The Film Industry in Pittsburgh, Pennsylvania

Economic Contribution and Capacity for Growth: Appendixes

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Sponsored by Pittsburgh Film Office
About This Report

These appendixes support research that examines the film industry’s economic contribution to Pittsburgh, Pennsylvania and to the state of Pennsylvania more broadly. We took a mixed-methods approach to this study with the following components: (1) an environmental scan (consisting of a review of peer-reviewed, industry, and gray literature, as well as a scan of state film production incentives); (2) semi-structured interviews of state and local film industry stakeholders and experts; (3) an assessment of quantitative evidence from input-output models that describe the linkages between sectors of the economy and that estimate the economic impacts of spending; and (4) an analysis of workforce and education or training data describing film industry occupations, workforce pipelines, and the capacity for industry growth.

Details on the environmental scan, including Table A.3 describing the film production incentives offered by each state, is provided in Appendix A. Appendix B provides the protocols that we used in our semi-structured interviews with film producers and local industry stakeholders. And in Appendix C, we describe film industry employment estimates from the U.S. Bureau of Labor Statistics and the U.S. Bureau of Economic Analysis.

The main report is available at www.rand.org/t/RRA2617-1.

RAND Education and Labor

This study was undertaken by RAND Education and Labor, a division of the RAND Corporation that conducts research on early childhood through postsecondary education programs, workforce development, and programs and policies affecting workers, entrepreneurship, and financial literacy and decisionmaking. This study was sponsored by the Pittsburgh Film Office. The findings and conclusions presented in this report are those of the authors and do not necessarily reflect positions or policies of the organization that supported this research.

More information about RAND can be found at www.rand.org. Questions about this report should be directed to epeet@rand.org, and questions about RAND Education and Labor should be directed to educationandlabor@rand.org.
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Appendix A. Environmental Scan

To understand how film producers decide on filming locations, we first conducted an environmental scan. The environmental scan consisted of a review of peer-reviewed, industry, and gray literature, as well as a scan of the film production incentives offered by states.

Review of Peer-Reviewed, Industry, and Gray Literature

Our review of the literature focused on the film location decision (inclusive of creative fit, cost, and local resource factors), as well as the economic contribution of the film industry. The literature we reviewed spanned industry sources, gray literature, and academic publications. Table A.1 provides a list of keywords used in our searches, as well as terms added to the search strings; searches include a keyword and at least one term from column 2 and one term from column 3. For literature related to Pittsburgh, Philadelphia, and Pennsylvania, we searched literature from 2000 to the present. For all other searches, we included literature from 2010 to the present. We also conducted supplemental literature searches for information on specific productions and the history of the film industry.

Table A.1. Literature Review Search Terms

<table>
<thead>
<tr>
<th>Keyword</th>
<th>Search String Term</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>Motion picture</td>
<td>“economic multipl”</td>
<td>“Pittsburgh”</td>
</tr>
<tr>
<td>Movie</td>
<td>“economic development”</td>
<td>“Pennsylvania”</td>
</tr>
<tr>
<td>Film</td>
<td>“economic impact”</td>
<td>“California”</td>
</tr>
<tr>
<td>Film industry</td>
<td>“economic contribut”</td>
<td>“New York”</td>
</tr>
<tr>
<td>TV production</td>
<td>“economy”</td>
<td>“Connecticut”</td>
</tr>
<tr>
<td>Setting and scenery for motion pictures</td>
<td>“multiplier”</td>
<td>“Illinois”</td>
</tr>
<tr>
<td>Motion picture location</td>
<td>“workforce”</td>
<td>“Massachusetts”</td>
</tr>
<tr>
<td>Location decisions</td>
<td>“tax credit”</td>
<td>“New Mexico”</td>
</tr>
<tr>
<td>Filmmaking</td>
<td>“tax rebate”</td>
<td>“Georgia”</td>
</tr>
<tr>
<td>Special effects</td>
<td>“tax incentiv”</td>
<td>“Canada”</td>
</tr>
<tr>
<td>Post production, post-production, or postproduction</td>
<td>IMPLAN</td>
<td>“United States”</td>
</tr>
<tr>
<td>Musical score</td>
<td>“economic polic”</td>
<td></td>
</tr>
</tbody>
</table>
NOTE: Quotation marks are used in online searches to request exact matches.

From the results of the formal searches described above, we eliminated references that were not relevant to the film industry business model, film location decisions, the film industry workforce, and the film industry’s economic contribution to local and state economies; or that were not relevant to state and local film production incentives or other economic development efforts targeting the film industry. Some sources that met these criteria appeared to be substantially biased; in these cases, we focused only on the elements that were clearly factual.

Table A.2 provides a selection of 20 articles that were relevant to our analysis, but we chose not to cite. This selection, while not comprehensive, is meant to provide a greater sense of the literature that we reviewed as part of the study.

### Table A.2. Selection of 20 Relevant Articles Not Cited in the Report

<table>
<thead>
<tr>
<th>Author(s)</th>
<th>Year</th>
<th>Title</th>
<th>Journal/Publisher</th>
</tr>
</thead>
<tbody>
<tr>
<td>Busis</td>
<td>2012</td>
<td>‘The Dark Knight Rises’: How Pittsburgh Landed the Blockbuster</td>
<td>Entertainment Weekly Online</td>
</tr>
<tr>
<td>Edwards</td>
<td>2012</td>
<td>There’s No Business Like the State Film Tax Incentive Business: An Analysis of Pennsylvania’s Film Production Tax Credit Program</td>
<td>Pittsburgh Journal of Technology Law &amp; Policy</td>
</tr>
<tr>
<td>Gautney et al.</td>
<td>2015</td>
<td>The Runaway Production Complex? The Film Industry as a Driver of Urban Economic Revitalization in the United States</td>
<td>City &amp; Community</td>
</tr>
<tr>
<td>Giardina</td>
<td>2011</td>
<td>The Vancouver Effect</td>
<td>Hollywood Reporter</td>
</tr>
<tr>
<td>Henchman</td>
<td>2012</td>
<td>Important Questions to Ask in Evaluating a Film Tax Incentive Program</td>
<td>Tax Foundation</td>
</tr>
<tr>
<td>Lehman</td>
<td>2006</td>
<td>Pennsylvania Offers Key Incentives for Companies</td>
<td>Expansion Management</td>
</tr>
<tr>
<td>Lindsay</td>
<td>2016</td>
<td>Peach State Production</td>
<td>Back Stage (1946-5440)</td>
</tr>
<tr>
<td>Miller</td>
<td>2013</td>
<td>Pa. Beckons Filmmakers</td>
<td>Back Stage (1946-5440)</td>
</tr>
<tr>
<td>Miller</td>
<td>2013</td>
<td>Uncapping the Commonwealth</td>
<td>Back Stage (1946-5440)</td>
</tr>
<tr>
<td>National Conference of State Legislatures</td>
<td>2018</td>
<td>State Film Production Incentives &amp; Programs</td>
<td>National Conference of State Legislatures</td>
</tr>
<tr>
<td>Pollard</td>
<td>2017</td>
<td>Cut—and That’s a Wrap—the Film Industry’s Fleecing of State Tax Incentive Programs</td>
<td>Akron Law Review</td>
</tr>
</tbody>
</table>
Scan of State Film Production Incentives

To contextualize Pennsylvania relative to other states seeking to attract film productions, we also conducted a scan of state film production incentives. Table A.3 provides a snapshot of the film production incentives offered by 37 states and the District of Columbia as of March 2023.

