

Creative Industries and Economic Development: The Contribution of Visual and Performing Arts

Yonten Chophel^{1*}, Jayson A. Dela Fuente²

¹ Daga Central School, Ministry of Education and Skills Development, Dagana, Bhutan;

² College of Education, State University of Northern Negros, Sagay City, Negros Island Region, Philippines;

* Corresponding author: yontenc@education.gov.bt.

ABSTRACT: This study investigates how visual and performing arts contribute to creative industries and regional economic development by examining employment, value added, compensation, income, and economic resilience. The paper develops an empirical state-level panel framework using official economic, labor, and demographic indicators across 51 United States jurisdictions over a 23-year period. Methodologically, fixed-effects regression models with clustered standard errors are estimated to test the relationship between arts-sector intensity and macro-development outcomes, including real Gross Domestic Product per capita, short-run growth, and unemployment rates. The empirical findings demonstrate that arts employment share is positively and statistically significantly associated with real output per capita ($\beta = 0.0343$, $p\text{-value} = 0.015$), even after controlling for population scale, personal income, financial sector concentration, time-invariant state heterogeneity, and common period shocks. While the association with short-run annual output growth is less pronounced, the labor model indicates a directionally favorable relationship with unemployment reduction ($\beta = -0.3458$, $p\text{-value} = 0.052$). Robustness tests further reveal that jurisdictions with higher creative-economy concentration exhibit lower average growth volatility, supporting the role of cultural ecosystems in fostering long-term economic resilience. Ultimately, the study contributes a reproducible panel framework demonstrating that the visual and performing arts function as vital economic infrastructure, whose developmental contributions are maximized when integrated with broader labor, education, tourism, and inclusive policy systems.

Keywords: creative industries; visual arts; economic development; cultural economy; analysis.

I. INTRODUCTION

Creative industries have moved from the margins of cultural policy to the center of development strategy because they combine symbolic production, skilled labor, entrepreneurship, technology-enabled distribution, and place-based identity. Visual and performing arts occupy a distinctive position within this system. They generate artistic value through galleries, festivals, theatres, music venues, museums, design practices, cultural events, community arts initiatives, and independent creative work. At the same time, they circulate economic value through employment, compensation, tourism, local services, creative supply chains, urban branding, and cultural consumption. This dual character makes the arts more than an expressive sector; it makes them a form of economic infrastructure that shapes how places attract people, firms, visitors, and investment.

The policy relevance of this topic is especially clear in regions seeking diversified growth. Manufacturing, finance, technology, education, hospitality, and tourism all benefit from cultural amenities and creative services, but these benefits are not always captured by conventional economic accounts. A theatre district, a visual arts cluster, a music ecosystem, or a citywide festival may not transform output by itself, yet it can improve the conditions under which entrepreneurship, tourism, knowledge exchange, and skilled labor

retention take place. The value of creative industries therefore lies in both their direct economic contribution and their wider spillover effects. Direct contribution appears in value added, paid work, compensation, cultural enterprises, and venue activity. Wider spillovers appear through place reputation, destination attractiveness, creative skills, social interaction, and the ability of cities and regions to distinguish themselves in competitive development environments.

Despite growing policy attention, the academic problem remains that many studies discuss creative industries in broad conceptual language without providing a sufficiently measurable link between arts-sector activity and economic development outcomes. This produces two limitations. First, it becomes difficult to separate evidence-based claims from promotional narratives. Second, visual and performing arts are often treated only as symbolic or cultural goods, while their labor-market and output contributions are under-analyzed. A stronger research design requires a framework that can connect arts activities to economic indicators while still respecting the sector's cultural specificity. The present study responds to this need by using a panel approach that operationalizes arts intensity through employment and output measures and then tests their relationship with development indicators.

The paper focuses on state-level variation because regional economies differ in population size, income structure, industrial composition, cultural infrastructure, and labor market conditions. A cross-sectional comparison alone would risk confusing large, wealthy, or metropolitan places with places where the arts actually contribute to economic performance. A panel design is more suitable because it allows the analysis to control for stable differences across states and common shocks across observation periods. This structure is particularly important for creative industries, where historical specialization, urban amenities, education systems, and policy support can create persistent differences between places.

The study has four aims. First, it develops a conceptual framework that explains how the visual and performing arts contribute to creative-industry value chains. Second, it identifies measurable indicators of arts-sector intensity that can be used in quantitative analysis. Third, it estimates the relationship between arts employment share, arts output share, and economic development outcomes using state and period controls. Fourth, it translates the findings into theoretical, practical, and policy implications for creative-economy development. The main research question is whether stronger arts-sector intensity is associated with stronger economic development after accounting for population, income, industrial structure, and unobserved state-level differences.

