Oklahoma's Film and TV Industry: State-Level Incentives, Growth Prospects, and Economic Contribution

2025 Update

REGIONTRACK

Regional Economic Forecasting and Analysis

RegionTrack Inc. (regiontrack.com) is an Oklahoma City-based economic research firm specializing in regional economic forecasting and analysis.

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Oklahoma's Film and TV Industry: 2025 Update

I. Introduction

This report is a follow-up to the 2020 RegionTrack report (*Oklahoma's Film and TV Industry: Growth Prospects and State-Level Incentives*[1]) which provided an in-depth examination of the role of film and TV incentives in Oklahoma and competing states. The report contained comprehensive analysis of a range of policy issues surrounding state film and TV incentives in the U.S. and the implications for efforts to expand the sector within Oklahoma.

Much has changed in the film and TV sector in the interim, including significant policy efforts within Oklahoma to expand the sector. The state expanded its incentive pool to $30 million annually in 2021 through the Filmed in Oklahoma Act (FIOA) and extended its commitment to growing a larger industry.

Changes are highly visible in the sector as state-based film and TV firms expanded their operations in expectation of increased activity in the sector. Entrepreneurs across the state built new studios, stages, and other specialized facilities to enable all aspects of film and TV production. The state also used the expanded incentive pool to attract major productions to the state that were not possible under the smaller incentive program in place in 2020.

In short, the state is transitioning from a competitive position traditionally hampered by a very small incentive pool to one that now has more meaningful incentives to offer production companies.

Objective of the Report

The objective of the report is to help policymakers better understand the policy implications of changes in the state's film and TV sector since the enactment of the FIOA. An adequate period of time has passed to determine the degree to which the larger incentive pool can boost activity in the sector.

The contents of the report are focused on answering the following six policy-related questions:

1. Did recent changes in the state's incentive program meaningfully boost film and TV activity in the state?
2. How have state-level incentive programs changed across the nation since the enactment of the Filmed in Oklahoma Act?
3. Did the expansion in the state's incentive enhance the competitiveness of the program relative to other states and build the foundation for a larger industry?
4. How has economic activity in the state's overall film and TV sector changed since expanding the incentive pool in 2021, especially relative to competing states?
5. Does the November 2024 Incentive Evaluation Committee's (IEC) report provide a useful measure of the economic and tax contributions of the film and TV sector under the new incentive program?
6. What is the overall assessment of ongoing efforts to expand the film and TV sector in Oklahoma?

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[1] The full 2020 RegionTrack report is available online at: https://www.regiontrack.com/www/wp-content/uploads/OK-Film-Full-Report-RegionTrack-July-2020-1.pdf. An executive summary of the 2020 report is available online at: https://www.regiontrack.com/www/wp-content/uploads/OK-Film-Exec-Summ-RegionTrack-July-2020.pdf.

Summary of Key Policy Findings

The findings suggest several policy conclusions concerning the ongoing development of Oklahoma’s film and TV industry. These findings provide direct insight into the underlying questions of the viability of growth in the Oklahoma film and TV industry and the efficacy of using incentives to grow the sector.

Key findings include:

1. **The state’s newly expanded incentive program produced a surge in incentivized activity in the state film and TV sector since 2021**. Estimates indicate that $531 million in incentivized film and TV activity occurred in the state between FY2021 and FY2024. Since the surge in incentivized spending in FY2021, approximately 60% of the qualified spending funded labor income to workers, while the remaining 40% funded direct purchases of goods and services. In FY2023, the most recent full year of activity, the industry made qualifying expenditures of $161.1 million. These estimates do not include the growth that occurred in non-incentivized activity in the sector.

2. **The state’s expanded incentive pool pushed the state into a higher tier of competitors but leaves it in the middle of the pack overall**. After accounting for program changes across all states, the expansion to a $30 million cap moved Oklahoma's incentive program up from 26th to 18th largest. However, the new $30 million cap still leaves Oklahoma in the middle of the pack relative to the group of 38 states now offering general film and TV incentives. Eleven states now have an incentive of $100 million or more, including neighboring Texas. The nationwide pool of incentives continues to expand as well. State incentives in the most recent year of data available totaled $3.43 billion, up 24% from $2.75 billion in the 2020 report. Five states added a new incentive since the 2020 RegionTrack report.

3. **Economic activity in the state’s film and TV sector surged following the enactment of the FIOA in 2021, far outpacing the sector nationally.** Since the onset of the pandemic, the film and TV sector at the national level has undergone significant gyrations. Overall, the sector posted relatively weak performance since the onset of the pandemic, mostly due to work disruptions along the way. In contrast, Oklahoma's film and television sector defied national trends and produced substantial growth since the onset of the pandemic in early 2020. From the fourth quarter of 2019 to the second quarter of 2024, the number of film and TV establishments in Oklahoma increased 46% (+50 establishments), employment increased 49% (+175 jobs), and total wages surged 135% (+$20.4 million). Notably, average wages in the industry increased by 66%, climbing from $47,780 in late 2019 to $79,450 by mid-year 2024, underscoring the sector's increased vitality and competitiveness in Oklahoma.
4. **The state’s film and TV sector has far outpaced the performance of most states since the onset of the pandemic.** The results highlight a very strong comparative performance for Oklahoma relative to the other states with an incentive in place. Across the 2019 to 2023 period, Oklahoma ranked 6th in film and TV employment growth (56.2%), 4th in total compensation growth (169%), and 9th in change in annual compensation per worker (72.3%) among the states. Oklahoma is the only state to rank among the top ten on all three measures over the period, the strongest overall performance among the 38 states offering incentives.

5. **Several data and methodology issues are found with the November 2024 Incentive Evaluation Committee (IEC) report assessing the state's film and TV incentive.** Our evaluation of the IEC report suggests that it provides an inadequate evaluation of both recent growth conditions in the sector and estimates of the economic and tax contribution of the sector. The primary result is that it grossly understates the contribution of the sector by using incorrect tax rates and economic impact multipliers suffering from aggregation bias. After discussing the methodological and data issues involved, we prepare adjusted estimates that provide a much more defensible view of the economic contribution of film and TV activity in the state. The industry still does not produce full tax recovery but is having a much larger impact than suggested and is likely recovering up to 78% of the cost of incentives.
6. **The findings in the report suggest that the state's film and TV industry is performing much as planned based on both findings in the 2020 RegionTrack report and the stated expectations surrounding the enactment of the FOIA.** Incentivized activity responded rapidly to the new larger incentive pool offered by the state. The state's overall film and TV industry has surged since 2021 based on federal datasets detailing activity in the industry. This suggests growth in the non-incentivized portions of the industry as well. Growth in the state's film and TV sector has far outperformed nearly all states offering incentives since the onset of the pandemic. On the cautionary side, while the competitiveness of the state was improved with the expanded incentive pool, its relatively modest $30 million size leaves the state in the middle of the pack amidst a growing overall offering of incentives. Eleven states now offer incentives of $100 million or more. Also, the sector is unlikely to produce full tax revenue recovery until the average incentive falls closer to 20% and a larger share of production jobs can be filled by Oklahoma's resident film and TV workforce.

II. Oklahoma's Film and TV Incentive

This section of the report provides an overview of recent changes to Oklahoma's film and TV incentive program. A key finding in the 2020 RegionTrack report was a clear lack of competitiveness of Oklahoma's incentive pool relative to other states. At the time, the state's $8 million incentive pool ranked 26th out of the 33 states that offered a general film and TV incentive. The state was simply not competitive and had little potential for generating sustainable development in the state's film and TV sector. It further limited the state's ability to attract large productions.

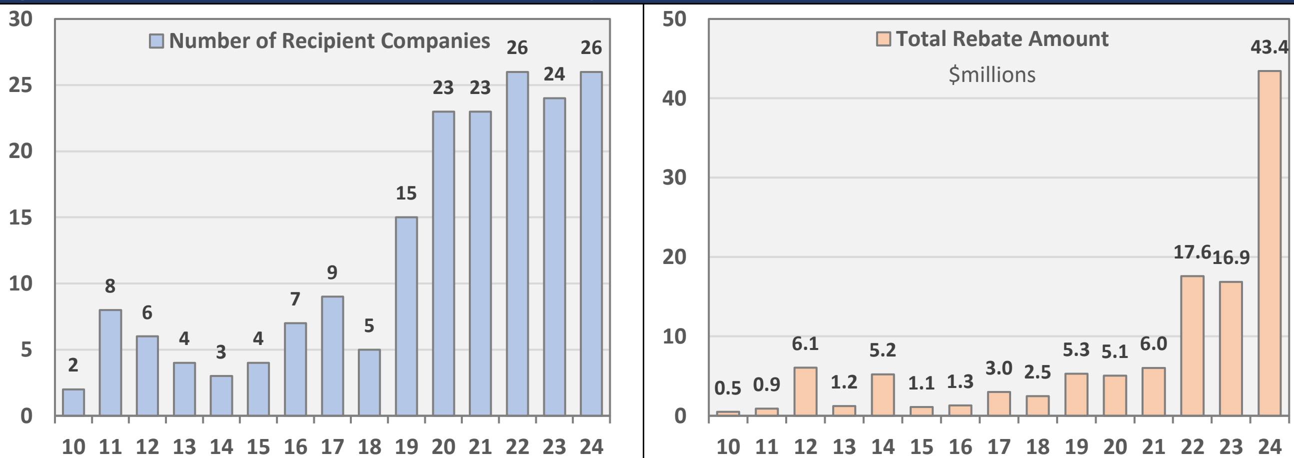
A policy conclusion in the 2020 report was that Oklahoma would have to offer a far larger incentive pool to grow a viable and sustainable industry and compete with larger film and TV producing states. A key element of the long-run strategy was building a resident workforce capable of supporting multiple (and large) productions within the state. Maintaining the very small incentive pool in place in 2020 provided little opportunity to do so.

Filmed in Oklahoma Act (2021)

In 2021, the Oklahoma legislature launched a directed effort to build a larger and more competitive film and TV sector. The centerpiece was the Filmed in Oklahoma Act[2] (FIOA), which was signed into law in May 2021. The legislation raised the annual cap on the state's film and TV incentive pool nearly four-fold, from $8 million to $30 million.[3] Several adjustments in the structure and administrative rules of the program were made based on feedback from the industry. The new FIOA has a 10-year life, with a sunset date of June 30, 2031.

Since the enactment of the FIOA in late FY2021, the total amount of rebates offered by the state has expanded roughly proportionately with the new pool size. Figure 1 provides an update of the number of production companies receiving an incentive and the total amount of rebates paid since FY2010.

Figure 1. Oklahoma Film Incentive Rebate Payments (Fiscal Year)



Source: Oklahoma Film & Music Office and various issues of the Oklahoma Comprehensive Annual Financial Report (CAFR).
Notes: Rebate numbers and amounts are derived from Oklahoma Film & Music Office data from FY2010 to FY2016 and from Oklahoma Comprehensive Annual Financial Report (CAFR) publications from FY2017 forward.

[2] The administrative rules for the program are available online at: https://www.okfilmmusic.org/wp-content/uploads/2022/09/OFMOAdministrative-Rules091122.pdf
[3] For additional details on the program, see: https://www.okfilmmusic.org/incentives

Following the enactment of the FIOA, a total of $78 million in incentives were paid in fiscal years 2022 to 2024, an average of $26 million annually.[4] This is roughly $12 million below the total capacity of the program over the three years. Rebates surged to about $17 million annually in both FY2022 and FY2023 before climbing to a record $43 million in FY2024. The recent three-year total is more than double the combined $36.8 million paid in the prior ten fiscal years, as rebates averaged only $3.7 million annually in the period.

Incentivized (Qualified) Spending

Incentivized spending in the state's film and TV sector has similarly increased since the enactment of the larger incentive pool. Note, however, that there is a timing mismatch between incentive payments discussed in the prior section and qualified spending, with spending occurring prior to the payment of rebates.

Figure 2 provides a summary of spending by major category that qualified for rebate payments under the state film and TV incentive in the FY2020 to FY2024 period. This period encompasses both the full pandemic cycle and the enactment of the expanded incentive pool under the FIOA at the end of fiscal year 2021.

Figure 2. Qualifying Oklahoma Expenditures

	Labor Spending					
Fiscal Year	OK Resident Below-the-Line	Non-OK Below-the Line w/Income Tax Withholding	Above-the-Line w/out Income Tax Withholding	Total Labor Spending	Non-Labor Spending	Total Qualified Expenditures
2020	$9,637,055	$658,219	$6,233,461	$16,528,735	$15,278,187	$31,806,923
2021	38,427,412	42,293,996	37,942,892	118,664,300	68,381,042	187,045,342
2022	25,130,400	35,882,367	16,723,652	77,736,420	58,182,171	135,918,591
2023	24,288,973	55,405,501	21,765,163	101,459,638	59,621,257	161,080,895
2024	17,059,790	5,784,132	8,326,935	31,170,857	16,160,720	47,331,577

Source: Oklahoma Film and Music Office
Notes: These expenditures qualify for rebates under the state film and TV incentive program. Non-labor spending includes a range of goods and services.

Incentivized spending under the rebate surged beginning in FY2021, posting a roughly six-fold increase from $31.8 million in FY2020 to more than $187 million in FY2021. In the FY2021 to FY2023 period, a total of $484.0 million in incentivized spending took place, or $161.3 million annually. Since the surge in incentivized spending in FY2021, approximately 60% of the qualified spending funded labor income to workers, while the remaining 40% funded direct purchases of goods and services.

In FY2023, the most recent full year of activity, the industry made qualifying expenditures of $161.1 million. The two major components included $101.5 million in labor spending and $59 million in spending on all other goods and services.

Data for FY2024 reflects an anomaly in industry conditions, with expenditures down sharply from the prior three fiscal years. The reduced activity is traced largely to the effects of a nearly five-month work stoppage by the Writers Guild of America (WGA) over a contractual labor agreement.[5] The WGA strike

[4] Incentives were paid in most years under both the Compete with Canada Film Act (CCFA) and the Filmed in Oklahoma Act. The Act extended the total pool of funds provided in the original Compete with Canada Film Act (CCFA). The CCFA is slated for termination July 1, 2027.
[5] For additional details on the strike, see: https://en.wikipedia.org/wiki/2023_Writers_Guild_of_America_strike

extended from May 2 to September 27, 2023, lasting 148 days, with the impact mostly confined to fiscal year 2024. Activity was further disrupted in FY2024 as the IATSE/Teamsters similarly threatened a work stoppage over labor negotiations. Both labor disputes introduced extended delays into the production schedule of both ongoing and future productions.

Qualified Labor Spending

The economic impact generated by qualified spending depends upon the likelihood that the activity occurs within the state of Oklahoma and is taxable in-state.

For non-labor spending, the economic and tax impacts are assumed to occur fully within the state. However, only a portion of the economic and tax impacts from qualified labor spending are felt within the state.

To illustrate the expected impacts from qualified labor spending, data in Figure 2 is partitioned into worker groups based on residency status, type of worker (below-the-line versus above-the-line), and income tax withholding status. For incentive purposes, above-the-line (ATL) labor spending is defined differently across the states but generally refers to creative positions held by producers, writers, directors, and cast that are specific to an individual production. Below-the-line (BTL) includes all other laborers not considered ATL. These workers are typically hourly production crew members whose skills transfer across productions.

Of $101.5 million in total FY2023 qualified labor spending, $24.3 million went to below-the-line workers who are residents of Oklahoma (or Oklahoma expatriates) and subject to state income tax withholding; $55.4 million went to nonresident below-the-line workers who are subject to state income tax withholding; and $21.8 million went to above-the line nonresidents who are not subject to stat income tax withholding. All three groups are considered qualified labor costs under the FIOA, but each group has differing economic and tax impacts.