<table>
<thead>
<tr>
<th>State</th>
<th>Payment Model</th>
<th>Overall Cap</th>
<th>Project Cap</th>
<th>Eligibility Criteria</th>
<th>Benefit Terms</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alabama</td>
<td>Nontransferable, refundable tax credit</td>
<td>$20 M</td>
<td>None</td>
<td>• $500 K minimum spend</td>
<td>• 25% of spend&lt;br&gt;• 35% resident labor&lt;br&gt;• 25% nonresident labor</td>
</tr>
<tr>
<td>Arizona</td>
<td>Nontransferable, refundable tax credit</td>
<td>$75 M&lt;br&gt;($100 M in 2024; $125 M in 2025)</td>
<td>$25 M/year</td>
<td>• Case-by-case application and approval</td>
<td>• Under $10 M: 15%&lt;br&gt;• $10 M–$35 M: 17.5%&lt;br&gt;• $35+ M: 20%&lt;br&gt;• Bonus 2.5% for resident labor</td>
</tr>
<tr>
<td>Arkansas</td>
<td>Tax credit/rebate combo</td>
<td>$4 M</td>
<td>None</td>
<td>• $200 K minimum spend&lt;br&gt;• First come, first serve&lt;br&gt;• % of production done in AR at discretion of film office</td>
<td>• 20% spend&lt;br&gt;• 20% above-the-line labor&lt;br&gt;• 30% below-the-line resident labor&lt;br&gt;• 20% below-the-line nonresident labor</td>
</tr>
<tr>
<td>State</td>
<td>Payment Model</td>
<td>Overall Cap</td>
<td>Project Cap</td>
<td>Eligibility Criteria</td>
<td>Benefit Terms</td>
</tr>
<tr>
<td>-----------------</td>
<td>----------------------------------------------------</td>
<td>-------------</td>
<td>-------------</td>
<td>--------------------------------------------------------------------------------------</td>
<td>---------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>California</td>
<td>Nontransferable, nonrefundable tax credit</td>
<td>$222.5 M</td>
<td>$25 M/year</td>
<td>• $1 M minimum spend&lt;br&gt;• Applicants must participate in training</td>
<td>• 20% spend&lt;br&gt;• 20% labor&lt;br&gt;• Bonus 5–10% for out of zone (outside LA) filming and labor</td>
</tr>
<tr>
<td>Colorado</td>
<td>Rebate</td>
<td>$11.25 M</td>
<td>None</td>
<td>• $100 K minimum spend for CO production company&lt;br&gt;• $1 M minimum spend for other</td>
<td>• 20% spend&lt;br&gt;• 20% labor</td>
</tr>
<tr>
<td>Connecticut</td>
<td>Transferable, nonrefundable tax credit</td>
<td>None</td>
<td>None</td>
<td>• $100 K minimum instate spend</td>
<td>• $100 K–$500 K: 10%&lt;br&gt;$500 K–$1 M: 15%&lt;br&gt;$1+ M: 30%</td>
</tr>
<tr>
<td>Delaware</td>
<td>Transferable, nonrefundable tax credit</td>
<td>$1 M</td>
<td>None</td>
<td>• Eligibility determined on a case-by-case basis by the state’s film office</td>
<td>• Up to 30% spend&lt;br&gt;• Up to 30% labor&lt;br&gt;• Specific terms determined on a case-by-case basis by the state’s film office</td>
</tr>
<tr>
<td>District of Columbia</td>
<td>Rebate</td>
<td>Determined by the film office</td>
<td>None</td>
<td>• $250 K minimum spend in DC</td>
<td>• 21% of spend not subject to DC taxation or 35% of spend that is subject to DC taxation&lt;br&gt;• 30% resident labor&lt;br&gt;• 10% nonresident labor</td>
</tr>
<tr>
<td>Georgia</td>
<td>Transferable, nonrefundable tax credit</td>
<td>None</td>
<td>None</td>
<td>• $500 K minimum instate spend</td>
<td>• 20% spend&lt;br&gt;• 20% labor&lt;br&gt;• Bonus 10% for embedded GA logo</td>
</tr>
<tr>
<td>Hawaii</td>
<td>Nontransferable, refundable tax credit</td>
<td>$50 M</td>
<td>$17 M/year</td>
<td>• $100 K minimum spend</td>
<td>• 22% spend&lt;br&gt;• 22% labor&lt;br&gt;• Bonus 5% for spend/labor on islands other than Oahu</td>
</tr>
<tr>
<td>Illinois</td>
<td>Transferable, nonrefundable tax credit</td>
<td>None</td>
<td>$4 M/year</td>
<td>• $100 K minimum instate spend</td>
<td>• 30% spend&lt;br&gt;• 30% labor&lt;br&gt;• Bonus 15% for labor residing in economically disadvantaged area</td>
</tr>
<tr>
<td>State</td>
<td>Payment Model</td>
<td>Overall Cap</td>
<td>Project Cap</td>
<td>Eligibility Criteria</td>
<td>Benefit Terms</td>
</tr>
<tr>
<td>------------</td>
<td>---------------------------------------------------</td>
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<td>--------------</td>
<td>--------------------------------------------------------------------------------------</td>
<td>--------------------------------------------------------------------------------</td>
</tr>
</tbody>
</table>
| Indiana    | Nontransferable, nonrefundable tax credit          | Unspecified, $300 M is the maximum for all tax credits (not just film) | None         | • Eligibility determined on a case-by-case basis by the state’s film office          | • 30% spend  
• 30% labor                                                                 |
| Kentucky   | Nontransferable, refundable tax credit             | $75 M               | $10 M/year   | • $20 K minimum instate spend for documentary or Broadway show  
• $250 K minimum instate spend for film or television | • 30% spend  
• 35% resident labor  
• 30% nonresident labor  
• Bonus 5% for spend in enhanced incentive counties |
| Louisiana  | Nontransferable, partially refundable tax credit   | $150 M              | $20 M/year   | • $300 K minimum instate spend                                                      | • 25% spend  
• 40% resident labor  
• 25% non-resident labor  
• Bonus 5% for out of zone (outside New Orleans) filming and labor  
• 88% refundability |
| Maine      | Tax credit/rebate combo                            | None                | None         | • $75 K minimum instate spend                                                      | • 5% spend  
• 12% resident labor  
• 10% non-resident labor |
| Maryland   | Transferable, nonrefundable tax credit             | $17 M               | $8 M/year    | • $250 K minimum instate spend                                                      | • 25% spend  
• 25% labor  
• Bonus 2% for qualified television series |
| Massachusetts | Transferable, partially refundable tax credit | None                | None         | • $50 K minimum instate spend                                                      | • 25% spend  
• 25% labor |
| Minnesota  | Tax credit/rebate combo                            | $4.95 M             | None         | • $100 K minimum instate spend  
• 50%+ of budget available in verified funds at time of application | • 20% spend  
• 20% labor  
• Bonus 5% if > $1 M in-state spend or 60%+ of filming outside metro area |
<table>
<thead>
<tr>
<th>State</th>
<th>Payment Model</th>
<th>Overall Cap</th>
<th>Project Cap</th>
<th>Eligibility Criteria</th>
<th>Benefit Terms</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mississippi</td>
<td>Rebate</td>
<td>$20 M</td>
<td>$10 M/year</td>
<td>• $50 K minimum in-state spend                                                         • 25% spend</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>• 30% resident labor                                                                   • 25% nonresident labor</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>• Bonus 5% for veteran labor                                                           • Bonus 5% for veteran labor</td>
<td></td>
</tr>
<tr>
<td>Montana</td>
<td>Transferable, nonrefundable tax credit</td>
<td>$12 M</td>
<td>None</td>
<td>• $350 K minimum in-state spend                                                        • 20% spend</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>• 50%+ of filming in state                                                             • 20% above-the-line labor</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>• 25% resident labor                                                                   • 25% below-the-line resident labor</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>• 15% below-the-line nonresident labor                                                  • Bonus 5% for select television shows</td>
<td></td>
</tr>
<tr>
<td>Nebraska</td>
<td>Grant</td>
<td>$1 M</td>
<td>None</td>
<td>• $1 M minimum in-state spend                                                          • 20% spend</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>• NE filmmakers only                                                                   • 20% labor</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>• 50%+ NE labor                                                                       • Bonus 5% for diversity hiring</td>
<td></td>
</tr>
<tr>
<td>Nevada</td>
<td>Transferable, nonrefundable tax credit</td>
<td>$10 M</td>
<td>$6 M/year</td>
<td>• $500 K minimum in-state spend                                                        • 15% spend</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>• 15% resident labor                                                                   • 12% above-the-line nonresident labor</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>• 0% below-the-line nonresident labor                                                  • Bonus 5% if 50%+ of production occurs in specified counties</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>• Bonus 5% if 50%+ below-the-line resident labor                                       • Bonus 5% if 50%+ below-the-line resident labor</td>
<td></td>
</tr>
<tr>
<td>New Jersey</td>
<td>Transferable, nonrefundable tax credit</td>
<td>$100 M</td>
<td>None</td>
<td>• $1 M minimum in-state spend                                                          • 30% spend</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>• 35% labor                                                                            • Bonus 5% for out of zone (outside New York metro) spend</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>• Bonus 2% for diversity hiring                                                        • Bonus 5% for out of zone (outside New York metro) spend</td>
<td></td>
</tr>
<tr>
<td>New Mexico</td>
<td>Nontransferable, refundable tax credit</td>
<td>$160 M</td>
<td>None</td>
<td>• Audit required for $5+ M credits                                                     • 25% spend</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>• 25% resident labor                                                                   • 25% above-the-line nonresident labor</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>• 15% below-the-line nonresident labor                                                  • 15% below-the-line nonresident labor</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>• Bonus 5% for production in rural counties                                             • Bonus 5% for select television shows</td>
<td></td>
</tr>
<tr>
<td>State</td>
<td>Payment Model</td>
<td>Overall Cap</td>
<td>Project Cap</td>
<td>Eligibility Criteria</td>
<td>Benefit Terms</td>
</tr>
<tr>
<td>------------</td>
<td>-------------------------------------------</td>
<td>-------------</td>
<td>-------------</td>
<td>--------------------------------------------------------------------------------------</td>
<td>-------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>New York</td>
<td>Nontransferable, refundable tax credit</td>
<td>$700 M</td>
<td>None</td>
<td>• $1 M minimum in-state spend if 50%+ filming in NYC or other select counties; $250 K minimum in-state spend otherwise</td>
<td>• 25% spend</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>• 25% below-the-line labor</td>
<td>• 0% above-the-line labor</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>• Bonus 10% for labor in select upstate counties</td>
<td></td>
</tr>
<tr>
<td>North Carolina</td>
<td>Rebate</td>
<td>$31 M</td>
<td>$7 M/year</td>
<td>• $1.5 M minimum in-state spend</td>
<td>• 25% spend</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>• 25% labor</td>
<td></td>
</tr>
<tr>
<td>Ohio</td>
<td>Nontransferable, refundable tax credit</td>
<td>$40 M</td>
<td>None</td>
<td>• $300 K minimum in-state spend</td>
<td>• 30% spend</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>• 30% labor</td>
<td></td>
</tr>
<tr>
<td>Oklahoma</td>
<td>Rebate</td>
<td>$30 M</td>
<td>None</td>
<td>• $25 K minimum in-state spend</td>
<td>• If 25% or less of crew are OK residents: 10% spend/labor</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>• Apprenticeship requirements for each production</td>
<td>• If 25–45% of crew are OK residents: 15% spend/labor</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>• If 45%+ of crew are OK residents: 20% spend/labor</td>
<td>• Various bonuses for rural production and post-production, maximum 18% bonus</td>
</tr>
<tr>
<td>Oregon</td>
<td>Rebate</td>
<td>$20 M</td>
<td>$7 M/year</td>
<td>• $1 M minimum in-state spend</td>
<td>• 25% spend</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>• Diversity hiring plan required</td>
<td>• 20% labor</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>• Bonuses up to 6.2% for out of zone (outside Portland metro) spend</td>
<td></td>
</tr>
<tr>
<td>Pennsylvania</td>
<td>Transferable, nonrefundable tax credit</td>
<td>$100 M</td>
<td>$12 M/year</td>
<td>• 60%+ of total production in state</td>
<td>• 25% spend</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>• 25% labor</td>
<td>• Bonus 5% for building and filmed at qualified facility with associated spending</td>
</tr>
<tr>
<td>Rhode Island</td>
<td>Transferable, nonrefundable tax credit</td>
<td>$40 M</td>
<td>$7 M/year</td>
<td>• $100 K minimum in-state spend</td>
<td>• 30% spend</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>• 30% labor</td>
<td></td>
</tr>
<tr>
<td>South Carolina</td>
<td>Rebate</td>
<td>$17 M</td>
<td>None</td>
<td>• $1 M minimum in-state spend</td>
<td>• 30% spend</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>• 25% resident labor</td>
<td>• 20% nonresident labor</td>
</tr>
<tr>
<td>State</td>
<td>Payment Model</td>
<td>Overall Cap</td>
<td>Project Cap</td>
<td>Eligibility Criteria</td>
<td>Benefit Terms</td>
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</tbody>
</table>
| Tennessee  | Grant         | $2.2 M      | None        | • $200 K minimum in-state spend                                                      | • 25% spend  
• 25% resident labor  
• 0% nonresident labor  
• Bonus 5% for resident labor on television show with minimum $500 K spend per episode                                                                                                                   |
| Texas      | Grant         | $45 M       | None        | • $250 K minimum in-state spend  
• 70%+ of crew are TX residents  
• 60%+ of total production in state                                                   | For $250 K–$1 M spend/labor: 5%  
For $1 M–$3.5 M spend/labor: 10%  
For $3.5 M+ spend/labor: 20%  
Bonus 2.5% for 25%+ filming in economically disadvantaged areas                                                                          |
| Utah       | Tax credit/rebate combo | $20.4 M | None        | • $500 K minimum in-state spend  
If spend is less than $1 M, 75%+ of labor must be UT residents                         | 20% spend  
20% resident labor  
0% nonresident labor  
Bonus 5% for 75%+ resident labor or 75%+ filming in select counties                                                                           |
| Virginia   | Tax credit/rebate combo | $6.5 M credit  
$4.15 M grant | None        | • $250 K minimum in-state spend  
• 50%+ filming in state                                                                  | 15% spend  
15% labor  
Bonus 5% if filming in economically disadvantaged areas  
Bonus 10% for VA resident labor if total production costs are between $250 K–$1 M                                                                                                                         |
| Washington | Rebate        | $15 M       | None        | • $500 K minimum in-state spend for films  
• $300 K minimum in-state spend for television shows  
• $150 K minimum in-state spend for commercials                                          | 30% spend  
30% resident labor  
0% above-the-line nonresident labor  
15% below-the-line nonresident labor  
Bonus 5% for television show with 6+ episodes  
Bonus 10% for production in rural counties                                                                                                    |
<table>
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<tr>
<th>State</th>
<th>Payment Model</th>
<th>Overall Cap</th>
<th>Project Cap</th>
<th>Eligibility Criteria</th>
<th>Benefit Terms</th>
</tr>
</thead>
</table>
| West Virginia| Transferable, nonrefundable tax credit                  | None        | None        | • $50 K minimum in-state spend | • 27% spend
• 27% labor
• Bonus 4% for production companies that full-time employ 10+ WV residents |