II. LITERATURE REVIEW

Research has broadened creative-labor analysis by showing that informality, inequality, and non-standard employment must be considered when examining creative work beyond Western institutional settings [1]. A spatial perspective further shows that creative-cultural districts can stimulate neighborhood redevelopment while also producing uneven territorial effects [2]. Cultural and creative production has also been shown to strengthen regional human-capital formation [3].

Artistic education has been found to improve occupational survival in the arts, emphasizing the importance of training, professional networks, and career continuity [4]. Cultural and creative industries can influence wealth at national, regional, and municipal levels [5]. Evidence also identifies both direct and indirect economic effects of creative industries across European regions and sectors [6].

Cultural vibrancy and creative-economy conditions have been linked to regional economic efficiency, suggesting that context determines whether creative assets generate broader benefits [7]. Coordinated cultural and creative policies can support sustainable postindustrial regional development [8]. Regional creative economies similarly contribute to sustainable change when they are grounded in local networks and institutional capacity [9].

Arts and humanities graduates play an important role in connecting higher education with creative-sector labor markets [10]. Multidimensional indices have also been developed for comparing creative-economy potential across cities, illustrating the value of composite measurement [11]. Creative industries are spatially concentrated according to infrastructure, markets, and urban amenities in developing-economy contexts [12].

Regional creative industries have been associated with productivity growth [13]. Higher education, cultural policy, and the creative economy are also interconnected, with universities strengthening creative capacity through talent formation and regional engagement [14]. Disaggregated creative outputs may provide more precise information about economic growth than broad aggregate creativity indicators [15].

Creative-economy indicators have been connected with innovation and entrepreneurship [16]. Creative-product exports have also been associated with economic growth and greater stability in export earnings [17]. The field of cultural economics has consequently expanded from a narrow focus on cultural value to encompass creativity, innovation, and local development agendas [18].

Creative workers frequently operate through flexible, portfolio-based, and precarious employment arrangements, complicating conventional labor-market measurement [19]. Creative industries can also support wider employment growth and innovation through industry relatedness [20]. Impact indicators further connect cultural heritage, tourism, and creative-industry value [21].

Creative-industry concentration has been linked with wider urban wage and employment growth [22]. The relationship between creative industries and economic development has also been treated as one of reciprocal causality rather than simple association [23]. Human capital, innovation systems, and supportive policy have been identified as central conditions for creative-industry development [24].

Cultural tourism connects heritage, arts participation, and local income generation [25]. Broader evidence shows that cultural and creative sectors can support employment, innovation, well-being, tourism, and local attractiveness [26]. Creative-economy policy may also influence entrepreneurial activity when embedded in broader institutional support [27].

Creative industries are increasingly measurable through trade, services, and digital-value indicators, providing a stronger basis for comparative economic analysis [28]. Inclusive cultural-policy systems are also important for sustaining creative sectors and distributing their benefits [29].

Innovation in creative industries is contested and shaped by professional meanings, local workspaces, and networks [30]. Welfare and labor-market protections influence the stability of arts occupations [31]. Resource allocation and city governance have also been identified as critical elements in the sustainable development of cultural and creative industries [32]. Collectively, these studies justify treating arts employment and arts output as measurable development variables while avoiding exaggerated claims of automatic economic effects

Table 1. Comparison table of studies

Author(s)	Year	Main focus	Key relevance to this study
[1] Alacovska and Gill	2019	Creative labour beyond Western contexts	Creative labour studies should account for informal work, inequality, and non-standard employment.
[2] Bereitschaft	2014	Creative-cultural districts and neighborhood change	Creative-cultural districts can support redevelopment but may also produce uneven spatial effects.
[3] Berti Mecocci, Maghssudipour, and Bellandi	2022	Cultural production and human capital	Cultural and creative production positively affected regional human-capital formation.
[4] Bille and Jensen	2018	Artistic education and arts careers	Artistic education improved survival in arts occupations, highlighting skill and network effects.
[5] Boix-Domenech, De Miguel-Molina, and Rausell-Köster	2022	Creative industries and territorial wealth	Creative industries influenced income across countries, regions, and municipalities.
[6] Boix-Domenech and Rausell-Köster	2018	Economic impact of creative industries in the EU	Creative industries produce direct and indirect effects across regions and sectors.
[7] Cerisola and Panzera	2021	Cultural and creative cities and regional efficiency	Cultural vibrancy and the conditions of the creative economy can catalyze regional economic efficiency.