From a policy perspective, it is important to note that nonresident BTL labor spending is currently allowed as a qualifying expenditure under the FIOA due to the relatively small resident worker pool the state has at this stage in its development. The large share of nonresident below-the-line labor spending ($55.4 million in FY2023) reflects the continued necessity to bring in out-of-state crew members to film large productions in Oklahoma. The film and TV labor pool in Oklahoma remains relatively small and is unable to provide an adequate number of trained resident workers to fully staff large productions. Example of these large projects in Oklahoma in recent years include Killers of the Flower Moon in FY2021, Tulsa King Season 1 in FY2022, and Twisters in FY2023. Until the resident labor pool expands sufficiently, the state will be challenged to fully staff the BTL labor needs of large productions from resident labor. The resulting economic impact will increase as the resident share of labor increases.

Economic and Tax Impacts of Qualified Labor Spending

The expected economic and tax impacts differ for the three groups of labor. Both the economic and tax impacts from spending on resident BTL labor are believed to be fully realized in-state. However, the economic and tax impacts of spending on nonresident BTL labor is less than fully realized in-state. However, nonresident BTL laborers must spend significant time living and working in the state during production and maintain much of their usual spending while shooting in Oklahoma. They also are

subject to state income tax withholding and must file a tax return with the state to recover any eligible portion of payments. In contrast, spending on nonresident ATL labor is mostly realized out-of-state and produces no income tax withholding. However, many of these higher-wage workers still spend a portion of their earnings within the state and generate both economic and tax effects.

The exact share of nonresident BTL and ATL income earned in Oklahoma that is ultimately spent and taxed in-state is unknown. Our expectation is that the leakage from nonresident BTL labor is roughly offset by the share of nonresident ATL labor spending that takes place in-state. Hence, we believe a good proxy for the total amount of realized in-state spending and taxation from qualified labor is the sum of resident BTL labor spending plus nonresident BTL labor spending. For FY2023, this is 78.5% of total qualified labor spending, or $79.7 million.

The most recent data for FY2024 show a far higher share of qualified resident BTL labor spending, reaching 55% of total labor spending. Combined with nonresident BTL labor, the share dropped to 73.3% of total qualified labor spending in FY2024. A high share of resident BTL spending should be one of the measures of a successful film and TV incentive program. The limited history available since the passage of the FIOA makes it difficult to assess whether this dimension of the program is showing meaningful progress.

How Competitive is the Oklahoma Payout Share?

The rebate and qualified spending data in Figures 1 and 2 indicate that Oklahoma continues to have a relatively high incentive payout rate. This concern was highlighted in the 2020 RegionTrack report and reflects the fact that an unnecessarily high payout ratio limits the total amount of spending that can be incentivized.

The underlying impetus for a high payout ratio is traced directly to the initial legislation implementing the *Compete with Canada Film Act* in 2001 (see Appendix 1). The original legislation stressed a desire to have an incentive structure that stands out among states:

> *"It is therefore the intent of the Legislature that Oklahoma provide an incentive that will stand out among those of other states and increase film production in this state."*
> *Title 68. Revenue and Taxation. OK Stat § 3622 (2023)*

Data on individual rebate payments suggests that the average rebate payment in Oklahoma across the full FY2021 to FY2024 period is approximately 31.4% of qualified spending.[6] This is based on an average calculated across the payout rate for each individual production receiving an incentive across multiple years.[7]

Importantly, the average payout has declined slowly over time, especially after implementing rules for the expanded incentive pool under the FIOA. In the two years prior to its enactment, the state's payout ratio averaged 35.2% in FY2019 and 34.7% in FY2020. More recently, the payout ratio declined to 34.4% in FY2021 before declining annually to 29.6% in FY2024, the most recent data reported.

[6] The latest historical listing of rebates was available online at: https://www.okfilmmusic.org/wp-content/uploads/2024/07/OFMO-FY-Payout-chart-7.1.24.pdf
[7] Some payouts for multiple production agreements are not included. Three is also a timing mismatch across years, with production spending occurring before payout.

Contrary to the Legislature's aim, there is simply no benefit to offering the highest payout ratio among the states. Paying a rate higher than is absolutely necessary comes at a significant cost in terms of supporting far less incentivized economic activity.

The rate should also be set with reference to the rates offered by competing states. The two large film and TV states of Georgia and California largely set the range on the size of incentive payouts across the states. The roughly 20% payout in California and the typical 30% payout in Georgia are representative of a competitive range across the major film and TV states. Georgia provides a base tax credit of 20% of expenditures but offers a 10% uplift for adding an embedded logo and link to either the Georgia film office website or another alternative marketing option.[8] This makes the Georgia payout a de facto 30% for nearly all tax credit recipients. In contrast, California, the dominant film and TV state, provided an average payout of only 21.5% of qualified expenditures in the FY2009 to FY2024 period.[9] In the more recent FY2021 to FY2024 period, the payout averaged only 20.8% of qualified spending. The rebate program in neighboring Texas similarly has a 22.5% maximum payout rate.[10]

Oklahoma's Incentive Multiplier

Oklahoma's payout has historically exceeded Georgia's and has only recently moved below 30%. The policy concern is that a high payout ratio entails a significant sacrifice in terms of the amount of incentivized activity that can be supported by the existing incentive pool.

To illustrate this tradeoff, Figure 3 highlights the amount of potential spending supported per million dollars of incentives at various payout ratios. It also demonstrates the spending potentially supported by the state's current $30 million incentive pool at various payout ratios. The ratios examined range from the 35% payout that the state was providing as recently as FY2019 down to a 15% payout. Again, these estimates do not account for the timing mismatch between spending and rebate payment present in the historical data.

Figure 3. Incentive Payout Ratio vs. Supported Spending

Payout Ratio	Spending Multiplier	Supported Spending per $1 mil. in Incentives	Qualified Oklahoma Spending with $30 Million Pool
35%	2.86	$2,857,143	$85,714,286
30%	3.33	3,333,333	100,000,000
25%	4.00	4,000,000	120,000,000
20%	5.00	5,000,000	150,000,000
15%	6.67	6,666,667	200,000,000

Notes: The spending multiplier is equal to 1.0 divided by the payout ratio.

As an example of the current payout environment nationally, we compare the 30% payout common in Georgia to the average 20% payout in California. California's payout ratio is 33.3% less (20% vs. 30%), but its spending multiplier is 50% higher (5.00 vs. 3.33). This example encapsulates the significant positive leverage that a lower payout ratio has on the resulting spending multiplier. Every $1 million in incentives spent in California supports $5 million in qualified spending, versus only $3.33 million in

[8] See: https://georgia.org/industries/film-entertainment/georgia-film-tv-production/production-incentives
[9] All historical California payouts are available online at: https://film.ca.gov/film-and-television-tax-credit-program-approved-projects-list/
[10] For details on the Texas Moving Image Industry Incentive Program (TMIIP), see: https://gov.texas.gov/film/page/incentives_overview#:~:text=State%20Production%20Incentive%20(Up%20to%2022.5%25)&text=Grants%20vary%20by%20budget%20levels,of%20the%20project's%20Texas%20expenditures.

Georgia. In other words, per dollar spent, the 20% payout ratio in California provides for 50% more supported spending than Georgia's 30% payout ratio. Just as important, California's lower payout also provides for potentially 50% more tax recovery per dollar of incentives, which addresses the most common criticism of film and TV incentives.

For Oklahoma, the five-percentage point reduction in the average payout from 35% to 30% (a 14.3% reduction) in recent years expanded the potential total amount of supported spending from $85.7 million to $100 million (a 16.5% increase) given the available $30 million in incentives. The leverage effect only increases as you reduce the average payout further. If Oklahoma reduced the average payout ratio to 20%, matching California, the state's spending multiplier would increase from 3.33 to 5.0 per dollar spent on incentives as potential qualified spending would increase to $150 million. As with Georgia, Oklahoma would produce fully 50% more in incentivized activity and tax revenue recovery with the same incentive pool but only a 20% average payout ratio.

Recent policy discussions in the state include increasing the state's incentive pool to $80 million. The current 30% payout ratio would support $266 million in incentivized activity while a 20% average payout would support $400 million of incentivized activity, 50% more activity. The tax recovery would also be 50% higher.

III. Update on State-Level Incentives

After the expansion of the state's incentive program through the FIOA, the question remains whether the legislature managed to boost Oklahoma's competitiveness relative to competing states. And does the new incentive pool provide the amount of funding needed to build a larger and more sustainable film and TV sector in the state? As discussed in the prior section, a related issue weighing on the effectiveness of the film and TV incentive is the ability of the state's workforce to fully staff large productions.

Updated State Film and TV Incentives

Figure 4 provides updated data on the size of the film and TV incentive pools across the 38 states that currently offer a general incentive. Tabulating the total amount of film and TV incentives offered across the states is complicated by differences in the forms of incentives used, eligibility rules, methods of payment, lags in reporting, tax credit discounting practices, changes in caps, and differences in funding periods across the states.

For consistency with findings in the 2020 RegionTrack report, incentive estimates are derived using data from state film offices, state budgets, and other public reports. All program data reflect the most recent year of information available in each state, which is primarily FY2024. Any remaining estimates are for FY2023. The reported program size in each state reflects either the cap size, the amount of actual spending when no cap is in place, or the amount of actual spending when it differs greatly from the cap.

Oklahoma's Competitive Position

For Oklahoma, the landscape has changed significantly since the implementation of the FIOA. After accounting for program changes across all states, the expansion to a $30 million cap moved Oklahoma ahead of several states with very small programs. However, Oklahoma remains in the middle of the pack (18th) relative to the group of 38 states now offering general incentives. While the larger $30 million pool provides greater potential to build a sustainable industry, the state's program remains comparatively small. Again, at the current 30% average payout rate, the state can incentivize only about $100 million annually in qualified spending (*see Figure 3*).

The state is also now competing with larger pools in several states (New York, Kentucky, Georgia, Ohio, Pennsylvania, and Texas all added $30 million or more; while Illinois and Rhode Island added $20 million or more) and added competition from five new programs in Arizona ($100 million), Missouri ($16 million cap), Indiana ($5 million cap), Delaware ($1 million cap), and West Virginia (no cap, no data on spending available yet).

Connecticut is the only state to make a meaningful cut to its incentive pool (-$34.5 million) since the 2020 report was released.

Currently, only 13 states do not offer a general film and TV incentive - Alaska, Florida, Idaho, Iowa, Kansas, Michigan, Nebraska, New Hampshire, North Dakota, South Dakota, Vermont, Wisconsin, and Wyoming. Eighteen states offered no incentive in the 2020 RegionTrack report.

Figure 4. State Film and TV Incentive Programs

State	Type	Cap	Incentive Spending FY24&FY23	Incentive Spending FY20&FY19	Change
Alabama	rebate	yes	20.0	20.0	0.0
Arizona*	credit	yes	100.0	-	-
Arkansas	rebate	no	4.0	0.0	4.0
California	credit	yes	330.0	330.0	0.0
Colorado	rebate	yes	5.0	1.0	4.0
Connecticut	credit	no	122.5	157.0	-34.5
Delaware*	rebate	yes	1.0	-	-
District of Columbia	rebate	yes	2.0	4.0	-2.0
Georgia	credit	no	900.0	860.0	40.0
Hawaii	credit	yes	50.0	50.0	0.0
Illinois	credit	no	157.0	131.0	26.0
Indiana*	credit	yes	5.0	-	-
Kentucky	credit	yes	75.0	9.6	65.4
Louisiana	credit	yes	150.0	150.0	0.0
Maine	credit/rebate	no	0.0	0.2	-0.2
Maryland	credit	yes	20.0	14.0	6.0
Massachusetts	credit	no	73.3	80.0	-6.7
Minnesota	rebate	yes	1.7	0.5	1.2
Mississippi	rebate	yes	10.1	20.0	-9.9
Missouri*	credit	yes	16.0	-	-
Montana	credit	yes	12.0	10.0	2.0
Nevada	credit	yes	10.0	10.0	0.0
New Jersey	credit	yes	100.0	100.0	0.0
New Mexico	credit	yes	120.0	110.0	10.0
New York	credit	yes	700.0	420.0	280.0
North Carolina	rebate	yes	31.0	31.0	0.0
Ohio	credit	yes	75.0	40.0	35.0
Oklahoma	rebate	yes	30.0	8.0	22.0
Oregon	rebate	yes	20.0	14.0	6.0
Pennsylvania	credit	yes	100.0	70.0	30.0
Rhode Island	credit	yes	40.0	20.0	20.0
South Carolina	rebate	min	17.0	15.5	1.5
Tennessee	grant	yes	0.0	7.5	-7.5
Texas	grant	yes	100.0	50.0	50.0
Utah	credit/rebate	yes	6.4	8.3	-1.9
Virginia	credit/grant	yes	6.5	9.5	-3.0
Washington	rebate	yes	15.0	3.5	11.5
West Virginia*	credit	no	0.0	-	-
United States			$3,425.5	$2,754.6	$670.9

Source: Estimates derived from state film office releases, state budgets, and other public reports. The reported program size in each state reflects either the cap size, the amount of actual spending when no cap is in place, or the amount of actual spending when it differs greatly from the cap. Data for FY2020/FY2019 is from the 2020 RegionTrack report.
Note: Millions of dollars. Thirteen states do not offer an incentive: Alaska, Florida, Idaho, Iowa, Kansas, Michigan, Nebraska, New Hampshire, North Dakota, South Dakota, Vermont, Wisconsin, and Wyoming.
*These five states added a new incentive program since the release of the 2020 RegionTrack report

Total U.S. State Incentives Up Sharply in Post-Pandemic Period

Oklahoma is also now competing against a much larger total pool of incentives. Total state incentive offerings in the most recent year of data available (primarily FY2024 and FY2023 data) totaled $3.43 billion, up 24% from the $2.75 billion reported in the 2020 RegionTrack report (mostly FY2020 and FY2019 data). The surge in incentive spending reflects, in part, the strength in overall tax revenue in

most states in the post-pandemic period. For additional historical context, Thom (2018)[11] reported that total film and TV incentives paid by the states totaled $2.13 billion in 2016. This suggests a 60% increase in the total pool in less than a decade.

Eleven States Offering $100 Million or More in Incentives

The incentive pools operated by the leading states are getting larger as well. A group of 11 states now operate with an incentive pool of $100 million or more, more than triple the current $30 million cap in Oklahoma. The top 11 states now offer a combined $2.88 billion in incentives, or 84% of all incentives offered. Relative to the 2020 report, the total offered by the top 11 is up 17% from $2.46 billion.

The three largest incentive pools remain Georgia (uncapped and nearly $1 billion in recent years), New York (capped at $700 million), and California (capped at $330 million). The incentives offered by these three states remain a large multiple of the funding available in Oklahoma. The three leading states have shown few signs of a pullback in their efforts to attract and retain film and TV activity. The Georgia state legislature maintained an uncapped incentive in the latest legislative session.[12] The cap on incentives in New York was increased from $420 million to $700 million in 2023 and extended until 2034. [13] The governor of California recently proposed more than doubling the state's incentive cap from $330 million to $750 million annually.[14]

Following the three largest states, the remaining states in the top group – Arizona, Connecticut, Illinois, Louisiana, New Jersey, New Mexico, Pennsylvania, and Texas – all have incentive programs with either an annual cap or actual spending between $100 million and $157 million.

Among five states in a second tier below the top 10, Kentucky, Ohio, and Massachusetts offer roughly $75 million, Hawaii offers $50 million, and Rhode Island offers $40 million. These states all exceed the funding available in Oklahoma but remain distant competitors to most states in the top 11 when funding for large movies or multi-project deals is at stake.

A third tier of 11 additional states, including Oklahoma, offers incentives between $10 million and about $30 million annually. Most of the states in this tier, especially those with the smallest pools, have limited ability to support a sizeable and sustainable film and TV industry. They also struggle to fund large productions or engage in multi-project deals. At a 25% average payout, incentives in these states directly support only $40-120 million in incentivized spending. Payouts are often above 25% in these states, including Oklahoma, which further reduces the amount of incentivized activity realized.