SOURCE: Features data accessed in March 2023 from Media Services, undated.

NOTE: Definition of terms used in this table: (1) **transferable** = credits can be transferred from the recipient to a third party; (2) **refundable** = credits in excess of tax liability are refunded, in cash, to the recipient; (3) **rebate** = cash paid by the state to the production company after filming; (4) **grant** = cash paid by the state to the production company before filming; (5) **spend** = qualified production expenditures, excluding labor; (6) **above the line** = individuals who guide and influence the creative direction, process, and voice of a film; and (7) **below the line** = remainder of the production team that is not involved in the creative direction, process, and voice of a film.
Appendix B. Semi-Structured Interviews

We conducted a set of semi-structured interviews with film producers and local (i.e., Pittsburgh, Pennsylvania) film industry stakeholders as our second approach to identify how film producers decide on filming locations. The individuals who we interviewed included industry contacts provided by the Pittsburgh Film Office; local individuals in the industry known to project team members; experts identified from our review of peer-reviewed, industry, and gray literature; stakeholders identified via online research; and suggestions made by interviewees. Because we were limited in the total number of interviews we could conduct, we attempted to recruit diverse subjects from each sector. Ultimately, we selected and conducted 12 interviews with representatives from the following four groups: (1) local film production stakeholders, (2) local film workforce stakeholders, (3) national film industry representatives involved in film location decisionmaking, and (4) experts (from advocacy or academic organizations) in film production incentives.

<table>
<thead>
<tr>
<th>Sector</th>
<th>Number of Interviews</th>
<th>Affiliation</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Local Film Production</td>
<td>3</td>
<td>Local production infrastructure</td>
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<tr>
<td></td>
<td></td>
<td>Local creative talent</td>
<td>September 8, 2022</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Local site management</td>
<td>September 21, 2022</td>
</tr>
<tr>
<td>Local Film Workforce</td>
<td>3</td>
<td>Crew union representative</td>
<td>September 6, 2022</td>
</tr>
<tr>
<td></td>
<td></td>
<td>State production representative</td>
<td>September 12, 2022</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Local workforce development</td>
<td>October 21, 2022</td>
</tr>
<tr>
<td>National Film Industry</td>
<td>4</td>
<td>Production representative, national studio</td>
<td>September 6, 2022</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Production representative, national studio</td>
<td>October 3, 2022, #1</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Independent film producer</td>
<td>October 3, 2022, #2</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Production representative, national studio</td>
<td>October 28, 2022</td>
</tr>
<tr>
<td>Film Production Incentive Expert</td>
<td>2</td>
<td>Advocacy organization</td>
<td>September 6, 2022</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Academia</td>
<td>September 21, 2022</td>
</tr>
</tbody>
</table>

Interview Protocols

We developed interview protocols to be used with individuals from each group. The interview protocols were designed to elicit information about production decisionmaking (e.g., how incentives are weighed against other regional characteristics). Additionally, the interview
protocols included semi-structured questions to allow interviewees to comment on costs, local resources, and other factors related to the film location decision and the industry’s economic contribution. The interview protocols for each group are included in the following sections.

