there are not practical means to verify the figures with real-world data, and the best methods of producing even more general assessments do not allow for timely results.

As a result, even under the best conditions, policy analysis will be affected by the validity of assumptions employed in the modeling, the quality of data in the model, and the skill of the analyst in using the model. Because small changes in many of these factors can result in large variations in the output, it is not surprising that different analysts can examine the same policies and come to significantly different conclusions. Furthermore, because of the nature of the analysis, an understanding of many technical matters will generally be necessary to discern which conclusion is likely to be more valid, when differences occur.

Balanced Budget Analysis

Perhaps the most common practice in studies of film incentives, particularly those that portray the incentives most favorably, is to assume that the cost of the incentives on the state budget and state economy is zero. States generally must balance their budgets, however, so any tax credit must be offset by either reduced expenditures or increased taxes just as any direct influx of capital such as a grant or loan would require additional revenue or an offsetting reduction in expenditure elsewhere in the budget. Economists term the cost of what is foregone an "opportunity cost". When an incentive's opportunity cost to the state budget and economy is incorporated in an analysis, it is often termed a "balanced budget" analysis. Nevertheless, even some studies that identify a net negative impact on a state's budget, such as the report on Louisiana's Motion Picture Tax Credit prepared by Economics Research Associates, have neglected to incorporate balanced budget aspects into their analysis.

Incorporating balanced budget components into an analysis can be quite difficult because an accurate modeling would require the analyst to identify the actual opportunity cost, which is often unknown information. Given the complexities of state budgets and the numerous policy changes enacted each year that affect revenue and/or expenditures, it is generally impossible to identify that "program X" was reduced or eliminated or "tax increase Y" was enacted in order to finance a film incentive program. Specific opportunity cost information is useful because different sectors of the economy have different impacts and transmit their activity through the economy in different ways. The cumulative impact of these transmissions is often termed the "multiplier effect" and different economic sectors exhibit different multipliers. Reducing activity in a sector with a high multiplier in order to foster activity in a sector with a low multiplier will reduce the net benefit that might be achieved, while doing the opposite will increase the net benefit.

Multipliers are difficult to estimate and the values obtained depend upon a number of key factors, including: 1) how the industry is defined, 2) the degree of openness in the affected economy, 3) spending behavior, and 4) tax rates. While some of these factors appear relatively simple, in practice they can be complex. The manner in which some industry groups, such as the agriculture industry, portray the industry can be illustrative. For example, statements in the media indicating that agriculture is the second-largest industry in Michigan generally define portions of other industries as part of agriculture, such as transportation (which hauls agricultural products), the retail sector (grocery stores, for example), and the food services sector (such as restaurants). Based on the standard classification of industries used by the U.S. Census Bureau, the U.S. Department of Labor, and the U.S. Bureau of Economic Analysis, if the private Michigan economy is divided into 20 sectors, the sector meeting the definition of agriculture ranks far behind second. Data on Gross Domestic Product by State, measuring the value of all goods and services produced within a state, would rank agriculture (inclusive of fishing, forestry, and hunting) 18th, comprising 0.8% of the Michigan economy. (Similar results are obtained if alternative data, such as employment, personal income, and wages, are examined.) As a result, depending on how "agriculture" was defined by the model and/or the analyst, a change in agricultural policy could have a direct effect (rather than secondary multiplier effects) on either a major or a minor portion of the State economy--in terms of the model's view of the State economy.

The openness of an economy is also vital to determine a multiplier, as is the size of the economy. Multipliers depend upon the transactions moving through the economy and if the economy is very open, the money can flow to another economy quickly. A simple example can illustrate the issue: If an individual from out-of-State comes to Michigan and purchases an umbrella at a local store, it boosts the economy. But if the store owner then replaces the sold inventory by ordering another umbrella from its supplier in New York, only the portion that represents the profit from the umbrella stays in the Michigan economy to continue circulating. If the umbrella expenditure was $10 and the cost from the supplier was $8, only $2 remains then to be spent at, for example, a local grocery store. If the local grocery then replenishes its inventory by ordering $1.50 in produce from California, only 50 cents of the original $10 purchase remains in the Michigan economy after just three transactions. As a result, the multiplier would be much smaller than if the umbrella were ordered from a Michigan manufacturer and the produce were ordered from a Michigan farm. Different states will exhibit different multipliers, based on the openness and size of the state economy and how quickly increases in economy activity flow to "the rest of the world".