A fourth, and bottom, tier that includes 10 states and Washington D.C. continues to offer very small amounts of incentives well below $10 million annually – amounts that have little potential to sustain long-run growth and development in the sector. Some of these states – e.g., Colorado, Tennessee, Virginia, and Utah – already have a sizeable film and TV sector (more than $100 million in annual compensation paid to workers) despite a small amount of incentive spending. These are typically high-amenity states with recognizable areas of tremendous natural beauty desirable for filming.

[11] Time to Yell "Cut?"An Evaluation of the California Film and Production Tax Credit for the Motion Picture Industry Michael Thom. https://escholarship.org/uc/item/3rf6v988
[12] See: https://variety.com/2024/film/news/georgia-drops-cap-billion-dollar-film-tax-credit-1235954200/.
[13] For a fiscal and economic analysis of the program in New York, see: https://esd.ny.gov/sites/default/files/NYS-Film-Tax-Credit-Impacts-2021-2022-REMI.pdf.
[14] See: https://www.gov.ca.gov/2024/10/27/governor-newsom-proposes-historic-expansion-of-film-tv-tax-credit-program/

Conversely, other low-incentive states including Arkansas, Indiana, Maine, Minnesota, and West Virginia have both a very small film and TV sector and a small incentive pool. This is the predicament Oklahoma was in prior to the enactment of the FIOA. Most of these states are highly unlikely to ever build and sustain a large film and TV industry at their current level of incentives.

Three of the states in the bottom tier – Maine, Tennessee, and West Virginia – extended no incentives in the latest year of data. These states all have highly restrictive conditions that must be met before conveying incentive funding to production companies. There is no data yet on the new programs enacted in 2024 in Delaware and neighboring Missouri.

Oklahoma's Share of the Incentive Pie

Our view is that the simultaneous shift by several states to either expand incentives or add new ones worked to offset at least some of the expected competitiveness gains. Oklahoma is now facing far greater competition from states with larger pools, even after the enactment of the FIOA. There are currently $3.22 billion in incentives offered by the 17 states with larger pools in the updated data in Figure 4, up 16% from the $2.73 billion offered by the 25 states with pools larger than Oklahoma's in the 2020 report. If the Legislature's intent with the FIOA was to increase the competitiveness of the state's incentive pool, the effort was only partly successful.

Incentive Spending Per Capita by State

A key policy metric for any incentive program is the relative burden on the state as measured by incentive spending per capita. Larger states will naturally have greater wherewithal to fund film and TV incentives or other economic development expenditures.

Figure 5 provides a comparison of incentive spending on a per capita basis along with measures of the size of the film and TV sector in each state. Per capita estimates are formed using Census state population estimates for 2023. The states are ranked by the amount of incentive funding currently available.

Among the 38 states offering incentives, the payments averaged $12.18 per capita in the latest data, up 12% from $10.87 in the 2020 RegionTrack report.[15] Incentives per capita ranged widely from zero in the three states with restricted eligibility to a high of $81.60 per capita in Georgia.

Oklahoma's incentive spending was only $7.40 per capita, but up nearly four-fold from $2.02 in the 2020 RegionTrack report. The rise is roughly proportional to the expansion of the state's incentive pool from $8 million to $30 million.

Measured across the states offering incentives, per capita spending generally rises with the total amount of incentive spending. A group of seven states offer the most aggressive incentives totaling more than $30 per capita. These states have both high levels of incentive spending per capita and large total incentive pools.

Georgia is an outlier relative to all other states, with both the largest total incentive spending ($900 million) and the highest per capita spending at $81.60 (up about 1% from $81.00 in the 2020 report).

[15] Nationally, film and TV incentives totaled $10.06 per person, up 20% from $8.39 per person in the 2020 RegionTrack report.

New Mexico remains the second highest burden state with $56.75 per person (versus $52.46 in the 2020 report). Five additional states spend more than $30 per capita including New York ($35.77), Connecticut ($33.87), Hawaii ($34.84), Rhode Island ($36.50), and Louisiana ($32.80). All states spending more than $30.00 per capita have a total incentive pool of $40 million or more.

Only three states with a larger total incentive pool than Oklahoma have lower per capita spending. These three include the relatively large states of Texas ($3.28 per capita), North Carolina ($2.86 per capita), and Ohio ($6.36 per capita). Nearby Texas has a far larger total pool ($100 million) than Oklahoma but a much larger population that reduces per capita burden to 21st among the 38 states with an incentive. The large states of Pennsylvania ($7.72 per capita) and California ($8.47 per capita) are the only other states with an incentive pool that is larger than Oklahoma's but spend less than $10 per capita.

As with total incentive spending, California and Georgia set the competitive range for incentive spending on a per capita basis. Georgia's $81.60 per capita is the outlier at the upper end of the range, nearly seven times higher than the overall average of $12.18 for all states with an incentive. In contrast, California's $8.47 per capita is fully 30% below the overall average for states with an incentive and reflects a relatively low financial burden on the state.

Among the nineteen states with a total incentive pool smaller than Oklahoma's, only the very small state of Montana ($10.59 per capita) spends more than Oklahoma per capita. The average per capita spending in states with less total spending than Oklahoma is far lower at only $2.32, which is approximately equal to the spending level in Oklahoma prior to the enactment of the FIOA.

The evidence suggests several key findings for the burden of film and TV incentives in Oklahoma:

1. The state continues to have a relatively small total incentive pool at $30 million annually, 18th among the 38 states with an incentive.
2. The state also has a relatively low overall spending burden of $7.40 per capita. Oklahoma ranks 16th in per capita spend among the states offering incentives.
3. State spending of $7.40 per capita is nearly 40% below the average of $12.18 per capita across all states with an incentive.
4. Relative to the benchmark states of California and Geogia, Oklahoma's per capita spending is 13% below spending in low-burden California and less than 10% of per capita spending in high-burden Georgia.
5. If Oklahoma moved to the overall U.S. average of $12.18 per capita, the state incentive pool would reach roughly $50 million. A $50 million incentive pool would rank only 15th among the 38 states with an incentive, tied with Hawaii.
6. Recent policy proposals have suggested expanding the state's film and TV incentive pool to $80 million annually. This would rank the state 12th among the 38 states with an incentive, just outside the top 11 states with an incentive pool of $100 million or more. Oklahoma would rank just below Arizona, New Jersey, Pennsylvania, and Texas with $100 million each and just above Kentucky, Ohio, and Massachusetts with approximately $75 million each. State spending on a per capita basis would rise to $19.73, ranking Oklahoma 8th among the 37 states offering an incentive.

Figure 5. State Film and TV industry and Incentive Characteristics

State Name	Estab-lish-ments	Employ-ment	Total Compen-sation Paid	Average Annual Comp.	Incen-tive?	Cap or Spend Amount (Mil.)	U.S. Incentive Share	U.S. Employ-ment Share	U.S. Wage Share	Popu-Lation (2023)	Incentives per Capita
United States	30,705	234,885	$27,093,626,65	$115,348		$3,425.5	100.0%	100.0%	100.0%	334,914,895	$10.23
States w/Incent.	27,426	222,549	26,104,198,376	117,296		3,425.5	100.0%	94.7%	96.3%	281,195,073	12.18
Georgia	900	11,732	939,414,763	80,073	YES	900.0	26.7%	5.0%	3.5%	11,029,227	81.60
New York	3,327	39,178	5,135,433,134	131,080	YES	700.0	20.8%	16.7%	19.0%	19,571,216	35.77
California	10,669	108,256	15,232,786,604	140,711	YES	330.0	9.8%	46.1%	56.2%	38,965,193	8.47
Illinois	840	4,907	322,655,741	65,754	YES	157.0	4.7%	2.1%	1.2%	12,549,689	12.51
Louisiana	250	2,394	103,562,223	43,259	YES	150.0	4.5%	1.0%	0.4%	4,573,749	32.80
Connecticut	374	3,043	506,826,016	166,555	YES	122.5	3.6%	1.3%	1.9%	3,617,176	33.87
New Mexico	174	1,220	91,539,792	75,043	YES	120.0	3.6%	0.5%	0.3%	2,114,371	56.75
Arizona	397	1,382	68,531,628	49,589	YES	100.0	3.0%	0.6%	0.3%	7,431,344	13.46
New Jersey	520	3,903	391,546,522	100,319	YES	100.0	3.0%	1.7%	1.4%	9,290,841	10.76
Pennsylvania	498	3,254	256,804,898	78,920	YES	100.0	3.0%	1.4%	0.9%	12,961,683	7.72
Texas	1,475	6,026	493,148,064	81,837	YES	100.0	1.3%	2.6%	1.8%	30,503,301	3.28
Kentucky	231	595	38,277,998	64,333	YES	75.0	2.2%	0.3%	0.1%	4,526,154	16.57
Ohio	428	1,479	90,650,199	61,292	YES	75.0	2.2%	0.6%	0.3%	11,785,935	6.36
Massachusetts	559	3,172	236,411,120	74,531	YES	73.3	2.2%	1.4%	0.9%	7,001,399	10.47
Hawaii	163	1,331	74,982,848	56,336	YES	50.0	1.5%	0.6%	0.3%	1,435,138	34.84
Rhode Island	133	269	20,282,241	75,399	YES	40.0	1.2%	0.1%	0.1%	1,095,962	36.50
North Carolina	750	1,659	128,987,422	77,750	YES	31.0	0.9%	0.7%	0.5%	10,835,491	2.86
Oklahoma	145	495	40,702,746	82,228	**YES**	**30.0**	**0.9%**	**0.2%**	**0.2%**	**4,053,824**	7.40
Alabama	169	608	46,732,578	76,863	YES	20.0	0.6%	0.3%	0.2%	5,108,468	3.92
Maryland	311	1,526	109,219,026	71,572	YES	20.0	0.6%	0.6%	0.4%	6,180,253	3.24
Oregon	590	2,572	205,814,738	80,021	YES	20.0	0.6%	1.1%	0.8%	4,233,358	4.72
South Carolina	213	686	37,174,319	54,190	YES	17.0	0.5%	0.3%	0.1%	5,373,555	3.16
Missouri	278	907	69,200,625	76,296	YES	16.0	0.5%	0.4%	0.3%	6,196,156	2.58
Washington	429	2,270	213,392,342	94,005	YES	15.0	0.4%	1.0%	0.8%	7,812,880	1.92
Montana	138	347	31,758,181	91,522	YES	12.0	0.4%	0.1%	0.1%	1,132,812	10.59
Mississippi	78	173	5,834,450	33,725	YES	10.1	0.3%	0.1%	0.0%	2,939,690	3.44
Nevada	274	2,228	105,827,275	47,499	YES	10.0	0.3%	0.9%	0.4%	3,194,176	3.13
Virginia	382	1,914	154,906,048	80,933	YES	6.5	0.2%	0.8%	0.6%	8,715,698	0.75
Utah	461	4,052	160,251,878	39,549	YES	6.4	0.2%	1.7%	0.6%	3,417,734	1.87
Colorado	626	1,907	142,758,658	74,860	YES	5.0	0.1%	0.8%	0.5%	5,877,610	0.85
Indiana	264	592	45,713,002	77,218	YES	5.0	0.1%	0.3%	0.2%	6,862,199	0.73
Arkansas	132	288	21,069,217	73,157	YES	4.0	0.1%	0.1%	0.1%	3,067,732	1.30
District of	175	749	85,358,506	113,963	YES	2.0	0.1%	0.3%	0.3%	678,972	2.95
Minnesota	264	906	56,118,333	61,941	YES	1.7	0.0%	0.4%	0.2%	5,737,915	0.29
Delaware	76	67	5,783,163	86,316	YES	1.0	0.0%	0.0%	0.0%	1,031,890	0.97
Maine	127	196	16,173,001	82,515	YES	0.0	0.0%	0.1%	0.1%	1,395,722	0.00
Tennessee	556	5,954	392,264,539	65,883	YES	0.0	0.0%	2.5%	1.4%	7,126,489	0.00
West Virginia	50	312	26,304,538	84,335	YES	0.0	0.0%	0.1%	0.1%	1,770,071	0.00
Alaska	34	212	17,887,086	84,176	NO	-	-	0.1%	0.1%	733,406	-
Florida	1,782	7,666	666,879,605	86,992	NO	-	-	3.3%	2.5%	22,610,726	-
Idaho	123	201	14,919,377	74,226	NO	-	-	0.1%	0.1%	1,964,726	-
Iowa	99	225	12,792,251	56,854	NO	-	-	0.1%	0.0%	3,207,004	-
Kansas	101	190	9,853,808	51,862	NO	-	-	0.1%	0.0%	2,940,546	-
Michigan	556	1,936	126,037,993	65,102	NO	-	-	0.8%	0.5%	10,037,261	-
Nebraska	78	139	8,708,462	62,651	NO	-	-	0.1%	0.0%	1,978,379	-
New Hampshire	104	391	41,769,649	106,828	NO	-	-	0.2%	0.2%	1,402,054	-
North Dakota	35	120	6,629,394	55,245	NO	-	-	0.1%	0.0%	783,926	-
South Dakota	57	410	29,987,173	73,180	NO	-	-	0.2%	0.1%	919,318	-
Vermont	82	147	11,028,438	75,023	NO	-	-	0.1%	0.0%	647,464	-
Wisconsin	184	630	38,277,975	60,759	NO	-	-	0.3%	0.1%	5,910,955	-
Wyoming	44	69	4,657,069	67,494	NO	-	-	0.0%	0.0%	584,057	-

Source: Bureau of Labor Statistics and Bureau of Economic Analysis. Estimates derived from state film office releases, state budgets, and other public reports.

Notes: Maine, Tennessee, and West Virginia have an incentive program but reported no payments in FY2024. The reported program size in each state reflects either the cap size, the amount of actual spending when no cap is in place, or the amount of actual spending when it differs greatly from the cap.

IV. Growth Trends in the Oklahoma Film & TV Sector

A key expectation of the state's newly expanded incentive program is the generation of substantial growth in the overall film and TV sector. To build and sustain a larger and more permanent film and TV sector in the state, the incentives must trigger visible growth – both incentivized and non-incentivized – in the various sectors of the industry.

This section of the report uses federal datasets to evaluate the degree to which the state's film and TV industry has responded to the expansion of the state's incentive pool. The industry now has more than three full years of experience with the larger $30 million incentive pool behind it, which provides an ample waiting period for a follow-up evaluation.

It is important to note that this section of the report evaluates changes in the *overall* film and TV sector, not just the amount of *incentivized* activity. Incentivized activity is up sharply, roughly in proportion to the incentive pool, and was summarized in Figure 2.

Film and TV Industry Definition

We define the film and TV sector using the following four 6-digit NAICS sectors:

1. NAICS 512110 – Motion Picture and Video Production
2. NAICS 512120 – Motion Picture and Video Distribution
3. NAICS 512191 – Teleproduction and Postproduction Services
4. NAICS 512199 – Other Motion Picture and Video Industries

These four core sectors are commonly used in existing studies to define the scope and size of the film and TV sector. This approach is also consistent with the definition used in the 2020 RegionTrack report. Little disagreement is found among researchers over whether these sectors are directly related to film and TV activity. All four sectors are also believed to be closely associated with the intended economic activity underlying most state film and TV incentives.

Some research uses a far broader definition of the film and TV industry that includes a range of additional NAICS sectors.[16] We view sectors beyond these four core NAICS sectors as involving only indirect activity which can be captured through estimated spillover effects resulting from the direct activity in the four core sectors.