[8] Černevičiūtė, Strazdas, Kregždaitė, and Tvaronavičienė	2019	Creative industries and sustainable regional development	Cultural and creative industries can support postindustrial regional development when policy is coordinated.
[9] Collins, Mahon, and Murtagh	2018	Creative economy in the West of Ireland	Creative-economy development can support regional sustainability when grounded in local capacity.
[10] Comunian, Faggian, and Jewell	2014	Arts and humanities graduates in the creative economy	Graduate skills connect arts education with creative-sector labour markets.
[11] de Figueiredo, Jesus, Robaina, and Couri	2019	Creative economy index for Brazilian capitals	Index construction can compare local creative development potential across territories.
[12] Fahmi	2016	Location of creative industries in Indonesia	Creative industries show spatial concentration shaped by infrastructure, markets, and urban amenities.
[13] Fahmi and Koster	2017	Creative industries and productivity growth	Regional creative industries contributed to productivity growth in a developing-economy setting.
[14] Gilmore and Comunian	2016	Higher education and the creative economy	Universities contribute to creative-sector capacity through talent formation and regional connections.
[15] Goel	2022	Creative outputs and economic growth	Disaggregated creative outputs were more informative than aggregate creativity indicators for growth.
[16] Gouvea, Kapelianis, Montoya, and Vora	2021	Creative economy, innovation, and entrepreneurship	Creative economy indicators were empirically connected to innovation and entrepreneurship.
[17] Gouvea and Vora	2018	Creative exports and economic growth	Creative product exports showed stabilizing and growth-related effects across countries.
[18] Greffe	2016	Culture, creativity, and cultural economics	Cultural economics moved from static cultural value toward creativity, innovation, and local development.
[19] Hennekam and Bennett	2017	Creative industries work contexts	Creative workers face portfolio careers, flexibility, and precarity across multiple contexts.
[20] Innocenti and Lazzeretti	2019	Industry relatedness and employment growth	Creative industries supported wider employment growth through relatedness and innovation linkages.
[21] Jelinčić	2021	Cultural heritage and tourism impact indicators	Impact assessment helps connect cultural heritage, tourism, and creative-industry value.
[22] Lee	2014	Creative industries and urban economic growth	Creative concentration was associated with wage and employment growth in the wider urban economy.
[23] Marco-Serrano, Rausell-Köster, and Abeledo-Sanchis	2014	Creative industries and causality	The creative sector and development are linked through reciprocal economic causality.
[24] Martinaitytė and Kregždaitė	2015	Factors of creative industries development	Creative-industry growth depends on human capital, innovation systems, and supportive policy.

[25] Noonan and Rizzo	2017	Economics of cultural tourism	Cultural tourism links heritage, arts participation, and local income generation.
[26] OECD	2022	Culture and local development	The cultural and creative sectors contribute to job creation, innovation, well-being, tourism, and local attractiveness.
[27] Pacheco Pardo and Klingler-Vidra	2019	Entrepreneurial developmental state and creative economy	Creative-economy policy can influence entrepreneurial activity when embedded in institutional support.
[28] UNCTAD	2022	Creative economy outlook	Creative industries became increasingly measurable through trade, services, and digital-value indicators.
[29] UNESCO	2022	Creative-policy monitoring	Inclusive cultural-policy systems are central to the sustainability of creative sectors.
[30] Wijngaarden, Hitters, and Bhansing	2020	Creative work and place-based innovation	Creative workspaces and networks matter for innovation, but benefits depend on local inclusion.
[31] Woronkiewicz, Soni, Freedman, and Simon	2020	Policy risk and artist occupations	Social protection conditions influence the stability and security of arts labor markets.
[32] Wu and Lin	2021	Sustainable development of cultural and creative industries	Resource allocation and city governance affect the sustainability of creative-industry development.

This table synthesizes the studies used to position the paper within the fields of creative industry, cultural economy, and development research.

III. RESEARCH GAP, CONCEPTUAL FRAMEWORK AND HYPOTHESES

1. RESEARCH GAP

The reviewed literature provides strong evidence that cultural and creative industries matter for local development, but three gaps remain. First, many studies treat creative industries as a broad category and do not isolate the measurable contributions of the visual and performing arts within creative value chains. Second, several policy-oriented studies make strong claims about cultural investment without using panel models that control for territorial differences and common shocks. Third, the relationship between arts-sector intensity and standard economic indicators remains underdeveloped, especially when employment share, output share, compensation, income, and unemployment are considered together. The present study addresses these gaps by building a state-level panel model that treats arts employment intensity and arts output share as empirical variables and tests their association with economic development outcomes.