Most issues regarding multiplier factors are very technical. The important aspect of multipliers is that they are difficult to estimate and can vary significantly, and the choice of multipliers not only will affect the impacts from any analysis but also will be important when the impact of the opportunity cost of a film incentive is compared.

The few studies and analyses that have used a balanced budget perspective generally have assumed, for simplicity, to apply the same multiplier (which will represent the cumulative economic impact) to the opportunity cost as is applied to the film industry. In most cases, this assumption will understate the opportunity cost of the film incentive and overstate its impact. First, with few exceptions, states enacting film incentives have small and/or underdeveloped film production industries. Second, due to the nature of the political process and the nature of government's role in the economy, the fiscal impact of government activities frequently will affect larger industry groups (and/or local groups) that are likely to exhibit larger multipliers than the media production sector (as well as keeping more of the spending in-state). In the case of the May 2009 consensus revenue estimates for the film credit, the opportunity cost was taken into account. Had the issue been omitted from the analysis, the estimate of additional private sector activity would have been increased by more than 62.0%. As a result, any analysis that fails to evaluate the impact of film incentives using a balanced budget approach will seriously overestimate their economic impact.

Out-of-State Spending

A number of states have discovered problems with evaluating even the initial spending from film productions. For example, Connecticut discovered that a significant portion of its production credit was subsidizing payments that essentially left the state immediately: Production companies were hiring New York companies (which were firmly established) to come to Connecticut to work on productions. The transactions occurred in Connecticut and were eligible for the credit, but the expenditure left the state immediately and added nothing to its economic activity. As noted above, the Michigan State University study on Michigan's Media Production Credit indicated that approximately 47.4% of the production expenditures eligible for the credit essentially left Michigan and thus did not add to the State's economy. Studies that fail to account for the flight of capital out of state will seriously overstate the impact of any incentive program.

Combining the out-of-State spending factor with the balanced budget issue can substantially reduce the estimated impact of film incentives, when compared with studies that omit these two factors. Because of the manner in which the factors interact, if they are omitted in an analysis consistent with the May 2009 consensus revenue estimates, the economic impact on the Michigan economy will be overstated by a factor of more than seven. (This would suggest more than $780.0 million in private sector activity in FY 2009-10, compared with approximately $110.0 million.) In other words, incorporating just these two adjustments lowers the credit's estimated private sector economic impact on Michigan by almost 86.0%.

Employment Measures

The models traditionally used to analyze the economic impact of film incentives rely on labor data extensively. Changes in labor force size, relative demand for employment, and relative labor costs are the primary drivers of these models. As a result, the accuracy of any employment or wage figures put into a model to represent the effect of the film incentives will significantly affect the magnitude of the estimate. Aside from the issue of out-of-state credit-eligible expenses discussed previously, there are several issues that arise in using accurate employment measures: 1) full-time versus part-time employment, 2) how many of the employees are residents of the state granting the incentives, and 3) how much of the measure represents new or additional activity, versus a redirection of existing activity.

The full-time equivalent status of the employment figures is the most easily addressed issue, and while it can have a significant impact on the estimates, it is not necessarily the issue that will most affect the results. Film offices and economic development agencies typically provide figures based on information received from incentive recipients and the data rarely include FTE values for any jobs created. Because incentives are generally based on the aggregate wages paid to different classes of employees, it can be difficult to differentiate the wages paid to a tailor or seamstress to make a costume from those paid to a member of the lighting crew. The tailor or seamstress may provide a total of 10 hours' labor to a production when constructing a costume, while a person working with the lighting crew may work many hours each day for the full duration of the production. Figures supplied by film offices generally count each employee, regardless of the duration of his or her employment, and do not express figures as FTE positions.

Making the adjustment to FTE levels is important and there is no clear approach, given the limited nature of the data supplied by (and requested of) incentive recipients. The approach followed by the MSU study is typical of the adjustment made by studies that do make an adjustment. The MSU authors assumed that each employee associated with a production worked for the same number of days the production filmed. For the MSU study, the average production filmed for 23 days, so the 2,763 direct jobs were reduced to 254 FTE positions, assuming a 250-day work year. This adjustment likely overstated the actual number of FTE positions, given that productions generally pay only for the time an individual is actually needed and many employees associated with a production are not needed for the full duration of the production process. Despite any potential inadequacies in this sort of adjustment, the impact on the analysis is substantial. In the case of the MSU study, the adjustment reduced the level of economic impact by nearly 91.0% compared with unadjusted figures.