National Film and TV Activity

To provide an initial profile of the industry at the national level, Figure 6 details recently released data on hiring and wages in the film and TV sector using the latest full year of data available for 2023. The data are derived from the Quarterly Census of Employment and Wages produced by the Bureau of Labor Statistics. Film and TV sector totals are defined using the four core sectors (NAICS 512110, 512120,

[16] We continue to exclude many indirectly related NAICS sectors from the definition of the film and TV sector. Additional sectors that may be used in studies of the film and TV industry include the following: NAICS 512131 – Motion Picture Theaters excluding Drive-Ins; NAICS 512132 – Drive-In Motion Picture Theaters; All music-specific sectors underlying NAICS 5122 (512220, 512230, 512240, 512290); NAICS 5151 – Broadcast Radio and TV; NAICS 515210 – Cable and Other Subscription Programming; NAICS 531120 – Commercial Real Estate Lessors; NAICS 532490 – Equipment Rental; NAICS 5419 – Marketing Services; NAICS 711110 – Theater Companies and Dinner Theaters; NAICS 711120 – Dance Companies; NAICS 711130 – Musical Groups and Artists; NAICS 711190 – Other Performing Arts Companies; NAICS 711410 – Agents and Managers for Public Figures; and NAICS 711510 – Independent Artists, Writers, and Performers. Although most of these categories may have some, and possibly significant, overlap with Film and TV in practice, they fall primarily outside the specific categories of activity generally traced directly to film and TV production as defined under state incentive programs.

512191, and 512199) discussed earlier and shown in the last row of Figure 6.[17] The relative contribution of each of the four sectors is also detailed.

In 2023, the U.S. film and TV sector consisted of a combined 30,700 business establishments that employed nearly 235,000 workers who earned $27.1 billion in wages. The industry continues to offer very high average wages, with workers in the sector earning a reported average of $115,348 in compensation in 2023.

Proponents of the industry typically point to the high average wages paid in the sector as a key reason for supporting incentives. Few sectors offer comparably high average wages in most states. High average wages also underly much of the interest of Oklahoma's economic development community in attracting film and TV activity, particularly those in rural areas. Even most critics of film and TV incentives acknowledge the high average wages paid across the industry in most states.

Figure 6. Profile of the U.S. Film and TV Sector by Component Industries (2019 to 2023)

NAICS Code	NAICS Code Description	Number of Establish-ments	Number of Employees	Annual Wages ($)	Average Annual Wage
512110	Motion picture and video production	25,215	205,865	$23,647,567,763	$114,869
512120	Motion picture and video distribution	805	8,505	1,268,633,705	149,163
512191	Teleproduction and other postproduction services	3,935	17,409	1,910,763,294	109,757
512199	Other motion picture and video industries	749	3,105	266,661,894	85,881
Film & TV (512110 + 512120 + 512191 + 512199)		30,704	234,885	$27,093,626,656	$115,348

Source: Bureau of Labor Statistics-Quarterly Census of Employment and Wages (QCEW)
Notes: The film and TV sector is defined using NAICS codes 512110, 512120, 512191, and 512199.

Sector 512110 is the largest component of the film and TV sector and comprises more than 80% of total firms, jobs, and payroll. Some existing research on the film and TV sector focuses solely on NAICS 512110, arguing that it is the sector most closely aligned with the issuance of incentives. For example, the Oklahoma Incentive Evaluation Committee used only NAICS 512110 in evaluating growth in the industry over time in its November 2024 report on the sector. In our view, including only NAICS 512110 results in an unnecessarily narrow definition that excludes nearly 20% of employment and payroll in the broader sector and produces overly conservative estimates of industry size. We recommend that all evaluations of the film and TV sector include all four components detailed in Figure 6 when possible.

U.S. Film and TV Growth Trends

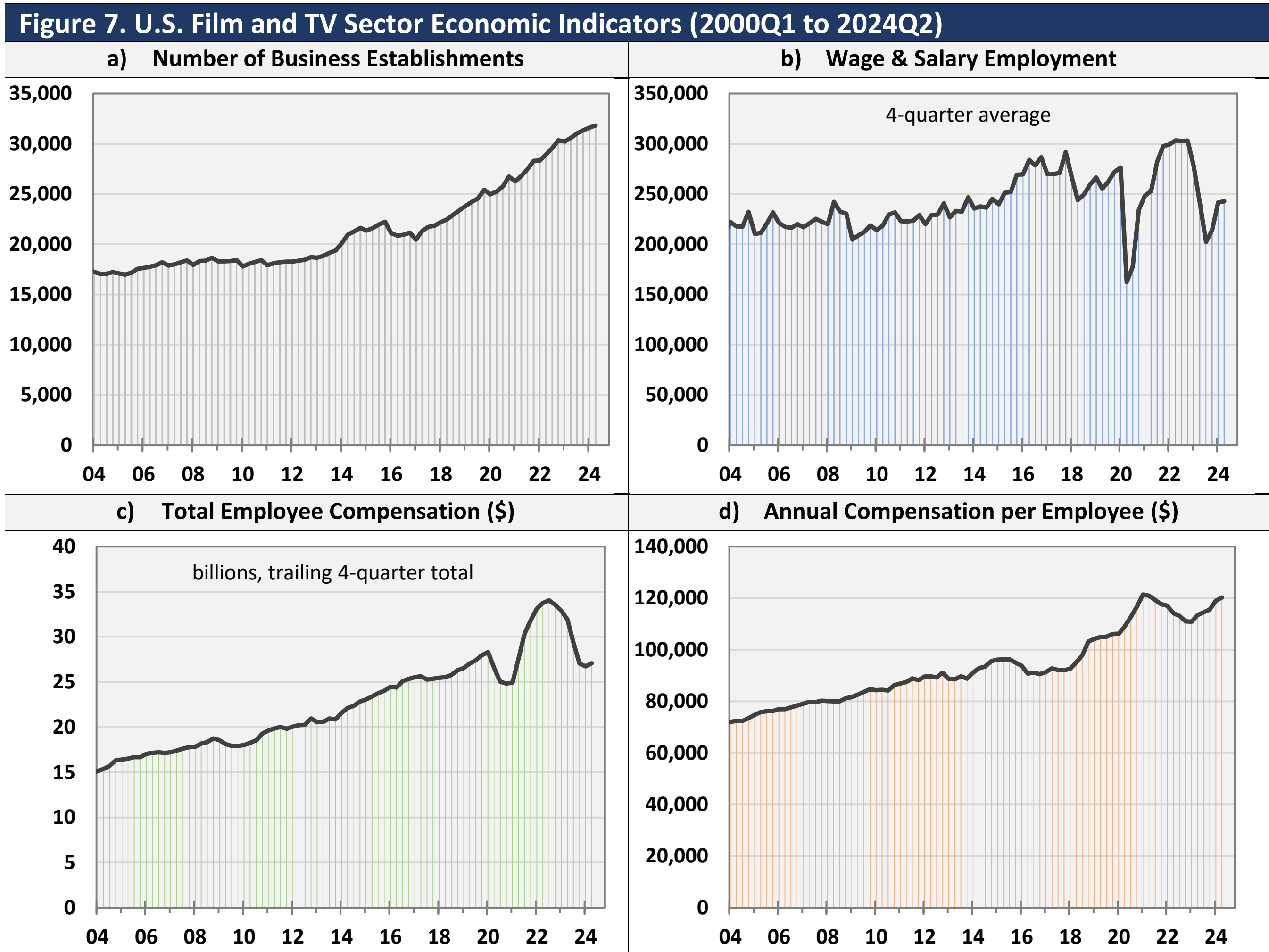
To evaluate recent growth in the U.S. film and TV sector, Figure 7 provides historical data on the number of establishments, employment, total compensation paid to employees, and average compensation paid per worker the past two decades. The data is quarterly and extends across approximately two decades from the first quarter of 2004 to the second quarter of 2024.

Since the onset of the pandemic, the film and TV sector at the national level has experienced significant gyrations. The sector entered a deep downturn at the onset of the pandemic in early 2020 as active

[17] A convenient method for calculating the Film and TV total that overcomes the suppression of some data at the state level is to subtract NAICS 51213 from NAICS 5121. Nearly all of the underlying QCEW data at the state level is fully disclosed for these two sectors.

productions shut down amid social distancing and shelter-in-place orders. Employment in the sector dropped sharply, which produced a steep pullback in total wages paid. Average wages per worker surged in the early stages of the pandemic, which likely reflects steeper job cuts among lower wage jobs.

Figure 7. U.S. Film and TV Sector Economic Indicators (2000Q1 to 2024Q2)



Source: Bureau of Labor Statistics-Quarterly Census of Employment and Wages (QCEW)
Notes: Includes NAICS sectors 512110, 512120, 512191, and 512199

The industry rebounded sharply in 2021 and 2022 as filming resumed and demand for streaming content spiked. Both employment and wages in the sector surged through late 2022 but entered another period of consolidation in 2023 as the Writers Guild of America (WGA) entered a five-month work stoppage over a labor dispute.[18] The strike extended from May 2 to September 27, 2023, lasting 148 days. The industry experienced significant job and wage losses nationally throughout most of 2023. Recovery began in the fourth quarter of 2023 but left the industry with a 30% decline in employment and a 20% decline in total payroll across the prior four quarters.

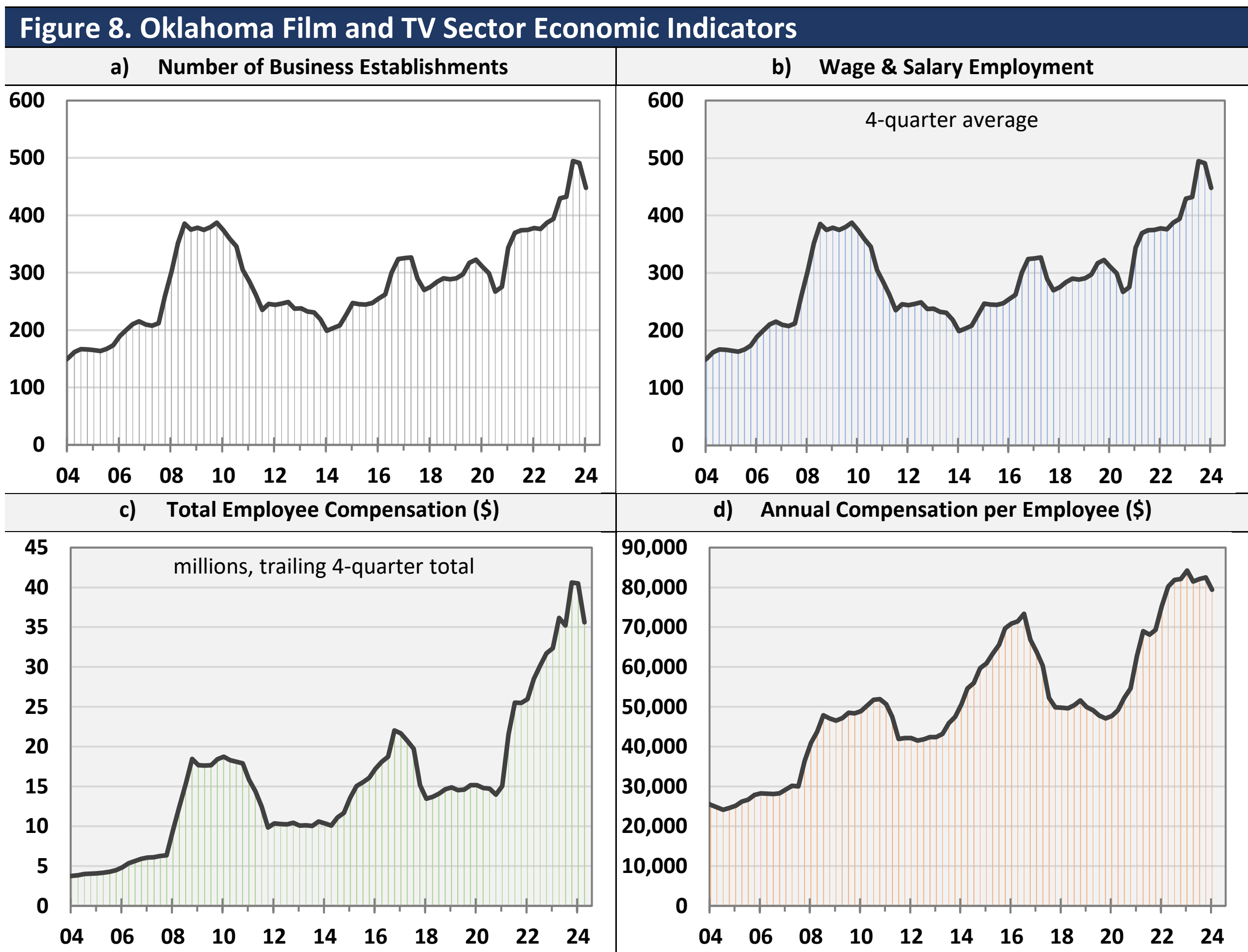
Overall, the U.S. film and TV sector has posted relatively weak performance since the onset of the pandemic, mostly due to work disruptions along the way. Both employment and total compensation remain below pre-pandemic levels in the latest data through the second quarter of 2024, with

[18] For additional details on the strike, see: https://en.wikipedia.org/wiki/2023_Writers_Guild_of_America_strike

employment down 11% and total wages down 3% relative to the fourth quarter of 2019. More positively, the average annual compensation paid has moved above its pre-pandemic level to about $120,300 per worker in the second quarter of 2024. The number of establishments also increased steadily across the full period, adding about 6,400 new firms (25% growth) in the period. Based on limited employment growth in the full period, many of the new establishments are likely businesses with either no employees or few employees.[19]

Oklahoma Film and TV Growth Trends

Figure 8 provides the same set of economic measures for the Oklahoma film and TV sector from the first quarter of 2004 to the second quarter of 2024. In contrast to weakness in the sector nationally, Oklahoma's film and television sector produced substantial growth since the onset of the pandemic in 2020. Some recent weakness is visible in the data in the first half of 2024 but is not yet clearly a downtrend.



The film and TV sector in Oklahoma far outpaced the sector at the national level since the early stages of the pandemic. While the national industry experienced significant contraction at the onset of the

[19] Nonemployer businesses are quite common and include a range of business types with no paid employees. For data on nonempoyers, see: https://www.census.gov/programs-surveys/nonemployer-statistics.html

pandemic, Oklahoma's sector faced only a minor downturn and has since achieved sustained and robust expansion. This reflects, in part, the less restrictive social distancing requirements implemented in Oklahoma relative to other states.

Figure 9 summarizes economic growth in the sector in Oklahoma versus the nation since the onset of the pandemic. From the fourth quarter of 2019 to the second quarter of 2024, the number of film and TV establishments in Oklahoma surged 46% (+50 establishments), employment increased 49% (+175 jobs), and total wages surged 135% (+$20.4 million). Notably, average wages in the industry increased by 66%, climbing from $47,780 in late 2019 to $79,450 by mid-2024, underscoring the sector's increased vitality and competitiveness in Oklahoma.

Figure 9. Growth in the Film and TV Sector (2019Q4 to 2024Q2)

Economic Measure	U.S.	Oklahoma
Number of Business Establishments	25.3%	45.9%
Wage and Salary Employment	-10.6%	48.9%
Total Employee Compensation	-3.2%	134.8%
Annual Compensation per Worker	13.4%	66.3%

Source: Bureau of Labor Statistics-Quarterly Census of Employment and Wages (QCEW)
Notes: Includes NAICS sectors 512110, 512120, 512191, and 512199

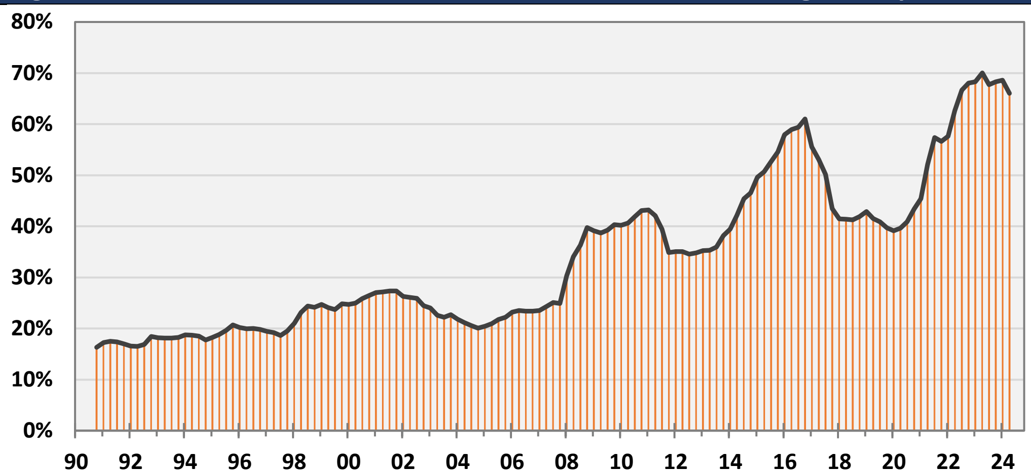
Oklahoma's film and television sector outperformed the national trend on all four measures. While the number of business establishments in the film and TV sector increased by 25.3% nationally, Oklahoma posted a 45.9% gain, reflecting almost double the rate of formation of state film and TV businesses relative to the nation.