2. CONCEPTUAL FRAMEWORK AND HYPOTHESES DEVELOPMENT

The conceptual framework assumes that visual and performing arts contribute to economic development through three pathways. The first pathway is the production pathway, where artists, venues, galleries, festivals, theatre companies, music organizations, museums, and arts-support services generate direct value added, employment, and compensation. The second pathway is the market-linkage pathway, where arts activity stimulates tourism, hospitality, local services, cultural entrepreneurship, and place branding. The third pathway is the capability pathway, where arts education, creative skills, cultural participation, and creative networks support human capital and innovation. These pathways do not operate automatically; their strength depends on cultural infrastructure, governance, inclusion, and market accessibility.

Based on this framework, the study develops four hypotheses.

- H1: Higher arts employment share is positively associated with real output per capita.
- H2: Higher arts employment share is negatively associated with unemployment after controlling for economic structure.

- H3: Higher arts output share is positively associated with economic development indicators, although the association may be weaker after fixed effects are included.
- H4: States with stronger arts-sector concentration exhibit lower average output-growth volatility because creative ecosystems may diversify local economic activity and strengthen place-based resilience.

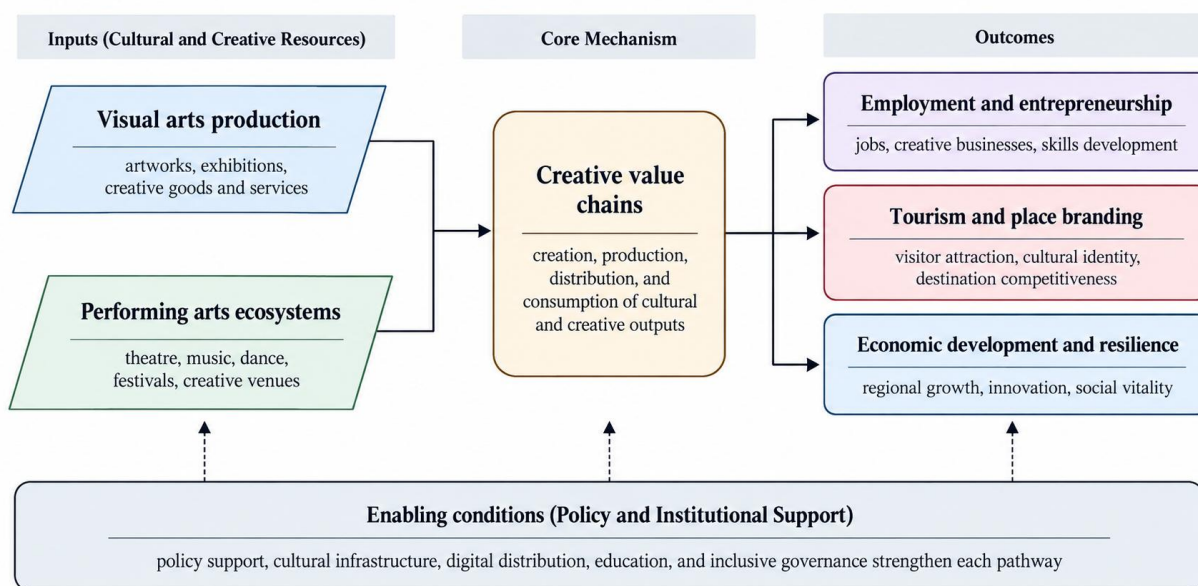


FIGURE 1. Conceptual framework of creative arts and economic development.

This figure shows how visual and performing arts are translated into employment, entrepreneurship, tourism, branding, and economic resilience through creative value chains.

IV. PROPOSED METHOD

The proposed method is a quantitative creative-economy assessment model that connects arts-sector intensity to economic development outcomes through panel estimation. The method begins from the assumption that creative industries cannot be evaluated only through cultural participation or descriptive examples. They require measurable indicators that capture employment, output, compensation, income, and economic context. Visual and performing arts are therefore operationalized as part of an arts and cultural production system that contributes to state-level value added and the labor market structure.

The method contains four components. The first component is arts intensity, measured by the share of employment and output in arts and cultural production. The second component is economic development, represented by real output per capita, output growth, unemployment, and income-related controls. The third component is structural adjustment, represented by population scale and finance-sector share to control for general economic size and industrial composition. The fourth component is unobserved heterogeneity, handled through state and period fixed effects. This structure reduces the risk that the estimated association reflects large states, wealthy states, or common macroeconomic conditions.