**Interview Protocol for Local Film Production and Workforce Representatives**

**Introduction:** Thanks so much for taking the time to speak with me today. We are conducting a study on behalf of the Pittsburgh Film Office to evaluate the contribution of the Pittsburgh film industry to the broader regional economy, and to identify what is necessary for Pennsylvania and Pittsburgh, in particular, to remain competitive in attracting film production. We are interviewing national, state, and regional industry stakeholders to gain insight into these questions. We wanted to speak with you because of your expertise in [interviewer fill in something about expertise]. We are researchers and not industry experts, and we’re looking forward to learning from your experience. At the end of the project, we will produce a report that will be publicly available on RAND’s website; we’d be happy to share a copy if you are interested.

For context, we’re defining “local film industry” as individuals and businesses whose work directly supports the production of feature films; TV films, talk or game show series, pilots or episodes intended as programming for a national audience; commercials; and documentaries; and individuals and businesses that do post-production work on such projects.

The first group of questions are intended to help us get a better understanding of the state and local film industry generally. The second group of questions:

- *(for Locals Working in the Film Industry)* is more specific to your business'/organization’s experience supporting or working in the film industry.
- *(for Film Industry Promoters)* more specifically focuses on state and local impacts of the film industry and the state film tax credit program.

1. *(Questions for all interviewees) Pittsburgh / Pittsburgh Region / Philadelphia Region

**Film Industry Overview**

1. First, we’d like to talk about the film industry in [Pennsylvania/the Pittsburgh region/the Philadelphia region] specifically.
   a. Is the amount of production work relatively constant through the year, or does it fluctuate? If the latter, please describe what kind of work fluctuates and why.
   b. Of the production work occurring in [Pennsylvania/Pittsburgh/Philly], about how much comes from [state/regional] production companies and businesses, and how much comes from out of state?
   c. Does the [Pennsylvania/Pittsburgh/Philly] film industry have the capacity to take on more work? *(Let local businesses and tradespeople know that we’ll ask about their particular sector a little later.)*
i. If so, what sectors could take on more work?
ii. If not, what are the limiting factors?

d. How do you think [Pennsylvania/Pittsburgh region/Philadelphia region] is perceived by production companies as a place to film?
   i. What are [Pennsylvania/Pittsburgh/Philly] strengths in drawing and supporting productions?
   ii. What are [Pennsylvania/Pittsburgh/Philly] weaknesses in drawing and supporting productions?

2. Do you have experience with or knowledge about the film industry in Philadelphia, or a sense for the ways in which it competes with Pittsburgh as a possible filming location? (If they answer yes, go to 2a; if they answer no, go to #3.)
   a. How does the Pittsburgh region compare with the Philadelphia region as a filming location?
      i. Do the two regions generally receive more, less, or the same number of productions?
      ii. Does either region—Pittsburgh or Philly—seem to be more likely to get certain types of productions, such as TV pilots or TV series, feature films, independent films, documentaries, commercials, and post-production and visual effects?
      iii. Does Philadelphia have different strengths and weaknesses than Pittsburgh as a filming location?

3. We’re interested in learning about how the film industry in Pittsburgh compares with other locations, both nationally and internationally. Is this a topic that you have experience with or knowledge about? (If they answer yes, go to 3a below; if they answer no, go to the next section.)
   a. What other regions or cities do you see as Pittsburgh’s biggest competitors for film productions?
      i. For each location they mention, ask what about the location’s strengths and weaknesses relative to Pittsburgh.
      ii. If they don’t mention them, ask if they consider any of the following locations strong competitors and why or why not:
         1. Georgia
         2. Los Angeles
         3. New York City
         4. California
         5. Canada
4. What could be done to make the state and region more competitive or attractive as a filming location?

2. *(Questions exclusively for Pittsburgh regional businesses Working in the Film Industry)*

**Business Impacts**

5. Please describe your work / your business and the work you do that’s specific to the film industry.

6. How do you/your company generally connect with film productions and get work? We’re going to read through a list of different types of film industry productions. We’d like you to rank them in order of importance to your company’s business (1 = most important):
   a. TV pilots
   b. TV series
   c. feature films
   d. independent films
   e. documentaries
   f. commercials
   g. post-production and visual effects.

7. When you/workers at your business/workers you represent perform work for the film industry, what’s your typical employment or contractual relationship to the production company?
   a. Hired as temporary and/or part-time workers at the production company and considered employees of that firm (i.e., receiving a W-2 for tax reporting)?
   b. Independent contractors who perform work for the production company and receive a 1099-MISC for tax reporting?
   c. Employed at your organization, which is contracted by the production company or otherwise receives payments from it in return for provision of goods/services?
   d. Other employment arrangement?

8. If you/your staff do not work full time on film industry productions:
   a. In the past year, about what percentage of your business’s work comes from the film industry? Was the percentage in the past year different than in the past five years? Why or why not?
      *(Interviewer note: If respondent asks how precise the number has to be, say that a ballpark estimate is fine, but we’d be happy to follow up via email if they would like to look up actuals.)*
b. Does the percentage of your work that comes from the film industry vary within a year, or is it roughly even year-round? Please describe.

c. Which types of productions are most important to your business?

d. What type of work, if any, fills out the balance of your/your company’s time?

9. About what percentage of your film-related work is produced by local companies or local independent producers and what percentage by companies or producers from outside Pennsylvania?

10. To what extent does the film industry work you/your firm does support other local businesses, such as suppliers, food service, equipment rental, housing/hospitality, etc.?

11. Do you have a sense of whether the state film tax credit plays a role in whether the productions you’ve worked on choose to locate in Pennsylvania? If yes, please describe.

   a. If the tax credits go away, would there be any change in your revenues? Would they change at all? Increase, decrease (e.g., decrease by 100%, 50%)?

   b. If the tax credits were to increase to $125 million, do you think the percentage change in your revenues would change? (E.g., Would your revenue change at all? Would it decrease/increase by 100%, 50%?)

   c. Do you have a sense of which types of productions have the biggest impact on the local economy overall (prompt, if necessary):

      i. TV series
      ii. feature films
      iii. independent films
      iv. documentaries
      v. commercials
      vi. post-production and visual effects.

12. How would you describe your business sector?

13. How much film-related work is available in this sector?

14. How large is this sector? How much competition is there?

15. What would be the impact on your business sector of increases or decreases in the number of productions filmed in the Pittsburgh region?

16. What are the training or experience requirements for working in this business sector on film-related work?
a. Is specialized training required? If so, is that training available locally? Are the local training programs adequate?
b. From where do you hire (local schools, local businesses, recruit from other cities)?
c. Are you able to hire sufficient staff? Why or why not?

17. Looking forward
a. How important is location to your business?
   i. Did you open in Pittsburgh for business-related reasons?
   ii. Would you/have you considered moving somewhere with more consistent film-industry work?

b. What could be done to help your business or business sector obtain more local film industry work? For example,
   i. providing specific resources (grants, technical assistance, marketing assistance, etc.)
   ii. addressing workforce capacity in your business sector so you can more easily hire
   iii. bringing more productions to the area.

3. *(Questions exclusively for Film Industry Promoters) State and Local Impacts*

18. We’re going to read through a list of different types of film industry productions. Please rate each type of production’s importance to the state film industry, Pittsburgh’s film industry, and Philadelphia’s film industry. Rate the productions on a scale of
   - 0 = Not important
   - 1 = Somewhat important
   - 2 = Important
   - 3 = Very important.

a. TV pilots
b. TV series
c. Feature films
d. Independent films
e. Documentaries
f. Commercials
g. Post-production and visual effects
h. Video games
i. Film industry overall
19. *(For the types of productions which were ranked in the top 3, ask each of the following questions:)* For this type of production:
   a. How much work is provided to local residents? Which types of local workers are generally employed? Why are some types of workers utilized more than others?
   b. Which types of workers are brought in from outside the state or region and why?
   c. What employment or contractual relationship do workers typical have with the production companies (e.g., traditional employees, independent contractors, employees of outside firms to which the production companies contract out work)?
   d. How much economic impact beyond the film industry (suppliers, housing, catering, etc.) does this type of production generally produce?
   e. What percentage of work is produced by local companies or local independent producers and what percentage by companies or producers from outside Pennsylvania?
   f. Who are the big players locating productions in Pennsylvania/Pittsburgh (e.g., Netflix, others)?
   g. Which types of productions are made with and without tax credits? Why?