Nationally, wage and salary employment in the sector contracted by 10.6%, a clear indicator of the challenges faced by the industry since the onset of the pandemic. In stark contrast, Oklahoma experienced an impressive 48.9% growth in employment, highlighting the state's ability to create film and TV jobs in a challenging environment. Similarly, total employee compensation at the national level declined slightly by 3.2% but surged by an impressive 134.8% in Oklahoma.

Annual compensation per worker also highlights Oklahoma's stronger performance. While average pay rose a modest 13.4% nationally, it jumped 66.3% in Oklahoma, indicating a significant improvement in earnings for workers and a shift toward higher-wage employment in the state.

The state also picked up considerable share relative to the U.S. in average compensation per employee in the sector since 1990 (*see Figure 10*). At the onset of the pandemic and prior to the expanded state incentive pool, film and TV workers in Oklahoma received only about 40% of the average annual compensation earned nationally in the sector. This reflects differences in both job quality and hours worked each year. The share has ranged from 65-70% since 2022. Two decades ago, Oklahoma workers earned only about 20% of the average annual wage paid nationally. The difference has historically been attributed to a high share of part-time employment and limited professional opportunities in the film and TV sector.

Figure 10. Oklahoma Share of U.S. Film and TV Sector Average Compensation



Source: Bureau of Labor Statistics-Quarterly Census of Employment and Wages (QCEW)
Notes: Includes NAICS sectors 512110, 512120, 512191, and 512199

Film and TV Sector Growth in Competing States

While Oklahoma's film and TV sector posted impressive results relative to the nation since the onset of the pandemic, it is important to understand how the state fared against other states offering film and TV incentives.

Figure 11 provides a comparative view of growth in the film and TV sector in each state in the 2019 to 2023 period. This period encompasses both the full pandemic cycle and the enactment of the FIOA. The first portion of Figure 11 compares the states with a general incentive program currently in place while the second portion compares the states with no incentive in place. The rankings shown are relative to all 50 states and the District of Columbia.

Several state-level trends from 2019 to 2023 are noteworthy in the data:

1. The results highlight a very strong comparative performance for Oklahoma relative to the other states with an incentive in place. Across the 2019 to 2023 period, Oklahoma ranked 6th in employment growth (56.2%), 4th in total compensation growth (169%), and 9th in change in annual compensation per worker (72.3%) among the states.
2. Oklahoma is the only state to rank among the top ten on all three measures – employment, total compensation paid, and average compensation – over the period, the strongest overall performance among the 37 states offering incentives.
3. The recent weakness in the national film and TV market discussed earlier in the report is largely confined to those states offering the largest pools of incentives. Ten of the 11 states with an incentive pool greater than $100 million posted job losses and declines in total compensation paid in the film and TV sector from 2019 to 2023. Four of the top 10 states measured by total incentives posted a decline in average compensation paid per worker.
4. Only one state (Arizona) among the ten largest incentive pools managed to rank among the top 20 states based on any single measure of economic growth.
5. The three largest markets – California, New York, and Georgia – measured by both size of incentive pool and total industry size suffered the greatest losses in economic activity in the

period. California alone lost approximately 12,500 workers and more than $1 billion in wages across the period. New York lost 10,500 workers while Georgia lost 4,700 in the period. New York and Georgia each lost approximately $200 million in compensation in the period.

6. Of note is that the 13 states with no incentive pool posted far stronger growth in the film and TV sector than the states with the largest incentive pools. Twelve of the 13 states with no incentive posted a gain in total compensation in the period while 9 of the top 11 states with an incentive pool of $100 million or more posted a decline in total compensation paid.
7. However, Florida was the only state among the 13 states without an incentive to post substantial growth in the film and TV sector in the period. Florida added almost 800 jobs and more than $140 million in total compensation paid. Michigan is the only other state with no incentive to add more than 100 jobs in the period.
8. Wage growth per worker in the film and TV sector remained generally strong across the states. Only nine states posted a decline in average compensation per worker in the period. Seven of these states had incentive programs in place, with six having an incentive pool of $40 million or more. Two of the states – North Dakota and Wyoming – with falling average compensation per worker over the period had no incentive program.
9. Of the 17 states with an incentive program larger than Oklahoma's, only five posted a gain in total compensation paid in the film and TV sector in the period. Only two states – Texas and North Carolina – added more total compensation in the film and TV sector than Oklahoma across the period. Oklahoma added $25.6 million, versus $103.6 million for Texas and $26.4 million for North Carolina.
10. Louisiana's film and TV sector suffered the largest percentage pullback in activity among the states from 2019 to 2023, with a nearly 50% decline in employment and 60% decline in total compensation paid.

For policymakers, the results suggest that the national film and TV industry faced a challenging business environment since the onset of the pandemic. However, much of the resulting economic weakness that occurred is confined to the states with the largest film and TV sectors and the largest incentive pools. These states seemingly acted as swing producers as production pulled back in challenging times. Many of the largest producing states posted meaningful declines in activity over the full period. In contrast, the states with no incentive in place had generally stronger growth in the film and TV sector and exhibited far less volatility.

Figure 11. Film and TV Sector Performance by State (2019 to 2023)

	2019 Profile			2023 Profile			Change 2019 to 2023			%Change 2019 to 2023 (Rank)						Incentive	
State	Employ-ment	Total Annual Compen-sation	Average Annual Comp.	Employ-ment	Total Annual Compen-sation	Average Annual Comp.	Employ-ment	Total Annual Compen-sation	Average Annual Comp.	Employ-ment	Rank	Total Annual Compen-sation	Rank	Average Annual Comp.	Rank	Y/N	Cap/ Spend (millions)
Georgia	16,433	$1,142,403,921	$69,519	11,732	$939,414,763	$80,073	-4,701	-$202,989,158	$10,554	-28.6%	*47*	-17.8%	*46*	15.2%	*30*	Y	$900.0
New York	49,692	5,335,793,411	107,377	39,178	5,135,433,134	131,080	-10,514	-200,360,277	23,703	-21.2%	*46*	-3.8%	*39*	22.1%	*25*	Y	700.0
California	120,752	16,292,946,411	134,929	108,256	15,232,786,604	140,711	-12,496	-1,060,159,807	5,782	-10.3%	*36*	-6.5%	*44*	4.3%	*40*	Y	330.0
Illinois	4,458	377,765,857	84,739	4,907	322,655,741	65,754	449	-55,110,116	-18,985	10.1%	*22*	-14.6%	*45*	-22.4%	*47*	Y	157.0
Louisiana	4,450	263,874,985	59,298	2,394	103,562,223	43,259	-2,056	-160,312,762	-16,039	-46.2%	*50*	-60.8%	*51*	-27.0%	*49*	Y	150.0
Connecticut	3,627	507,926,258	140,040	3,043	506,826,016	166,555	-584	-1,100,242	26,515	-16.1%	*40*	-0.2%	*36*	18.9%	*27*	Y	122.5
New Mexico	2,205	176,794,240	80,179	1,841	145,129,460	78,832	-364	-31,664,780	-1,347	-16.5%	*41*	-17.9%	*47*	-1.7%	*44*	Y	120.0
Arizona	1,514	48,521,976	32,049	1,382	68,531,628	49,589	-132	20,009,652	17,540	-8.7%	*34*	41.2%	*18*	54.7%	*13*	Y	100.0
New Jersey	4,081	410,229,434	100,522	3,903	391,546,522	100,319	-178	-18,682,912	-203	-4.4%	*29*	-4.6%	*42*	-0.2%	*43*	Y	100.0
Pennsylvania	3,928	268,229,531	68,287	3,254	256,804,898	78,920	-674	-11,424,633	10,633	-17.2%	*44*	-4.3%	*41*	15.6%	*28*	Y	100.0
Texas	6,290	389,513,731	61,926	6,026	493,148,064	81,837	-264	103,634,333	19,911	-4.2%	*28*	26.6%	*24*	32.2%	*20*	Y	100.0
Kentucky	468	22,313,002	47,677	595	38,277,998	64,333	127	15,964,996	16,656	27.1%	*9*	71.6%	*14*	34.9%	*17*	Y	75.0
Ohio	1,779	96,508,741	54,249	1,479	90,650,199	61,292	-300	-5,858,542	7,043	-16.9%	*42*	-6.1%	*43*	13.0%	*33*	Y	75.0
Massachusetts	3,383	233,458,246	69,009	3,172	236,411,120	74,531	-211	2,952,874	5,522	-6.2%	*30*	1.3%	*35*	8.0%	*38*	Y	73.3
Hawaii	1,560	96,699,495	61,987	1,331	74,982,848	56,336	-229	-21,716,647	-5,651	-14.7%	*38*	-22.5%	*48*	-9.1%	*46*	Y	50.0
Rhode Island	388	29,978,339	77,264	269	20,282,241	75,399	-119	-9,696,098	-1,865	-30.7%	*49*	-32.3%	*50*	-2.4%	*45*	Y	40.0
North Carolina	1,779	102,574,998	57,659	1,659	128,987,422	77,750	-120	26,412,424	20,091	-6.7%	*32*	25.7%	*26*	34.8%	*18*	Y	31.0
Oklahoma	317	15,127,916	47,722	495	40,702,746	82,228	178	25,574,830	34,506	56.2%	*6*	169.1%	*4*	72.3%	*9*	Y	30.0
Alabama	721	$41,746,620	57,901	608	46,732,578	76,863	-113	4,985,958	18,962	-15.7%	*39*	11.9%	*32*	32.7%	*19*	Y	20.0
Maryland	1,436	92,362,939	64,320	1,526	109,219,026	71,572	90	16,856,087	7,252	6.3%	*24*	18.2%	*30*	11.3%	*37*	Y	20.0
Oregon	2,944	162,830,185	55,309	2,572	205,814,738	80,021	-372	42,984,553	24,712	-12.6%	*37*	26.4%	*25*	44.7%	*15*	Y	20.0
South Carolina	971	51,706,170	53,250	686	37,174,319	54,190	-285	-14,531,851	940	-29.4%	*48*	-28.1%	*49*	1.8%	*41*	Y	17.0
Missouri	1,091	53,089,407	48,661	907	69,200,625	76,296	-184	16,111,218	27,635	-16.9%	*43*	30.3%	*22*	56.8%	*11*	Y	16.0
Washington	2,048	109,498,743	53,466	2,270	213,392,342	94,005	222	103,893,599	40,539	10.8%	*21*	94.9%	*8*	75.8%	*8*	Y	15.0
Montana	290	17,290,921	59,624	347	31,758,181	91,522	57	14,467,260	31,898	19.7%	*13*	83.7%	*11*	53.5%	*14*	Y	12.0
Mississippi	218	5,979,384	27,428	173	5,834,450	33,725	-45	-144,934	6,297	-20.6%	*45*	-2.4%	*37*	23.0%	*24*	Y	10.1
Nevada	1,549	63,864,512	41,230	2,228	105,827,275	47,499	679	41,962,763	6,269	43.8%	*7*	65.7%	*15*	15.2%	*29*	Y	10.0
Virginia	1,884	135,957,131	72,164	1,914	154,906,048	80,933	30	18,948,917	8,769	1.6%	*26*	13.9%	*31*	12.2%	*36*	Y	6.5
Utah	2,165	113,029,841	52,208	4,052	160,251,878	39,549	1,887	47,222,037	-12,659	87.2%	*4*	41.8%	*17*	-24.2%	*48*	Y	6.4
Colorado	1,648	96,303,384	58,437	1,907	142,758,658	74,860	259	46,455,274	16,423	15.7%	*17*	48.2%	*16*	28.1%	*22*	Y	5.0
Indiana	478	26,398,930	55,228	592	45,713,002	77,218	114	19,314,072	21,990	23.8%	*11*	73.2%	*13*	39.8%	*16*	Y	5.0
Arkansas	224	15,629,404	69,774	288	21,069,217	73,157	64	5,439,813	3,383	28.6%	*8*	34.8%	*21*	4.8%	*39*	Y	4.0
Dist. of Columbia	615	62,261,009	101,237	749	85,358,506	113,963	134	23,097,497	12,726	21.8%	*12*	37.1%	*20*	12.6%	*34*	Y	2.0
Minnesota	933	50,276,258	53,887	906	56,118,333	61,941	-27	5,842,075	8,054	-2.9%	*27*	11.6%	*33*	14.9%	*31*	Y	1.7
Delaware	63	716,384	11,371	67	5,783,163	86,316	4	5,066,779	74,945	6.3%	*23*	707.3%	*1*	659.1%	*1*	Y	1.0
Maine	169	7,917,032	46,846	196	16,173,001	82,515	27	8,255,969	35,669	16.0%	*15*	104.3%	*6*	76.1%	*7*	Y	0.0
Tennessee	5,739	314,694,025	54,834	5,954	392,264,539	65,883	215	77,570,514	11,049	3.7%	*25*	24.6%	*27*	20.1%	*26*	Y	0.0
West Virginia	232	6,406,686	27,615	112	6,214,930	55,490	-120	-191,756	27,875	-51.7%	*51*	-3.0%	*38*	100.9%	*3*	Y	0.0

Continued

Figure 11. (Continued) Film and TV Sector Performance by State (2019 to 2023)

	2019 Profile			2023 Profile			Change 2019 to 2023			%Change 2019 to 2023 (Rank)						Incentive	
State	Employ-ment	Total Annual Compen-sation	Average Annual Comp.	Employ-ment	Total Annual Compen-sation	Average Annual Comp.	Employ-ment	Total Annual Compen-sation	Average Annual Comp.	Employ-ment	Rank	Total Annual Compen-sation	Rank	Average Annual Comp.	Rank	Y/N	Cap/ Spend (millions)
Alaska	40	$1,379,916	$34,498	68	$4,387,086	$64,516	28	$3,007,170	$30,018	70.0%	5	217.9%	3	87.0%	4	N	-
Florida	6,875	525,182,207	76,390	7,666	666,879,605	86,992	791	141,697,398	10,602	11.5%	20	27.0%	23	13.9%	32	N	-
Idaho	105	4,412,582	42,025	201	14,919,377	74,226	96	10,506,795	32,201	91.4%	3	238.1%	2	76.6%	6	N	-
Iowa	249	12,612,249	50,652	225	12,792,251	56,854	-24	180,002	6,202	-9.6%	35	1.4%	34	12.2%	35	N	-
Kansas	167	7,002,262	41,930	190	9,853,808	51,862	23	2,851,546	9,932	13.8%	18	40.7%	19	23.7%	23	N	-
Michigan	1,622	104,078,712	64,167	1,936	126,037,993	65,102	314	21,959,281	935	19.4%	14	21.1%	28	1.5%	42	N	-
Nebraska	110	4,435,887	40,326	139	8,708,462	62,651	29	4,272,575	22,325	26.4%	10	96.3%	7	55.4%	12	N	-
New Hampshire	350	22,762,651	65,036	391	41,769,649	106,828	41	19,006,998	41,792	11.7%	19	83.5%	12	64.3%	10	N	-
North Dakota	42	3,437,024	81,834	120	6,629,394	55,245	78	3,192,370	-26,589	185.7%	1	92.9%	9	-32.5%	50	N	-
South Dakota	143	5,191,100	36,301	133	9,987,113	75,091	-10	4,796,013	38,790	-7.0%	33	92.4%	10	106.9%	2	N	-
Vermont	127	5,164,259	40,663	147	11,028,438	75,023	20	5,864,179	34,360	15.7%	16	113.6%	5	84.5%	5	N	-
Wisconsin	672	31,813,090	47,341	630	38,277,975	60,759	-42	6,464,885	13,418	-6.3%	31	20.3%	29	28.3%	21	N	-
Wyoming	36	4,839,041	134,418	69	4,657,069	67,494	33	-181,972	-66,924	91.7%	2	-3.8%	40	-49.8%	51	N	-
United States	**263,064**	**$27,970,947,389**	**106,328**	**234,885**	**$27,093,626,656**	**$115,348**	**-28,175**	**-$877,303,781**	**$9,020**	**-10.7%**		**-3.1%**		**8.5%**			**$3,425.5**

Source: Bureau of Labor Statistics – Quarterly Census of Employment and Wages (QCEW). Incentive estimates derived from state film office releases, state budgets, and other public reports.