The model is not designed to claim that every arts investment automatically produces growth. Instead, it tests whether higher arts-sector intensity is systematically associated with development outcomes after accounting for relevant controls. This approach is suitable for creative industries because their effects are often indirect, cumulative, and embedded in territorial systems.

$$Y_{it} = \alpha + \beta A_{it} + \gamma X_{it} + \mu_i + \lambda_t + \varepsilon_{it} \quad (1)$$

Equation (1) defines the baseline fixed-effects model, where Y represents an economic development outcome, A represents arts-sector intensity, X represents controls, μ captures state-specific effects, λ captures period effects, and ε is the error term.

$$A_{it} = \frac{AE_{it}}{TE_{it}} \times 100 \quad (2)$$

Equation (2) defines the main arts-intensity measure used to test whether the employment weight of the arts sector is associated with economic outcomes, where AE denotes arts employment, and TE denotes total employment.

$$\Delta Y_{it} = \alpha + \beta A_{i,t-1} + \gamma X_{it} + \mu_i + \lambda_t + \varepsilon_{it} \quad (3)$$

Equation (3) introduces a lagged specification for output growth, which reduces simultaneity concerns by relating current growth to prior creative-sector intensity.

V. METHODOLOGY

1. RESEARCH DESIGN

The study uses a secondary quantitative panel design. The unit of analysis is the state-level jurisdiction, and the observation structure contains multiple annual records for each jurisdiction. This design is appropriate because creative-sector capacity is geographically uneven, historically persistent, and influenced by both local characteristics and economy-wide conditions. The panel structure allows the study to estimate within-state associations while controlling for stable territorial differences and common period effects.

2. DATA SOURCE / PARTICIPANTS / CORPUS

The empirical material consists of official state-level indicators covering arts and cultural production, output, compensation, employment, population, income, unemployment, and industrial composition. The arts variables are grounded in the Arts and Cultural Production Satellite Account, which measures value added, employment, and compensation in arts and cultural industries [33], [34]. Labour-market indicators are aligned with official unemployment statistics [35], while demographic and income variables are drawn from federal statistical sources [36]. The study does not involve human participants, interviews, personal data, or textual corpora.

3. SAMPLE SELECTION AND INCLUSION CRITERIA

The final analytical sample contains 51 state-level jurisdictions and 23 annual observations per jurisdiction, producing 1,173 state-period records before model-specific missing-value adjustment. Observations were included when they contained valid values for arts employment, arts value added, compensation, population, income, output, and unemployment. Missing values in growth models were handled through complete-case estimation because the growth measure is not available for the first observation within each state-level sequence. The inclusion criteria were designed to preserve comparability across jurisdictions and prevent imputation-driven results.

4. VARIABLES / MEASURES / CODING FRAMEWORK

Table 2. Variables and operational definitions.

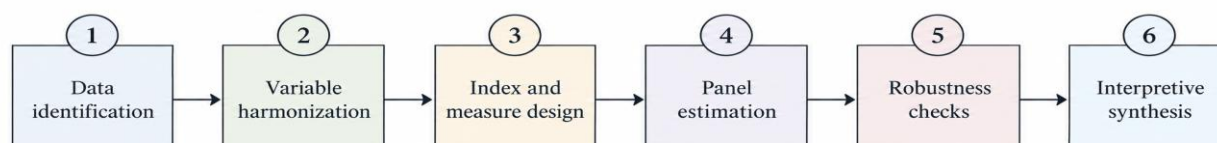
Variable	Role	Operational definition
Real output per capita	Dependent variable	Inflation-adjusted state output divided by population; natural logarithm used in regression.
Real output growth	Dependent variable	Annual growth in real state output; used to test short-run development dynamics.
Unemployment rate	Dependent variable	State-level unemployment rate; used as a labor-market development outcome.

Arts employment share	Main independent variable	Arts employment as a percentage of total employment; captures creative labour intensity.
Arts GDP share	Alternative independent variable	Arts value added as a percentage of total output; captures creative-sector output intensity.
Population	Control variable	Natural logarithm of population; controls for market size and scale.
Personal income per capita	Control variable	Natural logarithm of income per person; controls for purchasing power and income structure.
Finance-sector share	Control variable	Finance and insurance value added as a percentage of total output; controls for sectoral composition.
State effects	Model control	Controls for time-invariant territorial differences.
Period effects	Model control	Controls for common shocks affecting all states in a given observation period.

This table defines the variables used to convert arts-sector activity into measurable development indicators.

5. ANALYTICAL PROCEDURE

The analytical procedure followed six steps. First, relevant indicators for arts, labor, output, income, population, and industrial composition were identified. Second, state names and annual observations were harmonized to construct a balanced state-level panel. Third, arts intensity measures were calculated as employment and output shares. Fourth, descriptive statistics and correlations were used to understand the distribution and bivariate relationships among variables. Fifth, fixed-effects regressions with clustered standard errors were estimated to test the hypotheses. Sixth, robustness checks examined alternative specifications, instrumental sensitivity, first differences, and volatility grouping.



The procedure links official cultural-production measures to economic outcomes through transparent panel-econometric steps.

FIGURE 2. Analytical procedure.