The issue with residency also is important in that it duplicates the same problems with out-of-state spending. It is possible, however, for an analyst to adjust appropriately the credit-eligible spending that occurs out-of-state and yet not reduce the employment figures to account for jobs provided to nonresidents. While most states offer incentive programs that discriminate between resident and nonresident employees, and thus should possess data that can allow analysts to differentiate the employees in their analysis, many of the reports fail to indicate whether the adjustment has been made. The distinction is important analytically because of the way the models transmit economic activity across the economy. The "local" part of the model will generally treat all employment as indigenous to the local economy: Shortfalls are compensated for through a combination of rising wage rates and in-migration of labor. However, if a portion of the labor demand for the production is fulfilled with purely nonresident labor (as opposed to nonresident in-migration), the model will overstate the economic impact. Furthermore, it is likely that the models do not appropriately distinguish between the natures of different types of employment: The limited-term nature of employment, combined with the highly specialized skills or relationships that comprise the entertainment industry, is substantively different from more traditional jobs such as those in retail, manufacturing, or even health or business services that are more accurately captured in the models.

The MSU study also appears to have largely captured the residency issue by using the in-State labor expenditures and generating employment through a measure of "sales per employee". Had the study not made this adjustment, the employment effects could have been 335% larger than stated. (Conversely, making the adjustment lowered the employment impacts by more than 70.0%.) Most reports from other states are far less clear than the MSU report about any of the adjustments made to the models' employment data input and thus may significantly overstate not only the employment effects but also the subsequent economic activity generated as a result of those jobs (tax revenue, sales, output, indirect employment, etc.).

Most studies generally resolve the last employment issue by assuming that all additional employment related to a production (both direct and indirect) represents an increase in employment. In other words, a make-up artist who works on a production is assumed to have been unemployed absent the production, rather than merely working more hours. Similarly, the analysis assumes the employee has not shifted his or her employment from working on credit-eligible productions instead of another production that does not qualify for the credit. Similarly, services hired by the production (such as for a caterer or set construction) are assumed to represent new activity, rather than taking away from existing activity. The model implicitly assumes that no groups that otherwise would have hired the caterer or the construction worker choose to do without those services as a result of the commitment the caterer or construction worker has made to the film production. Obviously, the extent to which film activity merely redirects existing activity will have a significant impact on the real world effects of the incentives. In the extreme, if 100% of the film-related activity were simply redirected transactions, the net increase on the economy would be zero.

Private vs. Public Impact

Regardless of whether the ultimate focus of the studies conducted on film incentives has been the effect on the economy and/or the effect on government budgets, the conclusions have often contained multiple findings--potentially resulting in confusion or misinterpretation by readers. Virtually all studies of film incentives have included an analysis of their economic effects, i.e., effects on private sector economic activity that result from film productions that are attributed to the incentives. Relative to the size of the incentives, it is not uncommon for the estimated private sector impacts to be large, particularly if one of the previously discussed concerns, such as balanced budget effects or out-of-state spending issues, has not been addressed adequately.

Press releases from economic development agencies often highlight these differences, citing statistics such as "30 film productions…incurring $282 million in expenditures…that will claim $86 million in credits…". There is nothing inherently wrong or inaccurate about these statements, but readers frequently misinterpret them. The $86.0 million in credits is a public sector impact and reflects the loss of revenue experienced by the state budget. The $282.0 million in expenditure (or economic activity, or output, depending on how it is presented) represents a private sector impact and reflects the increase in economic activity experienced by employees and businesses directly associated with the film production (and, depending on the report, inclusive of the "multiplier effects"). Readers often then will interpret the figures to mean "the state received $3.28 back for every dollar it spent" because the state spent $86.0 million in credits and there was a positive result of $282.0 million on the economy. This sort of analysis is correct--if the reader is examining the impact of the program on the private economy. But, using this example, a $3.28 return to the private economy does not equate to a $3.28 return to the state government. Because of the nature of the credit and the activity, no tax rate could cause the state to receive more in revenue than it spent. In this example, even "breaking even" for the state would require an average state tax rate of approximately 30.0% (so that $282.0 million in economic activity would generate $86.0 million in tax revenue). No state exhibits such a high average effective tax rate.