V. Measuring the Economic and Tax Contribution of Film and TV

Another objective of this report is to delve more deeply into the ongoing policy debate over evaluations of the economic and tax contributions of the film and TV sector in Oklahoma. Little consensus has formed around the proper metrics for measuring the success or desirability of a state film and TV incentive. As a result, the public policy view of film and TV incentives has become highly polarized into two competing views of the industry:

> *In short, advocates argue that the film and TV sector is an excellent source of new high-wage and high-skill jobs that uniquely add to the quality of life in a region.*

> *Critics argue that it is not a cost-effective use of public funds and that alternative uses may provide a greater economic return.*

These seemingly irreconcilable views provide an uncertain foundation for policymakers and the public to evaluate the appropriateness of film and TV incentives for a state or local area.

Policy Debate

Our evaluation of existing research continues to suggest that proponents and critics of the industry can be both right and wrong. There are numerous costs and benefits to using financial incentives to attract any industry, with the disagreements over policy frequently falling along the line of which costs and which benefits are more important to the evaluator.

Hence, one of the goals of this section of the report is to provide better estimates of both the costs and benefits of film and TV incentives to better inform the ongoing policy debate and close the gap between these two views.

Much of the analysis in the section includes a detailed evaluation of the latest estimates of the economic and tax contribution of the sector provided by the state's Incentive Evaluation Committee. Our detailed review of the report highlights significant methodological and data concerns with the findings that exacerbate the policy debate rather than resolve it.

Tax Revenue Recovery. Much of the policy debate around film and TV incentives hinges around a single issue - the amount of tax revenue recovery taking place. Critics of film and TV incentives often apply a near litmus test where any project that does not produce full tax recovery is deemed undesirable, regardless of the range of additional benefits produced.

What is often ignored is that the hurdle of full tax recovery simply cannot be cleared by many incentive-funded economic development efforts, including professional sports franchises and other popular entertainment mediums. Much like film and TV incentives, advocates for professional sports teams point to high public demand for the non-traditional benefits of increased quality of life through added entertainment options. Many economists staunchly oppose this view and reject the idea of providing any financial incentives to sports- or entertainment-related ventures, regardless of benefits reported by the public.

However, as noted in the 2020 RegionTrack report, *"Sports activities and stadiums commonly receive strong public support for tax assistance despite widespread reports of a lack of impact on local economic development (Coates and Humphrey, 2008).* Opposition from economists on tax recovery grounds nearly always accompanies the construction of sports stadiums and arenas and other large public entertainment-related infrastructure. Economists who hold this view typically ignore the intangible benefits and consider only the direct quantitative benefits, instead focusing largely on the costs.

The most basic concern with focusing state policy decisions solely on tax recovery is that other desirable outcomes may be overlooked in the process. In addition to high wage and high skill jobs and improved quality of life, economic development officials and other advocates for the film and TV industry often cite non-traditional measures of impact such as greater national and international exposure, broader entertainment options, increased tourism, diversification of the job base, attraction of the creative class, and expansion of the arts. These benefits can be highly valued by both policymakers and the public, even when accompanied by less than full tax recovery.

As stressed in the 2020 RegionTrack report, "*There is evidence to suggest that states have adopted film incentives for intangible benefits such as quality of life and publicity (Sewordor and Sjoquist, 2016), which should be weighed against other policy objectives rather than simply assessed on narrow economic outcome metrics."*

Another real-world reason why a strict tax recovery hurdle is rarely used to evaluate government spending is that it would not be cleared by many of the core public services engaged in by state and local governments. In fact, there would be little need for taxation, at all, if government spending routinely produced full tax recovery.

Again, from the 2020 RegionTrack report, *"There is little evidence that state and local tax reductions pay for themselves (Rickman and Wang, 2018) and in fact may only produce revenue through increased economic activity (Berck, Golan and Smith, 1997) approximately equal to the amounts typically reported for film incentives. Governments spend dollars on education and highways because of beliefs such expenditures may generate returns through increased economic activity (Bartik, 2019b). Society simply may intrinsically value education, increased safety on the roads, public libraries, parks, etc."*

Nevertheless, there are valid reasons for examining the tax revenue recovery associated with all incentive programs. When tax recovery is not considered, it tends to create incentive programs that are unnecessarily generous and costly. Incentive payout rates that are unnecessarily high is one example of the concern. Managing this risk is one of the purposes behind the regular economic evaluations performed by the state's Incentive Evaluation Committee – that is, to identify programs that may not provide adequate benefits to compensate for the costs. It is also the reason why sunset provisions should always accompany the creation of economic development incentive programs.

No Incentives for Any Reason. The least meaningful criticisms of the film and TV sector come from those who simply oppose almost any use of publicly funded financial incentives, regardless of the level of cost recovery. These detractors view most forms of state incentives as a poor use of taxpayer funds, arguing that much of the incentivized activity would likely locate within the state without incentives or that it leads to crony capitalism or distortions in the marketplace.

In the current film and TV environment, the 'likely to locate here anyway' argument is not supported by research or history. Decades of modest amounts of film and TV activity in Oklahoma prior to the implementation of the incentive suggest that the industry is unlikely to expand significantly in Oklahoma without them. Considerable existing research reviewed in the 2020 RegionTrack report consistently finds that film and TV industry activity is unlikely to shift to most states – either temporarily or permanently – without the inducement of incentives.

While some critics concede that the film and TV industry can use incentives to create significant new jobs and wages, they often counter that the gains reported in economic impact evaluations of the programs are exaggerated. Other criticisms note problems associated with the design and implementation of incentive programs that limit their effectiveness. These include payments for spending that occur outside the state (including wages to nonresidents), no cap on spending, no sunset provisions, payments for salary of high wage cast members, lack of audit oversight, poor recordkeeping, lack of transparency, and other concerns. The presence of each of these concerns can be validated to some degree in existing research on film incentives.

A related criticism is that the added activity will simply disappear without the continued presence of the incentives. The 2020 RegionTrack report examined this issue in detail and concluded that the ultimate size of the industry will play a key factor in the outcome. The report noted that "*Development of a film industry that is capable of growing and sustaining itself without continued incentives might require attaining critical mass of the industry in the state."* Comparative data indicate that Oklahoma has not yet reached the point of critical mass and is likely far from it. What seems clear from both research findings and state history is that an expanded film and TV sector is unlikely to develop in the first place without incentives. Only time will tell whether a greatly expanded sector in Oklahoma is sustainable without them, or whether the incentive must act as a permanent subsidy to the industry.

Incentive Review Committee Report

The prior discussion of the ongoing policy debate over film and TV incentives is highly reflective of the current environment in Oklahoma. As discussed earlier in the report, Oklahoma's recent boost in total incentive spending from $8 million to $30 million annually produced a visible surge in both incentivized and non-incentivized activity in the sector. Estimates of job and compensation growth in the sector relative to the pre-pandemic period suggest Oklahoma had the strongest overall growth in the film and TV sector among all states offering incentives.

The state's Incentive Evaluation Committee (IEC) released its latest economic review of the film and TV incentive in November 2024.[20] The report contains estimates of the total economic and tax contribution of the sector to the Oklahoma economy and serves as the primary state-sanctioned economic review of the incentive. The report (p.5) concludes:

> *"On a purely quantitative basis, the incentive does not yield a positive return on investment for the state. When comparing economic activity that generates state tax revenue, the incentive returns about $0.25 for every $1.00 of rebate. Of course, that does not include local tax revenue, and there are positive qualitative impacts associated with the industry and the publicity it may generate for the state. However, given the 'nomadic' nature of the industry and the generally small number of*

[20] The full review is available online at: https://oklahoma.gov/content/dam/ok/en/omes/documents/FilmEnhancementRebateFinalDraft11142024.pdf

> *Oklahoma employees associated with it on a permanent basis, it is unlikely that the incentive will change significantly in terms of return on investment in the near future. It remains to be seen whether the industry can build the necessary infrastructure in the state to allow for significant growth."*

The IEC report focused on tax revenue recovery and cited a low share of tax recovery as a key weakness of the program. Finally, the report suggests that the state make some strategic and technical adjustments to the program but recommends maintaining the existing $30 million program cap.

Review of the Incentive Evaluation Committee Report

Overlooked in the narrative of the 2024 IEC report is the finding that tax revenue recovery associated with the incentive is only about half the amount suggested in the 2020 IEC report on the incentive (i.e., recovery of $0.25 per dollar in 2024 versus $0.52 per dollar in 2020). The reasons for this drop in tax recovery are not highlighted or discussed within the report. While tax recovery estimates are often quite low for film and TV incentives, we rarely encounter well-formed estimates that suggest tax recovery shares quite this low. This peculiar finding suggests that the incentive not only produced less than full tax recovery but the share of recovery dropped by 50% since the passage of the FIOA expanding the state's incentive pool.

Given the unusual nature of the tax recovery finding and the policy role played by IEC reports, we engaged in an in-depth evaluation of the economic and tax impact estimates contained in the November 2024 IEC report. Two major issues were found with the report that contribute to a meaningful understatement of the economic and tax contributions of the sector:

1) inadequate context for evaluating the strong performance of the state's film and TV sector in recent years, and
2) important methodological and data issues with the economic and tax contribution estimates.

Understated Industry Growth

While the first issue is the less serious of the two, it leads to a gross understatement of the recent surge in activity in the sector. Earlier sections of this report provide the reader with detailed context for evaluating the impressive growth in the state's film and TV sector since expansion of the incentive in 2021. In contrast, the IEC report (pp. 20-21) provides little background context that captures the surge in activity that has taken place in the state's film and TV sector since the enactment of the FOIA.

We find that the IEC report leaves the impression that the state's film and TV sector posted lackluster performance, at best, since the passage of the FIOA. In our view, the failure to document the impressive strength in the sector in recent years creates ambiguity around the performance of the sector since the onset of the pandemic and the enactment of the expanded incentive pool under the FIOA. The omission of more in-depth analysis makes it impossible to address the key policy question of whether growth in the industry responded to the expansion of the incentive.

We find five key contributing factors that explain the failure of the IEC report to adequately capture recent growth in the sector:

- The analysis is based on a definition of the industry that is too narrow (uses only NAICS 512110) and excludes other relevant sectors (NAICS 512120, 512191, and 512199);
- The analysis evaluates growth only through 2022 and excludes the significant growth in the industry in 2023 and the first half of 2024 during the period of expanded incentives;
- The report used only annual data in the analysis rather than available quarterly data in the QCEW database, ignoring the timing of the pandemic and the expansion of the incentive pool;
- The report provides no comparative analysis of activity in Oklahoma relative to the film and TV sector nationally or in competing states; and
- The analysis relies on a simple shift-share analysis in the 2013 to 2022 period which provides little useful information on the performance of the sector since the expansion of the incentive.

Again, the growth in the film and TV sector both nationally and at the state level are discussed in detail in earlier sections of this report. This analysis made clear that Oklahoma's film and TV sector posted arguably the strongest performance among all states with an incentive since the onset of the pandemic. We view this as an important, but overlooked, policy conclusion in evaluating the efficacy of the incentive.

Methodological and Data Issues

The second issue is a far more substantive problem related to the methodology and data underlying the quantitative estimates in the report. It is also intertwined with the unexplained finding that the tax recovery provided by the industry dropped by half between IEC reports. After we identify and explain the issues within the report, we prepare a revised version of the IEC estimates that provide a much more defensible view of the economic contribution of film and TV activity in the state.

Two significant data and methodological issues are found that undermine the quantitative estimates contained in the report. The first issue is tied to the use of assumed tax rates for activity in the film and TV sector that are far too low and inconsistent with published benchmark data. The second issue relates to the use of multipliers used for economic impact estimates that likely understate the spillover effects from the industry as it grows with incentive spending.

Both concerns are explained in more detail in the following sections. We then adjust the IEC findings for both concerns to illustrate the degree to which the results understate the economic and tax contributions of the industry to the state economy.

1) The tax rates on labor income used to form tax estimates are implausibly low

The first issue with the IEC findings is that the reported state tax estimates are unrealistically low (see Table 10: Economic and Fiscal Impacts, 2023; p. 27 of IEC report). The IEC's economic and tax estimates are reproduced below in Figure 12 along with calculations of tax revenue to the state as a share of labor income shown in the far right column. The concern is that the assumed tax share estimates used for <u>direct</u> labor income paid in the film and TV sector are only 2% of labor income, far below reasonable levels. As an example of the calculation, the direct tax share of labor income in 2023 is stated as $1.163 million in direct state tax revenue divided by $58.265 million in direct labor income, or 2.0%. The same approximate 2.0% tax share is found for direct labor

income in each year in the 2020 to 2023 period. While the report indicates that the tax estimates are formed with the widely used IMPLAN input-output model, we do not find similarly low direct tax shares in past versions of the dataset underlying the model.

Figure 12. Reproduction of Table 10 from 2024 IEC Report (2023)

Effect	Jobs	Labor Income	Value Added	Output	Est. OK Tax Revenue	Calculated OK Tax Share of Labor Income
Direct	1,405	$58,264,590	$58,264,590	$117,968,135	$1,163,989	2.00%
Indirect	233	$10,605,285	$17,470,755	$44,145,259	$876,604	8.27%
Induced	303	$15,316,259	$28,937,456	$53,817,258	$1,741,657	11.37%
Total	1,941	$84,186,133	$104,672,801	$215,930,652	$3,782,249	4.49%

It is important to understand that this estimate suggests that direct compensation paid in the film and TV sector produced well below average taxes relative to most other sectors of the Oklahoma economy. Our estimates suggest that the average share across all non-mining sectors of the state economy is slightly more than 10%. This is a useful estimate for most sectors of the state economy. The method we recommend for calculating taxes as a share of labor income in Oklahoma for measuring the tax contribution of the film and TV industry is discussed in the 2020 RegionTrack report.[21] Our specific finding is that an average of 10.7% of labor income produces a reasonable estimate of the amount of taxes produced by the film and TV sector in Oklahoma. The notion of below average tax payments (2%) produced by labor income from film and TV activity is simply not supported by the underlying gross domestic product data for the state maintained by the Bureau of Economic Analysis.

There has always been considerable uncertainty over the amount of taxes attributable to direct economic activity at the state level. This uncertainty reflects the lack of detailed data available for use when constructing the underlying datasets typically used in off-the-shelf economic impact models. As noted by IMPLAN, "For these reasons, we recommend constructing your own estimates of direct taxes whenever possible and using the model estimates for indirect and induced tax impacts."[22] This illustrates the uncertainty of IMPLAN over their own direct tax estimates.

What makes the 2% estimate even more implausible is the sharply higher the tax estimates provided for the indirect and induced effects in Figure 12. The estimates are close to 10%, which is perfectly consistent with estimates used in a range of economic impact reports, and in our own estimates. The indirect effects from IMPLAN have a reported tax share of 8.27% of labor income while the induced effects have a tax share of 11.27% of labor income. Averaged across both the indirect and induced effects, state tax revenue is estimated as 10.1% of labor income. Again, this overall share (roughly 10%) is perfectly consistent with a range of findings for Oklahoma. In addition, nearly all states produce similar amounts of

[21] The average tax rate is calculated as the ratio of total state taxes as defined by the Census Bureau (Urban Land Institute, 2020) (minus corporate taxes and taxes not elsewhere classified (which include oil and gas severance taxes)) to total state wages over the 2015 to 2017 period.
[22] https://support.implan.com/hc/en-us/community/posts/115003477694-Locality-Taxes-Implan-Calculated-Tax-Impact-far-Lower-than-Hand-Calculation

state tax revenue per dollar of labor income. But a 2% tax share is implausibly low for the direct impact.