This figure summarizes the sequence of analytical steps used to move from data identification to model interpretation.

6. VALIDITY, RELIABILITY, AND ETHICAL CONSIDERATIONS

Construct validity was strengthened by using arts employment share and arts output share rather than relying on vague cultural labels. Internal validity was addressed by including state and period fixed effects, controls for economic scale and industrial composition, and clustered standard errors. Reliability was supported through transparent variable construction and reproducible estimation procedures. External validity is strongest for comparable state-level creative economies and should be interpreted cautiously for countries with different cultural-policy systems or informal arts sectors. Ethical risk is minimal because the study uses aggregated public indicators and does not include human participants, identifiable personal information, or sensitive individual-level records.

VI. RESULTS / FINDINGS

The descriptive results show that arts and cultural production represents a measurable component of state-level economies. Across the analytical panel, the average arts output share is about 3.57% and the average arts employment share is about 1.82%. Average real output per capita is approximately 57,407. These values indicate that the arts sector is economically visible but also unevenly distributed across places.

The ranking of states by arts output share confirms strong spatial concentration. The highest average arts shares appear in the District of Columbia, Washington, New York, California, and Nevada. These places combine cultural institutions, media and publishing systems, entertainment activity, visual and performing arts markets, tourism, and high-density service economies. The pattern supports the conceptual claim that creative industries operate through territorial ecosystems rather than isolated artistic activities.

The correlation matrix shows that arts employment share is strongly correlated with real output per capita and arts compensation per capita. Arts GDP share is also positively correlated with real output per capita. These correlations are not interpreted as causal evidence, but they indicate that states with stronger arts-sector intensity tend to have higher economic-output levels. The correlation with short-run output growth is weaker, suggesting that creative industries are more closely linked to structural development capacity than to immediate annual fluctuations in growth.

Table 3. Descriptive statistics.

Variable	N	Mean	SD	Min	Max
Arts value added	1,173	14.59M	29.36M	714,642	288.90M
Arts employment	1,173	104,059	127,153	9,162.0	842,925
Arts compensation	1,173	7.18M	13.60M	424,388	140.49M
Arts GDP share (%)	1,173	3.570	1.483	1.098	10.885
Arts employment share (%)	1,173	1.817	1.035	0.910	11.331
Arts compensation per capita	1,173	1.142	1.515	0.366	14.631
Real GDP per capita	1,173	57,407	22,271	32,778	214,054
Real GDP growth	1,122	0.020	0.027	-0.103	0.232
Unemployment rate	1,173	5.430	2.037	1.800	13.675
Personal income per capita	1,173	45,155	13,000	22,806	107,384
Median household income	1,173	74,148	12,777	42,210	115,800

This table reports the distribution of arts-sector and economic-development indicators used in the empirical analysis.

Table 4. Correlation matrix.

Variable	Arts GDP share	Arts employment share	Arts compensation pc	GDP pc	GDP growth	Unemployment	Income pc
Arts GDP share	1.000						
Arts employment share	0.681	1.000					
Arts compensation pc	0.696	0.902	1.000				
GDP pc	0.572	0.842	0.934	1.000			
GDP growth	0.056	0.057	0.009	0.017	1.000		
Unemployment	0.205	0.029	0.085	0.014	-0.353	1.000	
Income pc	0.183	0.197	0.445	0.570	0.011	-0.207	1.000

This table presents bivariate correlations; the lower-triangular layout avoids unnecessary repetition.

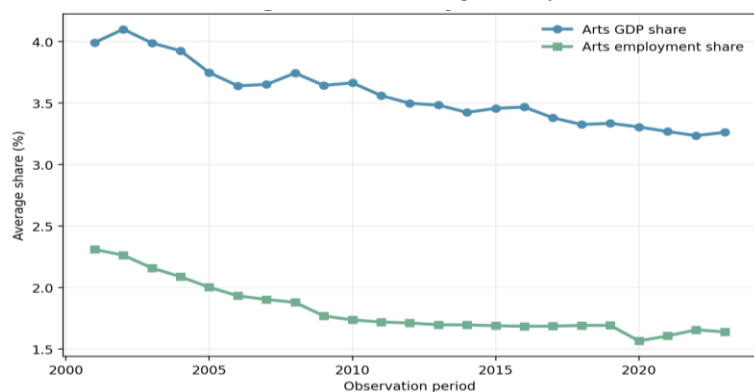


FIGURE 3. Average arts intensity across states.

This chart shows average arts output share and arts employment share across the observation period, indicating the relative stability of arts intensity over time.