20. What are the goals of the film tax credit program?

21. How are decisions made about which productions receive tax credits? Who is responsible for making those decisions (e.g., an individual or a committee)?
   a. Does the award process consider location, local economic impact (general), or local employment?

22. How quickly is the tax credit cap reached? What types of productions tend to apply for tax credits, and how many applications are received each year? If big productions use up a large share of tax credits, does the lack of credits deter other productions from coming?

23. The annual tax credit report lists which productions are issued tax credits each year. Can you provide information on how many major productions are made in the state and in Pittsburgh each year without tax credits?

24. The annual tax credit program report lists the entities that have received the credits but not where those entities are based. In the past year, how many tax credit awards were made to local companies vs. companies located in other states? Why does the distribution look the way it does?
25. Is the state tax credit structured in the best way to support the state or Pittsburgh film industry? If yes, why? If not, why not?
   a. *(If not mentioned, probe on whether any of the structures or options listed below would be better for supporting the Pittsburgh film industry:)*
      i. **Transferability** (which is how the program is now structured, which gives the company receiving the tax credit the ability to sell the credit to another company) vs. **tax refund** (the applicant would be provided the money directly to offset some of the money that it spent on taxes in the state, based on the certified accounting report)
      ii. **Tax credits for hiring Pennsylvania residents** (calculating the tax credit, or additional credits, based on the amount spent on the resident labor payroll)
      iii. **Tax credits for filming in rural locations** (providing additional credits for filming outside the major MSAs to provide economic stimulus in other parts of the state)
      iv. **Education provisions** (for example, California has a Career Readiness Initiative that makes additional incentives available for providing paid or unpaid internships; conducting workshops, lectures or demos; making financial or equipment contributions to a school or program; and producing extracurricular resources such as how-to videos)
      v. **Industry investments** (for example, Oklahoma now provides incentives for companies to build soundstages)
      vi. **Targeted incentives** (for example, British Columbia provides an increased tax credit when a production filmed there also uses local companies for digital animation and visual effects)
      vii. **Promoting diversity** (for example, California and Illinois have diversity hiring requirements to qualify for tax credits)
      viii. **Other special provisions.**

26. According to the most recent film tax credit report, 99% of the available credits went to TV productions (65%) and feature films (34%). Are there different types of incentives or incentive structures that are more likely to be utilized by, and hopefully increase the number of, other types of productions (e.g., commercials, documentaries, postproduction, other)?

4. *(Questions for all interviewees) Closing*

27. What could be done to make the state and regional film industry more competitive?

28. Is there anything else you’d like to add?
29. We are interested in interviewing representatives of other Pittsburgh businesses that work in the film industry. Could you suggest others we could reach out to?

*Interview Protocol for National Film Industry Representatives*

**Introduction:** Thanks so much for taking the time to speak with me today. We are conducting a study on behalf of the Pittsburgh Film Office to evaluate the contribution of the Pittsburgh film industry to the broader regional economy, and to identify what is necessary for Pennsylvania, and Pittsburgh in particular, to remain competitive in attracting film production. We are interviewing national, state, and regional industry stakeholders to gain insight into these questions. We wanted to speak with you because of your expertise in *[interviewer fill in something about expertise]*. We are researchers and not industry experts and we’re looking forward to learning from your experience. At the end of the project, we will produce a report that will be publicly available on RAND’s website; we’d be happy to share a copy if you are interested.

For context, we’re defining “local film industry” as individuals and businesses whose work directly supports the production of feature films; TV films, talk or game show series, pilots or episodes intended as programming for a national audience; commercials; and documentaries; and individuals and businesses that do post-production work on such projects.

The first group of questions are intended to help us get a better understanding of the different factors involved when deciding where to film productions. The second group of questions specifically focuses on the Pennsylvania film tax credit. The third group of questions focuses on filming in Pennsylvania, generally, and the Pittsburgh region, in particular.

1. *(Questions for all interviewees) Key Factors in Location Decisions*

We want to understand how production companies make decisions about where to film. First, we’re going to walk through a list of factors and ask you to rate their overall importance, then we’ll go back and ask about them in more detail.

1. We’re going to read through a list of different factors. We’d like you to rank them in order of importance when you/your company make decisions about production locations (1 = most important).
   a. **Local Crew**
   b. **Support Services and Local Amenities** (equipment rental, casting companies, caterers, housing, etc.)
   c. **Production Infrastructure** (sound stages, etc.)
   d. **Exterior Locations and Climate**
   e. **Accessibility of Shooting Location** (ease of access for non-local team members to get on location and ease of transportation once on location)
f. **Local Costs Relative to Other Locations** (local personnel costs, housing, food, equipment rental, lumber and materials, etc.)
g. **Ease of obtaining filming permits** (for example, ease with which productions can shut down the freeway during rush hour, rent real police cars, etc.)
h. **Availability of tax credits**
i. **Other Factors in Film Location Decision** (Are we missing any important factors? If so, please specify).

Let’s talk about some of these factors in more detail. *(NOTE: Only ask follow-ups of the top 3 choices from the previous question, and tax credits if it’s not in the top 3)*

2. *(Ask if in top 3)* **Local Crew.** In terms of relative importance for location decisionmaking, you ranked local crew near the top.
   a. Why are local crew so important to decisions about where to film?
   b. Are there specific types of local crew that you prefer to acquire on location?
   c. When you use local crew for your production, do you know if these workers are
      i. hired as temporary and/or part-time workers at your company and are considered employees of the firm (i.e., receiving a W-2 for tax reporting)?
      ii. independent contractors who perform work for your company and receive a 1099-MISC for tax reporting?
      iii. employed or contracted by an outside firm contracted by your company?
   d. In your experience, is the availability of local crew a more or less important factor for different types of productions (feature films, documentaries, TV pilots, TV series, other)?
   e. How does Pittsburgh compare with other regions in terms of local crew? *(Allow them to answer, then ask the questions below if they haven’t addressed the issue)*
      i. Does Pittsburgh have enough local crews?
      ii. Are local crews in Pittsburgh sufficiently skilled?
      iii. Do local crews from Pittsburgh have other strengths or weaknesses?
   f. Is racial, ethnic, or gender diversity of local crew a factor you consider?
      i. If so, is it a strength or weakness in Pittsburgh?
   g. What changes would make Pittsburgh more competitive in terms of local crews?

3. *(Ask if in top 3)* **Support Services and Local Amenities.** In terms of relative importance for location decisionmaking, you ranked support services and local amenities near the top.
   a. Why are support services and local amenities so important to decisions about where to film?
b. We included equipment rental, casting companies, caterers, and housing in our description. Are there other local services and amenities you consider in location decision making?

c. Are there specific types of support services that you prefer to acquire on location?

d. In your experience, are local amenities and support services a more or less important factor for different types of productions (feature films, documentaries, TV pilots, TV series, other)?

e. How does Pittsburgh compare with other regions in terms of support services and local amenities?
   i. Are quality support services easy to acquire?
   ii. Are support services easy to coordinate?
   iii. What changes would make Pittsburgh more competitive in terms of support services and local amenities?

4. (Ask if in top 3) Production Infrastructure. In terms of relative importance for location decision making, you ranked production infrastructure near the top.
   a. Why is production infrastructure so important to decisions about where to film?
   b. We included sound stages in our description. Are there other important types of production infrastructure that you might look for?
   c. What types of production infrastructure do you prefer to have on location?
   d. In your experience, is production infrastructure a more or less important factor for different types of productions (feature films, documentaries, TV pilots, TV series, other)?
   e. How does Pittsburgh compare with other regions in terms of production infrastructure?
      i. Are quality facilities available when needed?
      ii. Would additional or expanded production infrastructure make Pittsburgh more competitive? If so, please explain.
   f. Are there other changes would make Pittsburgh more competitive in terms of production infrastructure?

5. (Ask if in top 3) Exterior Locations and Climate. In terms of relative importance for location decision making, you ranked exterior locations and climate near the top.
   a. Why are exterior locations and climate so important to decisions about where to film?
   b. In your experience, are these factors more or less important for different types of productions (feature films, documentaries, TV pilots, TV series, other)?
c. How does Pittsburgh compare with other regions in terms of exterior locations and climate? (Allow them to answer, then ask the questions below if they haven’t addressed the issue)
   i. Are diverse locations easy to find?
   ii. Are locations easy to reserve?
   iii. Are locations easy to physically access?