Because the assumed 2.0% tax share on direct labor income is so low, the overall share of labor income reported to the state in taxes is only 4.49% of labor income. Again, a 4.49% average state tax rate is far lower than estimates typically reported in other economic impact studies for Oklahoma and our own estimates. A more plausible estimate remains that total state tax recovery is approximately equal to 10% of labor income, or roughly double the amount reported in Table 10 of the IEC report. The use of the more reasonable 10.1% tax share reported for the indirect and induced effects would produce a total of $8.502 million in state taxes rather than $3.782 million, a more than doubling of tax recovery. This change alone would push tax revenue recovery from $0.25 per dollar of incentives to $0.56 per dollar of incentives. While not pushing the activity to the point of full tax recovery, this adjustment brings it back to slightly above the $0.52 per dollar of incentives found in the 2020 report. Coincidentally, after this adjustment the tax recovery estimates in the 2024 report are nearly equivalent to the findings in the 2020 report. This one adjustment likely explains why the reported tax recovery fell by 50% between the two IEC reports. Unfortunately, the 2020 report does not provide adequate detail for us to calculate the direct tax shares used.

There are other data issues. The source of the low tax share issue with labor income is likely tied to the estimate for direct value added used in the report. Note in Figure 12 that direct value added (also known as Gross Domestic Product or GDP) is equal to direct labor income. These two measures can only be equal in very rare and unusual cases and at best would be only similar in magnitude. Value added is typically far larger than labor income in nearly all cases. *In this case, the exact same value is reused in the analysis.* Data from the Bureau of Economic Analysis for NAICS 512 (Motion Picture and Sound Recording Industries) suggests that value added is more than double the amount of labor income in this NAICS code. Having them equal implies that all the other components of value added after labor income – taxes after subsidies, corporate profit, consumption of fixed capital – just happen to sum to zero. The only way this is reasonably possible is if subsidies were large enough to offset all these other factors. And the offset would have to be *exact*. More importantly, all supporting data on the components of value added and subsidies published by the Bureau of Economic Analysis suggest the data used in the IEC analysis is implausible.

The irregularities in the data in Figure 12 imply that either an ad hoc or unintentional adjustment was made to the underlying IMPLAN dataset. The source could also be an unintended cut and paste error in reporting the results. The adjustment could also be an attempt to produce conservative results by reducing value added to account for the effect of increased subsidies. If it was an intentional adjustment, it further implies that the correct adjustment to make was somehow known.

If this was an attempt to produce conservative estimates, rather than attempting to adjust value added, most tax estimates of this nature instead would use labor income to produce

state tax revenue estimates because labor income is not influenced by subsidies as value added would. If using labor income, the original IMPLAN data will make reasonable tax estimates even when large subsidies are present. The estimated tax revenue produced is then typically compared to the amount of subsidies provided to determine the degree of tax recovery. The analyst would not remove subsidies from value added when forming the tax estimates and then compare the reduced amount of tax revenue to the amount of subsidies. If so, the subsidies are, in effect, accounted for twice and the resulting tax revenue estimates are far too low. This could be the case in the IEC estimates of state tax revenue where an overall 4.49% share of labor income results. Again, a 10-12% tax share is representative of state and local tax produced in Oklahoma and in most states from film and TV activity, more than double the 4.49% share reported.

The overarching concern is that the low tax shares and the errors in the value added in the IEC estimates inject important methodological inconsistencies into the tax recovery analysis. We know of no plausible reason why direct labor income in the film and TV sector would produce far below average tax shares relative to the average indirect and induced tax effects in the broader economy. On the contrary, the high average wages paid in the sector suggest to us the possibility of higher-than-average tax revenue for labor income. We also can't form a plausible scenario where labor income equals value added in the film and TV sector. In both cases, the inconsistencies contribute to a significant understatement of state tax revenue, where defensible estimates suggest more than double the reported amount of tax recovery. Again, our suggestion is that 10.7% of labor income represents a reliable estimate of tax recovery, not 4.49% as reported.

2) Data Aggregation Problem Results in Multipliers that are Too Low

A second issue is that the input-output modeling software used to estimate the economic and tax contributions in the IEC report likely leads to further understatement of the economic and tax contributions of the film and TV sector. The problem is traced back to the highly aggregated definition of the film and TV sector used within most economic impact software packages.

The issue is that off-the-shelf packages use broadly aggregated data that does not adequately capture the activity taking place solely within the four core NAICS sectors directly related to film and TV activity.[23] Most off-the-shelf software creates its own version of the film and TV industry from a highly aggregated group of sectors from within NAICS 512 (Motion Picture and Sound Recording Industries). The most common concern is that data for the film and TV sector is combined with data for movie theaters and drive-ins. Movie theaters and drive-ins have very little in common with film and TV activity, especially the low-wage labor typically used in these two sectors.

[23] For an accessible review of the long-standing issues surrounding aggregation bias, see: Kymn, Kern O. and J. R. Norsworthy. The American Economist. March 1976. Volume 20, Issue 1. Available online at: https://doi.org/10.1177/056943457602000. For a discussion of how estimates of suppressed or missing data affect the underlying input-output model and the accuracy of industry aggregation, see: Jackson, Randall, Caroline Welter, and Gary Cornwall "Aggregation Bias and Input-Output Regionalization: Detail or Accuracy?" 2022. West Virginia University Regional Research Institute Working Papers. Available online at: https://researchrepository.wvu.edu/cgi/viewcontent.cgi?article=1220&context=rri_pubs

Figure 13. Film & TV Sector Definition in Common Economic Impact Models

IMPLAN	
IMPLAN Sector	411-Motion picture and video industries
NAICS Sector(s)	NAICS 4-digit sector 5121
Source	https://support.implan.com/hc/en-us/articles/30545246649115-U-S-528-Industries-Conversions-Bridges
Limitation	Includes data on movie theaters and drive-ins
REMI	
REMI Sector	101-Motion picture, video, and sound recording industries
NAICS Sector	NAICS 3-digit sector 512
Source	https://www.remi.com/wp-content/uploads/2018/06/Industry-Comparison-Hierarchical.pdf
Limitation	Includes data on movie theaters, drive-ins, and sound recording
BEA RIMS-II	
BEA Sector	512100-Motion picture and video industries
NAICS Sector	NAICS 4-digit sector 5121
Source	https://apps.bea.gov/regional/rims/rimsii/industrylist.aspx?List=3
Limitation	Includes data on movie theaters and drive-ins
IO-Snap	
IO-Snap Sector	41- Motion picture and sound recording industries
NAICS Sector	NAICS 3-digit sector 512
Source	https://io-snap-guide.econalyze.com/data_menu.html#state-industry-data
Limitation	Includes data on movie theaters, drive-ins, and sound recording

Figure 14. Profile of the U.S. Film and TV Sector by Component Industries (2023)

NAICS Code	NAICS Code Description	Number of Establish-ments	Number of Employees	Total Annual Wages	Average Annual Wage
512	Motion Picture and Sound Recording Industries	40,353	377,959	$32,018,362,731	$84,714
5121	Motion Picture and Video Industries	35,026	357,237	29,519,399,890	82,633
512110	Motion Picture and Video Production	25,215	205,865	23,647,567,763	114,869
512120	Motion Picture and Video Distribution	805	8,505	1,268,633,705	149,163
512131	Motion Picture Theaters (except Drive-Ins)	4,105	120,677	2,401,885,415	19,903
512132	Drive-In Motion Picture Theaters	218	1,675	23,887,819	14,265
512191	Teleproduction and Other Postproduction Services	3,935	17,409	1,910,763,294	109,757
512199	Other Motion Picture and Video Industries	749	3,105	266,661,894	85,881
5122	Sound Recording Industries	5,328	20,722	2,498,962,841	120,595
512230	Music Publishers	1,196	5,840	714,443,753	122,338
512240	Sound Recording Studios	1,943	4,984	359,027,566	72,043
512250	Record Production and Distribution	1,319	7,261	1,185,242,479	163,236
512290	Other Sound Recording Industries	870	2,638	240,249,043	91,084
Film & TV (512110 + 512120 + 512191 + 512199)		**30,704**	**234,885**	**$27,093,626,656**	**$115,348**

Source: Bureau of Labor Statistics-Quarterly Census of Employment and Wages (QCEW)
Notes: 2023 is the most recently available full year of data.

In short, off-the-shelf economic impact software is generally not structured to do accurate assessments of the film and TV industry without major modifications to the underlying data. Figure 13 illustrates the NAICS industry sectors that are aggregated for use in modeling the film and TV sector in four popular economic impact models. The IMPLAN model used in the IEC analysis is the most widely used and includes movie theaters and drive-ins within the sector used to evaluate the film and TV activity. The IMPLAN model uses the aggregate 4-digit NAICS sector 5121 in forming its internal IMPLAN sector 411-Motion Picture and Video Industries. Again, this definition mixes activity in the film and TV sector with movie theaters and drive-ins – NAICS 512131 and 512132) – two sectors with little relationship to the four core NAICS sectors comprising the film and TV sector. Along with far lower average wages, these sectors have much different purchasing patterns for goods and services.

RIMS-II multipliers from the Bureau of Economic Analysis (BEA) similarly use NAICS 5121 and include movie theaters and drive-ins. Both the REMI and IO-Snap models use the even more highly aggregated 3-digit NAICS 512 sector as the closest industry definition to film and TV activity. These two models will suffer from significant industry aggregation bias for film and TV analysis when using the standard sectors provided.

Why are the Multipliers Too Low?

The sectors that are often improperly combined with film and TV activity typically have a far different economic fingerprint. Most importantly, movie theaters and drive-ins have far different labor usage than the film and TV sector, with substantial use of low-wage and part-time workers. The purchases made by movie theaters are also far less diverse.

Figure 14 shows the various 6-digit sectors included in NAICS 512, 5121, and 5122, along with average wages for each component sector. Commonly used economic impact models simply cannot differentiate between the relative impact of film and TV versus the other components of NAICS sectors 512, 5121, and 5122 without major adjustments to the underlying dataset.

The aggregation bias is most acute in those states where the film and TV industry is relatively small and the combined data used to form the economic and tax estimates is dominated by movie theaters and drive-ins. The result of these aggregation schemes is that the multipliers derived from the models can be far too low and understate the economic contribution of film and TV activity.

Rickman and Wang (2022)

A recent peer-reviewed article[24] by Rickman and Wang (2022) in the *Journal of Regional Analysis and Policy* examines this specific issue using Oklahoma's film and TV sector. It describes how the typical process through which the data is aggregated obscures the impact of the film and TV sector. Using Oklahoma data, the findings conclude that the economic multipliers for the film and TV sector are often far higher in practice than suggested by common economic impact software packages, especially when incentives are producing rapid expansion in the sector.

The findings indicate that the multipliers most applicable to states like Oklahoma with a small film and TV sector that is rapidly expanding under increased incentives are probably much higher and

[24] See: Rickman, Dan, and Hongbo Wang. 2022. "Industry Aggregation and Assessment of State Economic Development from Motion Picture and Television Production Incentives." *Journal of Regional Analysis & Policy* 52 (1): 82–104.

closer in magnitude to those found in more mature film and TV states like Louisiana and New Mexico. In other words, Rickman and Wang (2022) conclude that multipliers for Louisiana and New Mexico are more appropriate for use with Oklahoma when boosted by incentives than using Oklahoma-specific multipliers from highly aggregated models that assume little activity in the film and TV sector. The findings note "… the average IO-Snap Oklahoma employment multiplier for NAICS 51211 for 2002-2006 equals 1.15, which suggests that using the multipliers from Louisiana and New Mexico would be more accurate than using the Oklahoma multiplier for predicting the impact of an expanding NAICS 51211 sector in the state in response to increased availability of incentives."

The same issue of identifying the appropriate multipliers is visible in historical data for Louisiana and New Mexico following the adoption of incentives in both states. In short, findings for Louisiana and New Mexico after adopting incentives suggest that "the Oklahoma multipliers most likely do not reflect the production linkages that will develop in the state and the resulting total economic impact of expanded film production."

Incentive Evaluation Commission Findings

These same aggregation issues are found in the latest round of economic impact estimates used in the November 2024 IEC review of the state's film and TV sector. The results are formed using the IMPLAN model, however the report provides no insight into the industry aggregation scheme used or whether adjustments were made to the underlying data used for the film and TV sector.

We presume the results are formed using IMPLAN sector 411-Motion picture and video industries, which includes both movie theaters and drive-in theaters, the typical practice used in impact reports evaluating the film and TV sector. This definition using an overly aggregated definition of the industry is most compatible with the behavior of a very small film and TV sector in the state with few linkages to other industries and no meaningful incentive activity.

There is further uncertainty over the version of the IMPLAN dataset used in the IEC analysis. The description of the basic IMPLAN industry structure provided in Appendix C of the IEC report suggests that the version of the dataset used significantly pre-dates the expansion of incentives in Oklahoma. The description in Appendix C notes an industry structure with 440 available sectors. Based on past versions of the software we have used, this sector structure was phased out by IMPLAN approximately a decade ago.

Figure 15 reproduces Table 10 from the 2024 IEC report but includes calculations of the underlying multipliers (in red) used to estimate economic spillover effects from direct activity in the film and TV sector to the broader state economy. Again, these multipliers reportedly come from IMPLAN. The estimated type 2 multipliers used in the report are 1.38 for employment, 1.44 for labor income, 1.80 for value added, and 1.83 for output. We focus on the labor income multipliers in the remainder of this section.

Estimates from the Rickman and Wang (2022) analysis suggest that an average of the income multipliers from both Louisiana and New Mexico is a more appropriate multiplier than the use of the overly aggregated multiplier for Oklahoma from IMPLAN used by the IEC report. The

suggested type 2 income multiplier of 2.595 is fully 80% higher than the 1.44 multiplier produced by the IMPLAN model. Again, the IMPLAN multiplier is derived under the assumption that the film and TV sector is mixed with movie theaters and drive-ins and there is little boost from expanded incentives. We would caution that it is likely that Oklahoma is still in the early stages of a build-out after only three years of the incentive and that the appropriate multiplier is probably not as high as the suggested 2.595 estimate. To provide a more conservative estimate that reflects the early stages of the expanded incentive, we will assume the Oklahoma Type 2 multiplier increases to only 2.0. This is also a commonly used rule-of-thumb for picking a ceiling for multipliers if little information is known about an industry.

Figure 15. Reproduction of Table 10 (2023 data) from IEC Report

Effect	Jobs	Labor Income	Value Added	Output	Est. OK Tax Revenue
Direct	1,405	$58,264,590	$58,264,590	$117,968,135	$1,163,989
Indirect	233	$10,605,285	$17,470,755	$44,145,259	$876,604
Induced	303	$15,316,259	$28,937,456	$53,817,258	$1,741,657
Total	1,941	$84,186,133	$104,672,801	$215,930,652	$3,782,249
Type 1 Multiplier	1.17	1.18	1.30	1.37	
Type 2 Multiplier	1.38	1.44	1.80	1.83	

Adjusted Incentive Evaluation Commission Findings

Our final task in this section is to revise the economic and tax estimates provided by the IEC assuming both appropriate tax shares for direct labor income and multipliers that adjust for the industry aggregation problem and reflect the presence of significant incentives in the sector. The analysis covers fiscal years 2020 through 2023 and is detailed in Figure 16.