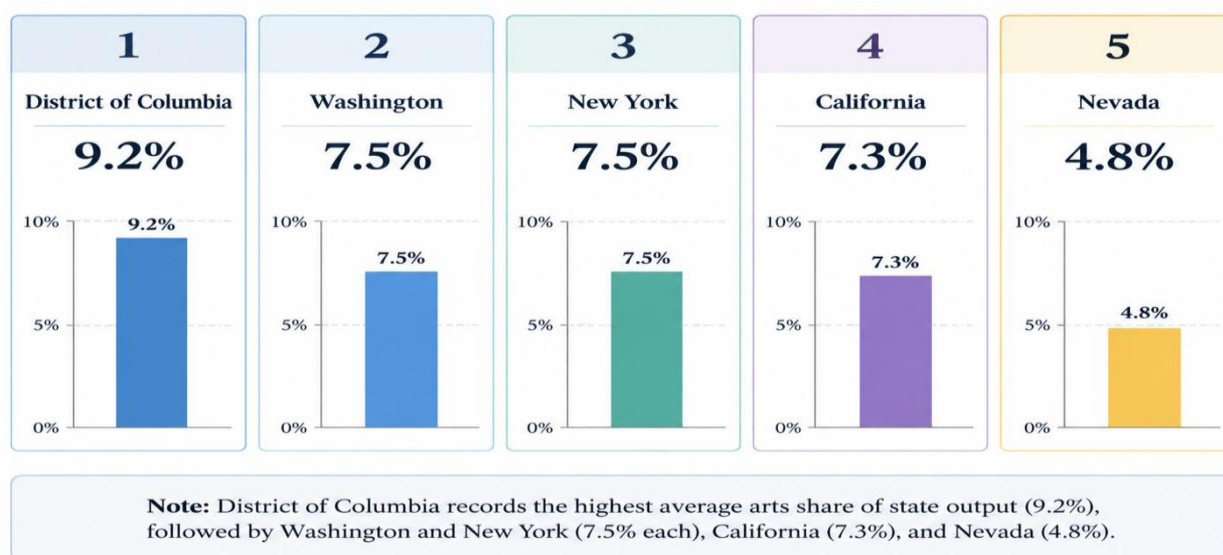


FIGURE 4. Highest average arts share of state output.

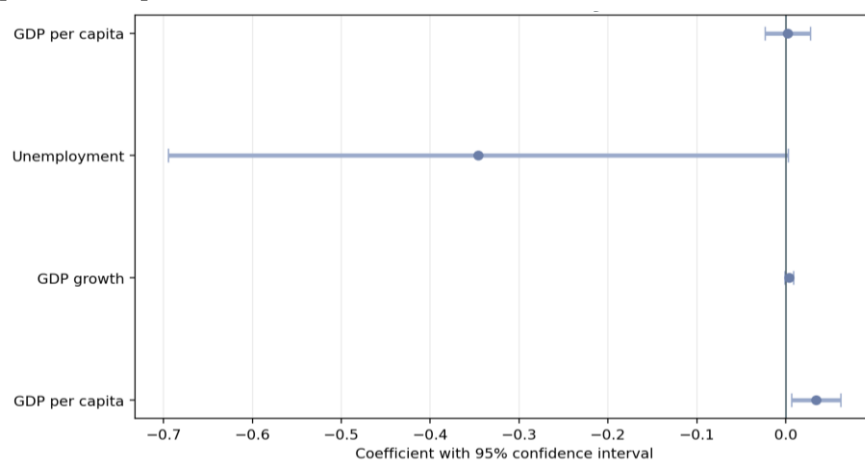
This chart identifies the states with the strongest arts output concentration in the analytical panel.

The regression results provide a more rigorous test of the hypotheses. Model M1 indicates that the share of employment in the arts is positively associated with real output per capita after controlling for population, income, the finance-sector share, state effects, and period effects. The coefficient is statistically significant, supporting H1. Model M2 shows a positive but statistically weaker relationship between lagged arts employment share and short-run output growth, indicating that annual growth effects are less stable than output-level effects. Model M3 shows a negative relationship between arts employment share and unemployment that approaches conventional significance, providing partial support for H2. Model M4 uses the arts output share rather than the arts employment share and shows a weaker association after full fixed effects are included, providing limited support for H3 and suggesting that employment intensity is the more robust development channel.

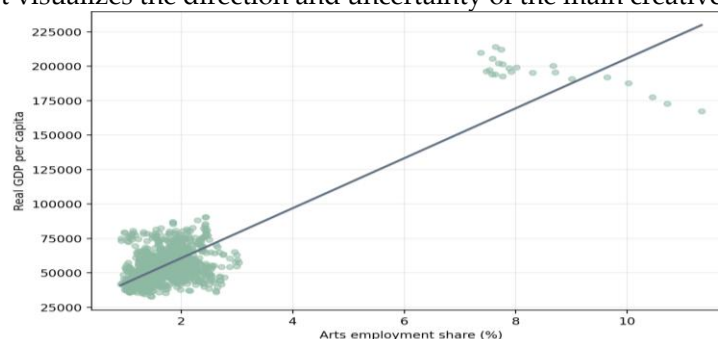
Table 5. Fixed-effects regression results.