The confusion between public and private impacts can even show up at high levels, particularly if a study has neglected to evaluate the public sector (tax revenue) impacts. For example, the MSU study did not evaluate any of the public sector impacts, whether in terms of balanced-budget analysis or in terms of revenue generated by either the direct or multiplier economic effects. No estimates were presented regarding any revenue impacts at all; the report did not even summarize the tax credit value for the credits it evaluated. The study only attempted to evaluate the private sector impacts of Michigan's film credit. However, in testimony before the Senate Finance Committee on April 30, 2009, Jim McBryde of the Michigan Economic Development Corporation, referring to data from the MSU study, indicated that the $48.0 million in Michigan film credits had returned over $200.0 million to the State of Michigan. The MSU study did not make such a claim, however, and the claim confused the timing of activity and mixed claims about private benefits with claims regarding public revenue. The $200.0 million estimate from the study represents the estimated increase in private sector output for 2009, given a higher new assumed level of film activity. As indicated earlier, the MSU report made no estimates about tax revenue to any unit of government.

<u>Confusion Regarding the Timing of Activities</u>

Confusing the public and private sector impacts of the incentives is not the only area in which an issue related to film incentives often becomes muddled. At least several studies of the impact of incentives have indicated future benefits, either to state revenue and/or the state economy, and then computed a present value of those benefits. In addition to difficulties that often arise when dealing with the time value of money, comparing the current value of revenue that may be received in four years (or longer) against the current-year impact of a credit is not realistic in a budgetary sense: A state cannot pay a current-year credit (or fund some other program) with revenue that will not be received for years.

Similarly, the timing of credits and the occurrence of economic activity creates difficulties. This issue was most evident in February 2009 when the Michigan Film Office released the report on 2008 activities. The report indicated that $48.0 million in refundable credits had been issued for 2008. Many compared this figure to the FY 2008-09 consensus revenue estimate from both January and May 2009 of $100.0 million, or to contemporary press releases that indicated the cost to the State of the incentives would total approximately $164.0 million, although none of these figures are comparable to each other. Production companies must enter into an agreement with the Film Office in order to receive the credits and these "pre-approvals" of production companies' plans (as of the February 3, 2009, press release) totaled approximately $164.0 million. After production is completed, the Film Office must issue a postproduction certificate approving a final credit amount. As of February 3, 2009, the Film Office had issued $48.0 million in such certificates. To claim the credit, taxpayers must file an annual Michigan Business Tax return. As these returns are filed, the State will process the credits (and issue any refund checks). The consensus revenue estimate at that time forecasted that between October 1, 2008, and September 30, 2009, the State would issue approximately $100.0 million in such credits.

Other states with longer-running incentive programs have experienced similar delays in linking film activity and actual refund processing (which is one reason that some studies have attempted to put revenue and expenditure amounts into a current value framework). Because of the delays, it is possible for a state to observe a substantial increase in economic activity that appears to come at little or no budgetary cost, because the budgetary cost will be experienced in future years once the credits have made their way through approvals, filing requirements, and tax reviews. The Michigan Film Office report identified $125.0 million in credit-eligible film production expenditures and those definitely affected the 2008 Michigan economy. As of early May 2009, none of the credits associated with that activity had completed the process to a point where the State was issuing refund checks. Depending on the perspective, it would appear that the 2008 boost in economic activity was costless, although the actual costs were posted against the FY 2008-09 and FY 2009-10 budgets, and those budgets will corresponded to different levels of new film production activity.

## Confusion Regarding the Incentive Itself

It is significant that many individuals and media outlets appear to misunderstand the nature of the film incentives, mistaking the incentive for a reduction in actual tax liability rather than a credit amount for something unrelated to tax liability. For example, if a production company qualifies for the 42.0% credit rate and makes $1.0 million in credit-eligible expenditures, the incentive allows it to receive a credit for $420,000, regardless of the taxpayer's actual liability. If the production company reported an MBT liability of $20,000, it would receive a $400,000 refund (the difference between the film credit of $420,000 and the tax liability of $20,000). In contrast, many individuals and media outlets appear to believe that the credit would reduce the production company's liability by 42.0%, to $11,600. Under this line of reasoning, the State is "giving up" money it would never have received absent the credit: Without the credit the production would not have occurred and the production company would not have a liability of $20,000; thus, giving up a portion of that revenue to attract the company is a "win" because the State still receives $11,600 it would have never received. However, that line of reasoning is faulty because the State is paying $400,000 on top of giving up 100% of the production company's tax liability. The private sector received $1.0 million from the incentive, but the State gave up 100% of the liability it would have never received plus another $400,000.