We start with the same example for FY2023 found in Table 10 of the IEC report with $58,264,590 in direct labor income from incentivized activity. We further assume a labor income multiplier of 2.0 rather than 1.44 and a state tax share of 10.7% rather than 4.49%. These adjustments produce total labor income of $116.529 million, up 38% from the IEC estimate of $84.186 million. Total state tax recovery is now $12.468 million, more than triple the $3.782 million in state tax revenue estimated by the IEC.

Figure 16. Adjusted IEC Tax Recovery Estimates

Fiscal Year	Direct Labor Income	Total Labor Income	Tax Recovery
2020	15,164,809	30,329,618	3,245,269
2021	76,970,551	153,941,102	16,471,698
2022	43,963,029	87,926,058	9,408,088
2023	58,264,590	116,529,180	12,468,622
4-Year Total	**$194,362,979**	**$388,725,958**	**$41,593,678**
4-Year Incentive Cost			**$46,413,040**
Share of Incentive Recovery			**89.6%**

Notes: See pp. 27-28 of the 2024 Incentive Evaluation Committee report.

We then rework the estimates in the IEC report for the combined labor income impacts in all four fiscal years and evaluate the share of the incentive cost recovered through state tax revenue. The IEC uses a total incentive cost over four years of $46.413 million.

Over the four years, we find that the $194.363 million in reported direct labor income results in total labor income of $388.7 million in the state. Again, this estimate is formed using of an adjusted labor income multiplier of 2.0. The estimated total gain in labor income at a tax share of 10.7% produces total tax state tax revenue of $41.6 million across the four years. The tax revenue recovered is more than triple the $11.8 million estimate provided by the IEC report. These estimates illustrate the substantial effect that an understated multiplier (Type 2=1.44) and a low average tax share (4.49%) will have on the resulting tax estimate. More importantly, tax recovery jumps to $0.90 per dollar of incentives after adjustments, versus only $0.25 per dollar in the original IEC estimates. The state's film and TV incentive still does not produce full tax revenue recovery after the adjustments, but it reaches 90% when evaluated using more plausible assumptions for both tax rates and income multipliers.

If another degree of caution is warranted, the multiplier of 2.0 used in the adjusted estimates may still reflect a future stage of development in the state's film and TV sector and slightly overstate current realized multiplier activity. The use of a more conservative income multiplier of 1.75 still produces 78% in state tax recovery versus 25% as suggested in the IEC report. In our view, the 78% tax recovery estimate is likely representative of the current environment in the state's film and TV sector. The estimate is also triple the tax recovery estimate provided in the IEC report.

In short, these adjustments to the IEC estimates illustrate the importance of closely evaluating the data and key assumptions underlying economic impact estimates and applying a reasonableness test to all major estimates before policy decisions are made.

VI. Compilation of Key Findings

1. The enactment of the *Filmed in Oklahoma Act* (FIOA) in late FY2021 and expansion of the state incentive pool from $8 million to $30 million added significant stimulus to the state's film and TV sector.
2. Since the enactment of the FIOA, the total amount of rebates offered by the state has expanded roughly proportionately with the new pool size. Rebates surged to about $17 million annually in both FY2022 and FY2023 before climbing to a record $43 million in FY2024. Across the three most recent fiscal years, the state provided 76 recipients with incentives totaling $78 million.
3. Incentivized spending tied to the rebate surged in FY2021, posting a roughly six-fold increase from $31.8 million in FY2020 to more than $187 million in FY2021. In the FY2021 to FY2023 period, a total of $484.0 million in incentivized spending took place, or $161.3 million annually.
4. Reported weakness in incentivized activity for FY2024 is traced to the effects of a nearly five-month work stoppage by the Writers Guild of America.
5. Since the surge in incentivized spending in FY2021, approximately 60% of the qualified spending funded labor income to workers, while the remaining 40% funded direct purchases of goods and services.
6. Of total FY2023 qualified labor spending, $24.3 million went to below-the-line workers who are residents of Oklahoma (or Oklahoma expatriates) and subject to state income tax withholding; $55.4 million went to nonresident below-the-line workers who are subject to income tax withholding; and $21.8 million went to above-the line nonresidents who are not subject to income tax withholding.
7. Our estimates suggest that the share of qualified labor spending producing both economic and tax effects in the state was approximately 73% in FY2024.
8. Data on individual rebate payments suggests that the average rebate payment in Oklahoma across the full FY2021 to FY2024 period is approximately 31.4% of qualified spending.
9. The roughly 20% payout in California and the typical 30% payout in Georgia are representative of a competitive range across the major film and TV states. Nearby Texas has a 22.5% maximum payout.
10. More recently, the payout ratio in Oklahoma declined to 34.4% in FY2021 and then dropped annually to 29.6% in FY2024, the latest data reported.
11. The high average incentive payout rate paid by the state continues to limit the amount of incentivized activity supported and the resulting economic and tax spillover effects.
12. For Oklahoma, the recent five-percentage point reduction in the average payout from 35% to 30% (a 14.3% reduction) in recent years expanded the potential total amount of supported spending from $85.7 million to $100 million (a 16.5% increase). If Oklahoma reduced the average payout ratio to 20%, matching California, the state's spending multiplier would increase from 3.33 to 5.0 per dollar spent on incentives as potential qualified spending would increase to $150 million. Oklahoma would produce fully 50% more in incentivized activity and tax revenue recovery with the same incentive pool at a 20% average payout ratio.

13. The state's relative competitiveness may have possibly declined given the larger pools of incentives now available in competing states.
14. After accounting for program changes across all states, the expansion to a $30 million cap moved Oklahoma's incentive program moved up from the 26th to 18th largest. However, the new $30 million cap still leaves Oklahoma in the middle of the pack relative to the group of 38 states now offering general incentives.
15. While the state's $30 million pool provides greater potential to build a sustainable industry, the state's program remains comparatively small. At the current 30% average payout rate, the state can incentivize only about $100 million annually in qualified spending.
16. Six states added $30 million or more to their incentive pool since the release of the 2020 RegionTrack report. New incentive programs were added in five states. Only one state (Connecticut) made substantial cuts to its program since the 2020 report. Currently only 13 states do not offer a general film and TV incentive.
17. If the state legislature's intent with the FIOA was to increase the competitiveness of the state's incentive pool, the effort was only partly successful. The simultaneous shift by several states to either expand incentives or add new ones worked to offset at least some of the expected gains.
18. Oklahoma is now competing against a much larger total pool of incentives. Total state incentive offerings in the most recent year of data available totaled $3.43 billion, up 24% from the $2.75 billion reported in the 2020 report.
19. The three largest incentive pools remain Georgia (uncapped and nearly $1 billion in recent years), New York (capped at $700 million), and California (capped at $330 million).
20. Eleven states in the top tier now have an incentive pool of $100 million or more, more than triple the current $30 million cap in Oklahoma. The incentive pool in neighboring Texas recently doubled to $100 million.
21. Five states in a second tier offer between $45 million and $75 million in annual incentives. A third tier of 11 states, including Oklahoma, offers incentives between $10 million and about $30 million annually. A fourth, and bottom, tier includes ten states and Washington D.C. that offer very small incentives well below $10 million annually.
22. Among the 38 states offering incentives, the payments averaged $12.18 per capita in the latest data, up 12% from $10.87 in the 2020 RegionTrack report.
23. Oklahoma's incentive spending was only $7.40 per capita, but up nearly four-fold from $2.02 in the 2020 RegionTrack report. The rise is roughly proportional to the expansion of the total incentive pool from $8 million to $30 million. The state ranks 16th in per capita spending among the states offering incentives.
24. If Oklahoma moved to the overall U.S. average of $12.18 per capita, the state incentive pool would reach roughly $50 million. A $50 million incentive pool would rank only 15th among the 38 states with an incentive, equal to the current spending pool in Hawaii.
25. Recent policy proposals have suggested expanding the state's film and TV incentive pool to $80 million annually. This would rank the state 12th among the 38 states with an incentive, just outside the top 11 incentive pools of $100 million or more. State spending on a per capita basis would rise to $19.73, ranking Oklahoma 8th among the 38 states offering an incentive.

26. Much like with total incentive spending, California ($8.47 per capita) and Georgia ($81.60 per capita) set the competitive range for incentive spending on a per capita basis.
27. In 2023, the U.S. film and TV sector consisted of a combined 30,700 business establishments that employed nearly 235,000 workers who earned $27.1 billion in wages. The industry continues to offer very high average wages, with workers in the sector earning a reported average of $115,348 annually in 2013. Few industry sectors offer comparably high average wages in most states.
28. Since the onset of the pandemic, the film and TV sector at the national level has undergone significant gyrations. Overall, the film and TV sector posted relatively weak performance since the onset of the pandemic, mostly due to work disruptions along the way. Both employment and total compensation remain below pre-pandemic levels in the latest data through the second quarter of 2024, with employment down 11% and total wages down 3% relative to the fourth quarter of 2019.
29. More positively, average annual compensation per worker has moved above its pre-pandemic level to about $120,300 in the second quarter of 2024. The number of establishments also increased across the full period, adding about 6,400 new firms.
30. In contrast to weakness in the sector nationally, Oklahoma's film and television sector has defied national trends and produced substantial growth since the onset of the COVID-19 pandemic in 2020.
31. From the fourth quarter of 2019 to the second quarter of 2024, the number of film and TV establishments in Oklahoma surged 46% (+50 establishments), employment increased 49% (+175 jobs), and total wages surged 135% (+$20.4 million). Notably, average wages in the industry increased by 66%, climbing from $47,780 in late 2019 to $79,450 by mid-2024, underscoring the sector's increased vitality and competitiveness in Oklahoma.
32. Oklahoma's film and television sector far outperformed the national trend on all four economic measures. The state has also picked up considerable share relative to the U.S. in average compensation per employee in the sector since 1990.
33. The results highlight a very strong comparative performance for Oklahoma relative to other states with an incentive in place. Across the 2019 to 2023 period, Oklahoma ranked 6th in employment growth (56.2%), 4th in total compensation growth (169%), and 9th in change in annual compensation per worker (72.3%) among the states.
34. Oklahoma is the only state to rank among the top ten on all three measures – employment, total compensation paid, and average compensation – over the period, the strongest overall performance among the 38 states offering incentives.
35. The three largest markets – California, New York, and Georgia – measured by both size of incentive pool and total industry activity suffered the greatest losses in economic activity in the period.
36. The 13 states with no incentive pool posted far stronger growth in the film and TV sector than the states with the largest incentive pools.
37. For policymakers, the results suggest that the broader film and TV industry has faced a challenging business environment across the full period since the onset of the pandemic. Much of the resulting economic weakness is confined to the states with the largest film and

TV sectors and the largest incentive pools. These states acted as swing producers as production pulled back in challenging times.

38. The public policy view of film and TV incentives remains highly polarized into two competing views of the industry: In short, advocates argue that the film and TV sector is an excellent source of new high-wage and high-skill jobs that uniquely add to the quality of life in a region. Critics argue that it is not a cost-effective use of public funds and that alternative uses may provide a greater economic return.
39. Our evaluation of existing research continues to suggest that proponents and critics of the industry can be both right and wrong. There are numerous costs and benefits to using financial incentives to attract any industry, with the disagreements over policy frequently falling along the line of which costs and which benefits are more important to the evaluator.
40. The most basic concern with focusing state policy decisions solely on tax recovery is that other desirable outcomes may be overlooked in the process. From the 2020 RegionTrack report, "*There is evidence to suggest that states have adopted film incentives for intangible benefits such as quality of life and publicity (Sewordor and Sjoquist, 2016), which should be weighed against other policy objectives rather than simply assessed on narrow economic outcome metrics.*"
41. Our own evaluation of the recent IEC review of the state's film and TV incentive suggests that it provides an inadequate evaluation of both recent growth conditions in the sector and estimates of the economic and tax contributions of the sector. The primary concern is that it grossly understates the overall economic and tax contributions of film and TV in Oklahoma.
42. The IEC analysis also inexplicably finds that the tax recovery share of the industry is only half the share reported in the 2020 IEC review of the incentive.
43. After a detailed review, we find two major issues with the findings in the recent IEC report: 1) understated industry growth in the period since the launch of the expanded incentive and 2) important methodological and data issues that understate the economic and tax contribution estimates.
44. The first methodological issue with the IEC findings is traced to assumed state tax estimates that are unrealistically low. IEC estimates of state tax revenue assume a 4.49% tax share of direct labor income while a 10% tax share is more representative of state tax produced in Oklahoma and in most states from film and TV activity.
45. The second methodological issue is that most off-the-shelf economic modeling packages use broadly aggregated data that does not adequately capture the activity taking place solely within the sectors directly related to film and TV activity. The IMPLAN model used in the IEC analysis includes movie theaters and drive-ins as components of the film and TV sector when evaluating the economic and tax contribution of the sector.
46. This aggregation bias can lead to significant understatement of the economic and tax contributions of the film and TV sector. The sectors that are often improperly combined with film and TV activity typically have a far different economic fingerprint. Most importantly, movie theaters and drive-ins have far different labor usage than the film and TV sector, with substantial use of low-wage and part-time workers. The purchases made by movie theaters are also far less diverse.

47. The result of these aggregation schemes is that the multipliers derived from the models can be far too low and understate the economic contribution of film and TV activity.
48. Findings in Rickman and Wang (2022) indicate that multipliers that are most applicable to states like Oklahoma that have a small film and TV sector but are rapidly expanding under increased incentives are probably much higher and closer in magnitude to those found in more mature film and TV states like Louisiana and New Mexico. In other words, the multipliers for Louisiana and New Mexico are more appropriate for use with Oklahoma than using Oklahoma-specific multipliers from highly aggregated models that assume little activity in the film and TV sector and ignore growing incentives.
49. Revised economic and tax estimates assuming more appropriate tax shares for direct labor income and the use of multipliers that adjust for the industry aggregation problem suggest far greater economic and tax contributions from the film and TV sector.
50. For FY2023, we assume a labor income multiplier of 2.0 rather than 1.44 and a state tax share of 10.7% rather than 4.49%. These adjustments produce total labor income of $116.529 million, up 38% from the IEC estimate of $84.186 million. Total state tax recovery increases to $12.468 million, more than triple the $3.782 million in state tax revenue estimated by the IEC.
51. We further adjust IEC estimates of total activity in fiscal years 2020 through 2023. The IEC uses a total incentive cost over four years of $46.413 million and total direct labor income over the four years of $194.363 million. The revised estimates using an adjusted labor income multiplier of 2.0 and a tax share of 10.7% produce total labor income of $388.7 million and total tax state tax revenue of $41.6 million across the four years.
52. The adjusted tax revenue recovered is more than triple the $11.8 million estimated provided by the IEC. More importantly, tax recovery jumps to $0.90 per dollar of incentives after adjustments, versus only $0.25 per dollar in the original IEC estimates.
53. A more conservative income multiplier of 1.75 still produces 78% in state tax recovery versus 25% as suggested in the IEC report. In our view, the 78% tax recovery estimate is likely representative of the current environment in the state's film and TV sector.
54. The significance of these adjustments to the IEC estimates illustrates the importance of evaluating the data and key assumptions underlying film and TV economic impact estimates and applying a reasonableness test to all major estimates before policy decisions are made.

VII. Appendix - Oklahoma Film Incentive Legislation

Oklahoma Statutes §68-3621 - §68-3626[25]

Legislative intent. (§68-3622)

The Legislature hereby finds that the production of films in Oklahoma not only provides jobs for Oklahomans and dollars for Oklahoma businesses, but also enhances the state's image nationwide. Recognizing that the high costs of film production are driving motion picture and television production out of the country, most notably to Canada, and that the film industry is always seeking attractive locations that can help cut the costs of production, the Legislature further finds that the State of Oklahoma, with the appropriate incentive, can become an attractive site for film production and that Oklahoma is presently among several states with minimal incentives to attract the film industry. It is therefore the intent of the Legislature that Oklahoma provide an incentive that will stand out among those of other states and increase film production in this state.

Added by Laws 2001, c. 259, § 2, eff. July 1, 2001.

[25] http://www.oklegislature.gov/osstatuestitle.html

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