6. **Accessibility of Shooting Location.** In terms of relative importance for location decisionmaking, you ranked accessibility of shooting location near the top.
   a. In our description, we included both ease of access for non-local team members to get on location, and ease of transportation once on location. Is one type of access more important a consideration than the other (access for non-local team members vs. ease of transportation once on location)?
   b. In your experience, is accessibility a more or less important factor for different types of productions (feature films, documentaries, TV pilots, TV series, other)?
   c. How does Pittsburgh compare with other regions in terms of different types of accessibility? (Allow them to answer, then ask the questions below if they haven’t addressed the issue)
      i. Flights to and from Los Angeles, New York, or other film hubs?
      ii. Local highways and roads?
      iii. Access to rental vehicles?
   d. Are there things that could be done to make the city or region more competitive in this regard (such as increasing ease of use)?

7. **Local Costs Relative to Other Locations.** In terms of relative importance for location decisionmaking, you ranked local costs relative to other locations near the top.
   a. Can you elaborate?
   b. We define local costs are local personnel costs, housing, food, equipment rental, lumber and materials, etc. Are there important types of local costs that we’re missing?
   c. How does Pittsburgh compare with other regions in this regard? (Allow them to answer, then ask the questions below if they haven’t addressed the issue)
      i. How well does it compete overall?
      ii. Are there specific types of costs for which Pittsburgh is more or less competitive?
d. Are there things that could be done to make the city or region more competitive in this regard?

8. **(Ask if in top 3) Ease of Obtaining Filming Permits.** In terms of relative importance for location decisionmaking, you ranked ease of obtaining filming permits near the top.
   a. Why is the ease of obtaining filming permits so important to decisions about where to film?
   b. Are some types of local permits more important or more frequently sought than others?
   c. When filming in Pittsburgh or the Pittsburgh region, are such permits easy to obtain?
   d. How does Pittsburgh compare with other regions in this regard?
   e. Are there specific things Pittsburgh or the region could do to be more competitive in this regard?

9. **(Ask if in top 3) Availability of Tax Credits** (general and Pennsylvania-specific). In terms of relative importance for location decisionmaking, you ranked the availability of tax credits near the top.
   a. Why is the availability of tax credits so important to decisions about where to film?
   b. Can you provide a rough estimate of the percentage of production costs that tax credits need to comprise to make a location more likely to be chosen?
      i. Does this amount vary depending on the tax credits offered elsewhere?
      ii. Does the amount vary on the total estimated production costs?
      iii. At what point—what percentage of production costs—are tax credits too small that it would eliminate a location? **(Prompts, if needed:)** Less than 25%, less than 10%? Something else?
   c. In your experience, is the availability of tax credits a more or less important factor for different types of productions (feature films, documentaries, TV pilots, TV series, other)?

10. **(Ask if in top 3) Other Factors in the Film Location Decision** (only if they listed other factors in response to question 1h)
    a. You said that *(other factor/s they listed)* are also important in the film location decision.
       i. For each factor, please
          1. Describe the factor.
          2. Discuss its relative importance.
          3. How well does Pittsburgh compete on this factor?
4. Are there things the Pittsburgh region could do to be more competitive?

11. *(Questions for all interviewees)* **Factors in the Film Location Decision Overall**
   a. Are there factors that could tip the balance one way or another in terms of choosing a location? For example, if a factor is so good, it’s why you choose a location, or if a factor is so bad, it’s why you decide against a location *(prompt, if needed:)* Factors may include
      i. local crew
      ii. support services and local amenities
      iii. production infrastructure
      iv. exterior locations and climate
      v. accessibility of shooting location
      vi. local costs relative to other locations
      vii. ease of obtaining filming permits
      viii. other.
   b. Are there things that would tip the balance and make you decide to locate your *whole production* in Pittsburgh? *(prompt, if needed:)* For example,
      i. in terms of crew: More crews? More skilled crews?
      ii. in terms of production infrastructure: More sound stages? Easier access to structures for filming interior locations?
   c. Would more low-cost, high-quality post-production services increase the likelihood of doing post-production in Pittsburgh? Why or why not?

2. *(Questions for all interviewees)* **Pennsylvania’s Film Tax Credit Program**

12. Are you familiar with Pennsylvania’s Film Tax Credit Program? *(If they are not, here is short description that the interviewer can provide:)*
   - The program provides a tax credit equal (in most cases) to 25% of a production’s “qualified film production expenses” if at least 60% of a production’s total budget is spent in Pennsylvania. Feature films and TV productions intended for a national audience can qualify for additional credits.
   - The types of film production eligible for a tax credit include feature films; TV films, talk or game show series, pilots or episodes intended as programming for a national audience; commercials; and documentaries. Post-production expenses can also receive tax credits, even if production was filmed elsewhere.
   - Production company can use credit to offset any state taxes owed or sell or assign the credit; companies have three years to use the credit.
   - The program is capped at $100 million in tax credits per year.
13. Have you/your company ever applied for film tax credits in Pennsylvania?
   a. *(If they answer yes)*
      i. Have you/your company received and redeemed film tax credits in Pennsylvania?
      ii. Did receiving the tax credits from Pennsylvania affect your decision to shoot here?
   b. *(If they answer no)*
      i. Why not?

14. *(If they answer yes to 13a)* Of qualified expenses for which you received Pennsylvania film tax credits, to the extent you know, how do those expenses tend to break down in terms of payments to
   a. permanent employees on your company’s payroll
   b. temporary or part-time hires who are W-2 employees of your company
   c. independent contractors who receive a 1099-MISC from your company
   d. contracts to other firms who (1) employ workers as W-2 employees; and/or (2) hire independent contractors themselves
   e. vendors who (1) employ workers as W-2 employees; (2) hire independent contractors; or (3) are themselves independent contractors/sole proprietors.

15. Have you/your company filmed productions in Pennsylvania without receiving film tax credits? Why or why not?

16. How well does Pennsylvania compare with other locations in terms of tax credits?
   a. Specifically, how does the state compete with Georgia, New York, California, Canada, and other locations?

17. If the Pennsylvania tax credit is eliminated,
   a. what would you expect the overall effect to be on the industry in terms of locating here? *(prompts if needed:)* No change? A reduction of more than 25%? 50%? Please explain.
   b. Would your likelihood of locating a production here change? Please explain.

18. Now that the amount of tax credits available in Pennsylvania has increased from $70 million to $100 million, will you be more likely to film in Pennsylvania? Why or why not?
19. A number of productions have taken place in Pennsylvania without applying for tax credits, leading to the critique that tax credits don’t play a large role in decision about where to locate a production. So, we’d like to explore the responsiveness of film production to tax credits using scenarios.

   a. **Scenario 1:** The available tax credits in Pennsylvania are sufficient to cover 100% of the Pennsylvania production budget. How likely are you to film in …

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<th>Percent</th>
<th>Why?</th>
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<tr>
<td>Pennsylvania, assuming no other state has equal available tax credits?</td>
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<td>Pennsylvania, even if New Jersey has equal available tax credits?</td>
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<td>Pennsylvania, even if Georgia has equal available tax credits?</td>
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<tr>
<td>Pennsylvania, even if New Mexico has equal available tax credits?</td>
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</tbody>
</table>

   b. **Scenario 2:** The available tax credits in Pennsylvania are sufficient to cover 50% of the Pennsylvania production budget. How likely are you to film in …

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<th>Percent</th>
<th>Why?</th>
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<tbody>
<tr>
<td>Pennsylvania, assuming no other state has equal available tax credits?</td>
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<tr>
<td>Pennsylvania, even if New Jersey has equal available tax credits?</td>
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<tr>
<td>Pennsylvania, even if Georgia has equal available tax credits?</td>
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</tr>
<tr>
<td>Pennsylvania, even if New Mexico has equal available tax credits?</td>
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</table>

   c. **Scenario 3:** The available tax credits in Pennsylvania are sufficient to cover 25% of the Pennsylvania production budget. How likely are you to film in …

<table>
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<tr>
<th>Percent</th>
<th>Why?</th>
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<tbody>
<tr>
<td>Pennsylvania, assuming no other state has equal available tax credits?</td>
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</tbody>
</table>
Pennsylvania, even if New Jersey has equal available tax credits? | Percent | Why?
--- | --- | ---
Pennsylvania, even if Georgia has equal available tax credits? | | 
Pennsylvania, even if New Mexico has equal available tax credits? | | 

**d. Scenario 4:** The available tax credits in Pennsylvania are sufficient to cover 10% of the Pennsylvania production budget. How likely are you to film in …

Pennsylvania, assuming no other state has equal available tax credits? | Percent | Why?
--- | --- | ---
Pennsylvania, even if New Jersey has equal available tax credits? | | 
Pennsylvania, even if Georgia has equal available tax credits? | | 
Pennsylvania, even if New Mexico has equal available tax credits? | | 

20. Another critique of the film tax credit is that the credits could be put to better use subsidizing another industry. How would you respond to the perception that Pennsylvania film tax credits …

a. increase the profits or income of already wealthy members of the film industry?
b. transfer taxes paid by Pennsylvanians to individuals that do not live in Pennsylvania?