## Other Factors

There is a wide variety of lesser factors that can cause studies to provide significantly different portrayals of incentive programs. While the previously listed issues are somewhat technical, many of these other issues are even more technical. The models used to evaluate these incentives provide very poor, and sometimes even nonexistent, modeling of the tax structure. As a result, the nature of how the incentives are specified is very important. Often, the way changes are incorporated fails to capture the limited nature of the tax provisions or the specific industries affected. For example, in most models, taxes are modeled only as an aggregate average tax rate, faced by "the business community". In such a model, the state tax rate might be 5.0% (assuming the model does not use a combined Federal, state, and local tax rate as do most models), based on something akin to taking total business tax revenue and dividing it by total economic output. The incentive may substantially affect the liability of very few, perhaps 50, taxpayers out of a population of 150,000 taxpayers. The model will compute the effects of the incentive as if all 150,000 taxpayers received a rate cut from 5.0% to perhaps 4.8% rather than keeping the taxes for most taxpayers constant and substantially lowering the rate on (or giving refunds to) the 50 affected taxpayers. However, the economic effects of a rate cut for all taxpayers are very different than the economic effects of a substantial cut for very few taxpayers--especially when those taxpayers have little or no liability before the incentive.

A host of other problems can result from inadequate tax modeling, ranging from issues regarding business size to the distribution of the change across economic sectors, even if the tax rates are correctly specified. However, the correct specification of tax rates can frequently be very difficult. A common error is to use statutory tax rates in calculating revenue from additional marginal economic activity. While applying statutory rates in this manner is generally an appropriate process for evaluating the impact of, for example, an increase in income received by a specific individual or business, it is not appropriate when evaluating effects where additional employment is being generated, particularly if the additional workers are relocating from out-of-state.

A simple illustration can demonstrate the impact of using statutory rates rather than average effective rates when specifying the taxes in the models. Assume individual "A" lives in a state with a flat income tax rate of 4.35% and already earns enough to have an income tax liability. If that person earns $20,000 as a result of increased business activity spurred by a tax incentive, he or she will pay an additional $870 in taxes. However, if instead the credit creates a new job that is filled by individual "B", who is currently unemployed and has no income, the additional $20,000 of income will generate less revenue than it did for "A". When computing the income tax liability, "B" will subtract amounts for a personal exemption and any standard deduction, paying tax only on the remainder. In Michigan, each personal exemption subtracted $3,600 from income in 2009, so a family of four would subtract $14,400 and pay tax on the remaining $5,600. As a result, "B" would pay only $243.50 in income tax revenue--approximately one-fourth of the additional tax revenue generated in the case of individual "A". In this case, "B" pays an effective income tax rate of approximately 1.2%, well below the 4.35% rate specified in statute. The same effect will happen if "B" is an individual who migrates to the state to take advantage of the new job opportunity. The value of exemptions and deductions will cause the revenue received by the state to reflect a lower income tax rate than the statutory rate. If a model uses the statutory rate to evaluate the effects of the tax change, it will likely substantially overestimate the tax revenue generated by the change.

The aggregate effect of provisions such as deductions, exemptions, and credits can be substantial. In 2006, the statutory tax rate under the Michigan individual income tax rate was 3.90% while the average effective rate was 2.03%, slightly more than half of the statutory rate. A model that used the statutory rate of 3.9% to estimate additional tax revenue would thus overestimate the actual revenue the State would likely receive, almost doubling the actual revenue that would be generated.

In some cases, the reports have not only specified the tax rates incorrectly, but made additional adjustments that have caused the effective rates to be too high. In other cases, the analyses have attempted to estimate tax revenue using an overall statewide effective tax rate inclusive of all taxes, but then allocated the revenue across individual taxes using the highest statutory marginal rates--resulting in a serious distortion of the allocation of revenue across taxes.