21. How do special provisions in tax credit programs affect their value in terms of the likelihood of their influencing a location decision?

a. Transferability vs. tax refund or grant

*(For reference: If tax credits are transferable, a production company may sell or assign the credit to another company. When sold, the production company receives less than face value of the tax credits. Pennsylvania film tax credits are transferable, and historically, production companies have always sold them. If tax credits are tax refunds or grants, a production company gets a direct subsidy from the state [i.e., the production company receives full value]).*

b. Roll forward
(For reference, production companies receiving tax credits in Pennsylvania have three years to use or sell them.)

22. Are there additional types of tax credits or provisions in tax credit programs used in other locations but not used in Pennsylvania that would make the state more competitive as a filming location?
   a. (Probe, if not mentioned:) Additional tax credits for hiring locally
   b. (Probe, if not mentioned:) Additional tax credits for filming in rural locations
   c. (Probe, if not mentioned:) Additional tax credits for TV productions only (not movies).

3. (Ask everyone who has filmed in Pittsburgh or Pennsylvania) **Filming on Location in Pennsylvania and the Pittsburgh Region**

23. When you film on location
   a. All else being equal, does filming in a particular location once increase the likelihood of using that location again?

24. Filming in Pittsburgh
   a. How is Pittsburgh perceived as a location for filming?
      i. Is it considered more or less attractive(desirable) for different types of productions (feature films, documentaries, TV pilots, TV series, other)? Why or why not?
      ii. Why might you choose Pittsburgh over a comparable location?
      iii. What could be done to improve the attractiveness/competitiveness of Pittsburgh
           1. as a filming location?
           2. as a post-production services tech center?
   b. Why did or didn’t you choose to film in Pittsburgh?
      i. What were the most important factors in that decision?
      ii. How was the experience? Were certain factors more positive or negative?
25. Filming in Pennsylvania  
   a. How is Pennsylvania perceived as a location for filming?  
      i. Is it considered more or less attractive/desirable for different types of productions (feature films, documentaries, TV pilots, TV series, other)? Why or why not?  
      ii. What could be done to improve the attractiveness/competitiveness of Pennsylvania  
          1. as a filming location?  
          2. as a post-production services tech center?  
   b. Why did or didn’t you choose to film in Pennsylvania?  
      i. What were the most important factors in that decision?  
      ii. How was the experience? Were certain factors more positive or negative?  

4. (Questions for all interviewees) Wrap Up  

26. Is there anything else you would like to add?  

27. We are interested in interviewing representatives of other national film production companies in similar roles as yourself. Could you suggest others we could reach out to?  

*Interview Protocol for Film Production Incentive Experts*  

**Introduction:** Thanks so much for taking the time to speak with me today. We are conducting a study on behalf of the Pittsburgh Film Office to evaluate the contribution of the Pittsburgh film industry to the broader regional economy. We are interviewing national, state, and regional industry stakeholders to gain insight into these questions. We also wanted to speak with you because of the work you’ve done evaluating the economic impact of state film tax credit programs.  

We’ve read your [research, cite article(s)]. In general, these papers found [summarize research]. We’d like to ask you questions about your research in order to understand how it may apply to our study of the economic contribution of the film industry, particularly in the Pittsburgh, Pennsylvania region.  

[The following are questions designed to be asked of a specific researcher and study.]  

1. Could you describe why you chose to research the impact of film tax incentives?  
   a. What is it about the film industry and the nature of the incentives that made it a good test case for analyzing impacts of regional tax incentives in general?
b. Did you have any hypotheses at the outset in terms of what you might find?

2. You describe in your papers some of the data challenges in terms of capturing film industry employment in typical data sources, namely the Bureau of Labor Statistics’ Quarterly Census of Employment and Wages (QCEW). For the purposes of these questions, let’s just focus on film production [as defined by the North American Industry Classification System], NAICS 512110, which is what you do in the papers of yours we reviewed.

   a. Could you talk about how you handled the issue of independent contractors working in the film industry but who don’t show up in the counts for film industry employment because they are not W-2 employees?
      i. For which occupations in the film industry is this issue more pronounced?
      ii. By approximately what percentage would you say the QCEW undercounts film industry employment for this reason?
      iii. Do you expect there is regional variation in terms of the role of contract labor?

   b. You also describe factors that might lead QCEW data to overestimate state-level employment in the film industry, for example, by counting workers who temporarily move to the state but who do not stay after production ends. How would you characterize the potential magnitude of this factor?

   c. On balance, do you think QCEW data provide a reasonable estimate of employment and establishments in the film industry at the state level? Are there other sources that could supplement the QCEW data?
      i. For example, I know you’d looked at county business patterns as well for your 2019 paper, which seemed to be a more conservative estimate of employment, perhaps because of the March date for that collection?
      ii. You also consider impacts on employment in the NAICS codes of Independent Artists, Writers, and Performers, and Payroll Services, as a way to get at the contractor issue. Did you develop any estimates of what portion of employment in those industries might be connected to the film industry?

   d. What challenges are there in terms of measuring and interpreting wages in the film industry as measured by the QCEW?

3. Our work is focused on the Pittsburgh region in particular, so in addition to state-level data, we are looking at data at the metropolitan statistical area (MSA) and county levels. We also are looking beyond film production (NAICS 512110) to film distribution (512120) and post-production (512190). Each of these introduces additional challenges,
and we’d like to get your perspectives and whether you’ve wrestled with these in your work.

a. In terms of the sub-state data, we’re seeing in the QCEW that a large share of establishments and employment at the state level in film production (focused on Pennsylvania) show up as “Unknown or Undefined Location, PA” as opposed to linked to a particular county (and therefore able to assign to an MSA). Have you done work at the sub-state level and, if so, have you encountered this issue? How did you resolve it?

b. A notable limitation when attempting to include film distribution and post-production is data suppression at finer levels of geography in those industries and then the inclusion of film exhibition (i.e., movie theaters) at the higher level of industry aggregation (NAICS 5121). We’ve encountered the issue of the inability to exclude movie theaters (which are not our focus) in other data sources as well, including BEA [U.S. Bureau of Economic Analysis] data (which additionally includes sound recording industries all under NAICS 512) and IMPLAN data. Have you confronted this in any of your work? How did you work through it?

4. Turning now to the findings of your work on film tax incentives.

a. The most notable impacts seem to be in terms of the number of productions filmed in locations with tax incentives, although your findings differ across studies in terms of whether feature films or TV series have the significant impact.
   i. Could you talk about these impacts and any theories for the different results in terms of types of productions affected from one paper to the other?
   ii. Is there something about the nature of the film industry or the structure of the tax incentives in Louisiana and New Mexico that was conducive to spurring feature film production?

b. Conversely, you find little in the way of impacts on film industry employment or establishments in either study. To what would you attribute those non-impacts?

c. Are there characteristics of state film industries or the structure of tax credits that are associated with larger or smaller impacts on the various outcomes you considered?

5. Spillovers from the film industry to other sectors of the economy are often touted by film tax incentive proponents as an important benefit of these programs. You consider these in your work and other researchers have as well.

a. You find little in the way of spillovers and suggest this is to be expected given the limited impacts on the film industry to begin with. Have you found any examples of sectors with detectable impacts flowing from film tax incentives?
b. Many others have used input-output models, such as IMPLAN, to trace the spillover effects of the film industry on other sectors, either via supply chains or as a result of workers in affected sectors spending their labor income on goods and services. What is your view on the strengths and weaknesses of that approach to estimating impacts?

c. Have you considered other potential avenues for spillover impacts, such as on tourism? Are you aware of research that has quantified those impacts in a rigorous way?

6. You discuss agglomeration economies in your papers and the concentration of the film industry in New York City and Los Angeles.
   a. Could you describe why agglomeration economies are important in the film industry?
   b. Is there a public benefit to these industries not agglomerating in select cities? In other words, does the film tax credit in places like Pennsylvania act as support for artistic or creative jobs that would otherwise be moved to New York City or Los Angeles?
   c. Do you think it is possible for other regions to reach a “critical mass” in terms of film industry businesses, pools of talent, and education and training feeder systems—maybe not to match those two huge cities—but to stand out nationally as mid-tier city success stories in making the film industry an important part of the local economy?
   d. Are there other industries with sufficient overlap with the film industry in terms of the occupations and skills needed to perform the work that might have some synergies in terms of offering opportunities for film industry workers to work in between productions or where growth in those industries could benefit the film industry?

7. A conclusion that could be drawn from your work is that because state film tax credits do not produce any meaningful effects on the number of feature films, or local film industry employment and wages, that opportunity costs arise because the tax credits could be put to better use.
   a. What are the characteristics of industries that, if supported by tax credits, would produce meaningful gains outweighing the nominal and opportunity costs?

8. Finally, I’m interested in your views on Pennsylvania’s Film Tax Credit Program and how it compares to others in your research, and whether there’d be any reason to expect larger or smaller impacts than the average impacts you report in your paper. As a refresher,
the program provides a tax credit equal (in most cases) to 25% of a production’s “qualified film production expenses” if at least 60% of a production’s total budget is spent in Pennsylvania. Feature films and TV productions intended for a national audience can qualify for an additional credits.

the types of film production eligible for a tax credit include feature films; TV films, talk or game show series, pilots or episodes intended as programming for a national audience; commercials; and documentaries. Post-production expenses can also receive tax credits even if production was filmed elsewhere.

the production company can use a credit to offset any state taxes owed or sell or assign the credit (in practice, they all sell the credits)

companies have three years to use credit

the program has been capped at $70 million in tax credits per year but was recently increased to $100 million per year in the latest state budget.

a. How does the Pennsylvania credit compare to a “typical” state’s tax credit in terms of structure and value?
b. What would you say are the benefits or drawbacks of the Pennsylvania credit?
c. Are there ways it could be improved to get the most “bang for the buck” even if the “bang” is relatively modest relative to the “bucks,” even in the best of cases?
Appendix C. Film Industry Employment

To quantify film industry employment in Pittsburgh, we must devise ways to overcome issues of industry definition, data granularity, and vague self-employment data. To do so, we used multiple data sources to triangulate employment information. Specifically, we used the U.S. Bureau of Labor Statistics (BLS) QCEW, BEA regional employment data, and IMPLAN data.

The first hurdle in describing film industry employment in the Pittsburgh region is that some of the data sources can define the industry too broadly. Specifically, the BEA and IMPLAN data lump together motion picture and video exhibition (i.e., movie theaters) with the portions of the industry more closely aligned with the focus of our study—motion picture and video production, post-production, and distribution. However, the BLS data separate out these areas. Therefore, we could use BLS data to start generating our estimate of film industry employment in the Pittsburgh MSA. The 2021 BLS data indicate that 1,175 people were employed in the film industry in the Pittsburgh MSA, about one-third of whom were in exhibition (399 people). If we remove the film exhibition employees, the BLS data show that 776 people were employed in the Pittsburgh film industry. This reflects about 0.08 percent of private employment in the Pittsburgh MSA (938,042 in 2021) or about 0.07 percent of employment overall (of 1,045,705 people).

However, we expect that 776 workers, which constitutes only 20 percent of statewide employment in the film industry after excluding statewide film exhibition employees (of 3,922), underestimates film industry employment in the Pittsburgh region for a couple reasons. First, the BLS data indicate that about 60 percent of statewide employment in film production—the largest portion of the film industry outside movie theaters—is not attributable to a county and, therefore, not counted in the Pittsburgh MSA (or any other MSA or location in the state). Instead of ignoring these employees with “unknown/undefined location,” if we distribute these jobs in proportion to the share of film production jobs with known locations (41 percent of which are in the Pittsburgh MSA), our estimate of Pittsburgh film employment (excluding exhibition) in 2021 would increase to 1,661. This number represents about 42 percent of statewide film industry employment, or about 0.18 percent of private employment in the Pittsburgh MSA and about 0.16 percent of overall Pittsburgh employment.

However, 1,661 likely still underestimates the number of people working in the film industry in the Pittsburgh area because the BLS data do not include self-employed workers who may perform contract work. Fortunately, our two other data sources—BEA and IMPLAN—do capture self-employed workers. The problem is that we cannot parse out film exhibition from these data sources. Moreover, the film industry is combined with the sound recording industry in the BEA data, which are only available for Pennsylvania overall rather than by MSA. To illustrate these issues, consider the time-series data for Pennsylvania employment as described in the BLS, BEA, and IMPLAN (2018 only) data shown in Figure C.1.
We observe a few important patterns. First, the film industry experienced clear year-over-year job losses in 2020 at the outset of the COVID-19 pandemic, although these losses were less severe when excluding movie theaters (according to BLS data, film industry employment fell by 42 percent overall but by 26 percent when excluding movie theater jobs). Second, wage and salary employment in the film and sound industries according to BEA essentially matches the BLS estimates,\(^1\) while total employment in the film and sound recording industries, according to BEA (including self-employed workers), was about one-third higher (in 2021). Third, IMPLAN’s 2018 estimate for total employment in the film and sound recording industries nearly matches BEA’s, suggesting that if we were to analyze more recent years of IMPLAN data, they would align with the BEA data. Fourth, the film industry accounts for the majority of combined film and sound recording industry employment—about 95 percent, according to BLS data (which exclude self-employed workers), and 89 percent, according to the 2018 IMPLAN data (which include the self-employed).

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\(^1\) As of this writing, 2021 is an exception to this finding that BEA wage and salary employment in the film and sound recording industries in Pennsylvania essentially match the totals from the BLS QCEW.
With these insights and combining information across sources, we arrive at an alternative, plausible estimate for film industry employment in Pittsburgh (excluding film exhibition). We proceed as follows:

1. **Estimate total statewide employment in the film industry** in 2021, including the self-employed. To do so, we apply the proportion of the combined film and sound recording industry that is in the film industry from the 2018 IMPLAN data (89 percent) to the 2021 total employment in the film and sound recording industries, according to the BEA data (8,867). This approach builds on our finding that 2018 employment in the film and sound recording industries very closely aligned between the IMPLAN and BEA data sources. It assumes that the proportion of the combined film and sound recording industry employment in the film industry remained unchanged from 2018 to 2021. This method yields an estimated 7,856 workers in the film industry in Pennsylvania in 2021. This number includes workers at movie theaters (i.e., film exhibition), as well as the self-employed.

2. **Estimate total statewide employment in the film industry excluding exhibition** in 2021, while including the self-employed. To make this estimate, we assume that self-employed workers are working in film production, post-production, or distribution (as opposed to exhibition). We estimate the number of self-employed by subtracting statewide employment in film including exhibition from the BLS data (6,142) from the estimate derived in step 1 for film industry employment, including the self-employed from BEA (7,856). We then add this estimate (1,714) to the BLS estimate of the workers in film excluding exhibition (3,922). This calculation leads us to an estimate of 5,636 people working in the statewide film industry (excluding exhibition) in 2021, including the self-employed.

3. **Estimate Pittsburgh MSA employment in the film industry excluding exhibition** in 2021, including the self-employed by assuming that self-employed film industry workers are distributed across the state proportionally to their wage and salary counterparts. Applying our estimate of the portion of wage and salary film industry employment excluding exhibition in the Pittsburgh MSA from the BLS data (42 percent) to the statewide estimate (5,636) derived in step 2, we arrive at an estimate of 2,386 workers in the film industry in the Pittsburgh MSA for those portions of the film industry that are the focus of our study.

This estimate of 2,386 workers remains a very small share of regional employment—just 0.17 percent relative to a denominator of 1,443,840 for total employment, including the self-employed, from BEA data. However, this higher estimate adjusts for some of the limitations of the available data that officially peg local film employment outside movie theaters at just 776 workers, a likely underestimate that is only about one-third of our alternative estimate.

While this triangulation of data probably gets us closer to the true level of film industry employment, the various data sources should be considered to provide bounds on film industry employment. Moreover, these estimates do not consider part-time employees that the film industry may draw on from other sectors during its productions.
# Abbreviations

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<tr>
<th>Abbreviation</th>
<th>Description</th>
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<tbody>
<tr>
<td>BEA</td>
<td>U.S. Bureau of Economic Analysis</td>
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<tr>
<td>BLS</td>
<td>U.S. Bureau of Labor Statistics</td>
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<tr>
<td>MSA</td>
<td>metropolitan statistical area</td>
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<tr>
<td>NAICS</td>
<td>North American Industry Classification System</td>
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<tr>
<td>QCEW</td>
<td>Quarterly Census of Employment and Wages</td>
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</table>
References

BEA—See U.S. Bureau of Economic Analysis.


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