Some reports have struggled with appropriate wage data or treated the data inconsistently. In other cases, national average wage data have been applied to specific states where the size of the industry would suggest such rates were incorrect. The reports often assume all of the economic activity associated with a credit would not exist absent the credit, even in cases where the rhetorical purpose of the incentives (or their expansion) was to retain employment or activity. Particularly in this example, any positive deviation from the forecast error has been attributed to presence of the incentives. In other cases, data used in historical comparisons have not received sufficient evaluation. For example, in a report on the New York film credit, employment changes related to the lack of incentives (or their subsequent adoption) were not adjusted to reflect the substantial changes that occurred after the September 11, 2001, terrorist attacks in New York City.

Another technical problem that has appeared in a few studies is the inclusion of "film tourism" returns, in terms of economic activity and/or tax revenue. These studies have exhibited numerous problems in incorporating this aspect, most notably: 1) a lack of strong empirical evidence upon which to base the modeling, and 2) the fact that the estimation of multipliers generally captures these effects, so to some degree the effects get double-counted.

One final problem that is somewhat less technical, but highly relevant, is what actually gets compared in the final analysis. Many of the studies that have portrayed the film incentives very positively, particularly in terms of the return of tax revenue, have combined state and local tax revenue in looking at the "return". In some cases, the combination can lead to substantial increases in the apparent returns, and returns have frequently been doubled. As with the issue of calculating a present value of future returns, combining local revenue with state revenue presents an inaccurate evaluation from a budgetary perspective: State governments may not balance their budgets by counting revenue received by local governments. Increases in local tax revenue, while advantageous to local units of government (particularly if attributable to the film incentives), do not provide a relevant offset for a state-funded tax credit. States are obligated to find ways to afford the incentives they adopted from their own revenue and expenditure policies.

## CONCLUSION AND PROSPECTS FOR THE FUTURE

Since their adoption in April 2008, Michigan's incentives for film and media production have attracted considerable interest. In 2008, the Michigan Film Office received 136 applications for credits, of which 71 applications were approved. By the end of 2008, 35 productions had been finished and the production companies received postproduction certificates of completion totaling approximately $48.0 million in tax credits. Applications for another 126 productions were submitted during 2009; of those, 62 were approved. Of the approved applications, 46 productions were completed during 2009, although the production companies filed for only 38 postproduction certificates during 2009. Credits approved as part of these incentives were estimated in May 2010 to total $37.5 million in FY 2008-09, $110.0 million in FY 2009-10, and $135.0 million in FY 2010-11; of these amounts, the Media Production Credit accounts for $37.5 million in FY 2008-09, $100.0 million in FY 2009-10, and $125.0 million in FY 2010-11. The May 2010 consensus revenue estimates forecasted the net revenue impact on the budget to lower revenue by $30.8 million in FY 2008-09, $91.4 million in FY 2009-10, and $111.8 million in FY 2010-11, with even larger reductions in General Fund revenue in FY 2009-10 and FY 2010-11, of $100.7 million and $125.7 million, respectively. Based on the experience of other states, the revenue costs of these incentives are expected to grow substantially over the next few years.

The analysis of film incentives is a complex process. Many assumptions and interactions must be accounted for and studies will differ in both the manner and degree to which these issues are addressed. Failure to address several of the issues that arise can cause results to differ by factors of more than 10, or even produce results that differ in the direction of their impact. Studies that have produced lower impacts for film incentives have generally addressed more of the issues and/or used more realistic assumptions, but such a claim cannot be made universally about the studies. This paper has highlighted a few of the more significant factors that a critical reader of these analyses should consider when evaluating the merits of a study.

Regardless of what factors are accounted for in the analysis, film incentives have generally exhibited a positive private sector impact in the form of creating employment and generating income. The magnitude of impacts depends upon a wide array of assumptions. In Michigan, however, the sector is very small relative to the size of the economy, accounting for less than 0.1% of gross domestic product by state and about 0.14% of wage and salary employment. If the MSU report's employment projections are correct, the sector will increase in size by approximately 50% over the next five years. However, this growth would represent only roughly 2,900 jobs, about 8.1% of the jobs lost between May and June 2008. The information sector, of which media production is a subsector, lost 3,100 jobs in 2008--even with the film incentives. If the incentives have the impact forecasted in the MSU study, it will be insufficient to bring the information sector back to its 2007 level. Any probable impact from the film incentives is likely to have a negligible impact on economic activity in Michigan, particularly when the economy is viewed as a whole.

As is true for most tax incentives, the film incentives represent lost revenue and do not generate sufficient private sector activity to offset their costs completely. As with other types of incentives and credits, whether the relationship of costs to benefits is acceptable is a decision for individual policy-makers.