Model	Creative-economy variable	Coefficient	Clustered SE	p-value	N	R ²	Effects
M1: GDP per capita	arts emp share pct	0.0343**	(0.0141)	0.015	1,173	0.984	State and period
M2: GDP growth	lag arts emp share pct	0.0039	(0.0026)	0.127	1,122	0.477	State and period
M3: Unemployment	arts emp share pct	-0.3458*	(0.1780)	0.052	1,173	0.874	State and period
M4: GDP per capita	arts share pct	0.0024	(0.0130)	0.856	1,173	0.984	State and period

This table reports fixed-effects estimates with standard errors clustered by state-level jurisdiction; stars indicate $p < .10$, $p < .05$, and $p < .01$.

**FIGURE 5.** Estimated creative-economy coefficients.

This coefficient plot visualizes the direction and uncertainty of the main creative-economy estimates.

**FIGURE 6.** Arts employment intensity and output level.

This scatter chart shows the positive association between arts employment intensity and real output per capita before fixed-effects adjustment.

Robustness checks qualify the main findings. The instrumental-variable sensitivity model remains positive, while the first-difference model does not provide strong evidence that short-run changes in arts output share immediately translate into output changes. This distinction is important. It suggests that creative industries are better understood as structural development assets rather than as quick annual-

growth instruments. The volatility grouping also shows that high-arts states have lower average output-growth volatility than low-arts states, which supports the view that diversified creative ecosystems may contribute to resilience.

Table 6. Robustness and sensitivity checks.

Check	Specification	Estimate	SE / detail	Interpretation
Instrumental-variable sensitivity	Arts exposure instrumented with historical creative infrastructure	0.330***	(0.067)	Positive association remains in sensitivity model
Pooled benchmark	Arts GDP share with regional and period controls	0.0556***	(0.0194)	Positive cross-sectional association with output level
First-difference check	Changes in arts GDP share and changes in output level	-0.0086	(0.0060)	No short-run causal claim is made
Volatility grouping	Mean output-growth volatility by arts-share tercile	High=0.021; Low=0.024		High-arts states show lower average volatility

This table summarizes supplementary evidence used to assess whether the main findings are sensitive to alternative specifications.

VII. DISCUSSION

The findings support a nuanced interpretation of the contribution of visual and performing arts to economic development. Arts employment intensity is positively associated with real output per capita even after controlling for population, personal income, finance-sector concentration, state-specific heterogeneity, and common period effects. This result suggests that the labor dimension of the creative economy matters. States with higher shares of arts-related employment tend to have higher output levels, not merely because they are larger or wealthier, but because creative labor appears to be part of a broader development ecosystem. This finding is consistent with research that links creative industries to urban growth, productivity, industry relatedness, human capital, and territorial wealth.

The weaker findings for short-run output growth are equally important. They indicate that the creative sector should not be treated as an automatic growth accelerator. Visual and performing arts contribute through cumulative and systemic mechanisms: they attract and retain talent, support tourism and local services, strengthen symbolic identity, contribute to cultural entrepreneurship, and create employment in production, performance, exhibition, management, education, and support services. These mechanisms rarely appear as immediate annual growth shocks. They are more likely to shape the long-term quality and resilience of local economies. This interpretation aligns with studies emphasizing creative ecosystems, cultural tourism, policy conditions, and sustainable regional development.

The partial evidence on unemployment suggests that arts employment may contribute to labour-market vitality, but the effect is not strong enough to claim that arts-sector growth automatically reduces unemployment. This cautious result is realistic, as arts labor markets are complex. Creative workers may hold multiple jobs, combine freelance and formal employment, or work across sectors. Some arts jobs are highly skilled and well connected to metropolitan markets, while others are precarious or seasonal. Therefore, the labor-market contribution of the visual and performing arts depends on the quality of creative work, workforce development systems, institutional support, and the presence of sustainable venues and enterprises. This interpretation is consistent with the literature on creative labour and arts occupations.

The difference between arts employment share and arts output share also deserves attention. Employment intensity is a stronger predictor of output level than arts GDP share in the fully controlled model. This suggests that the development relevance of the arts lies not only in direct output but also in people, skills, professional networks, and labour-market participation. Visual and performing arts create economic value through performers, visual artists, designers, curators, technicians, instructors, producers, administrators, cultural entrepreneurs, and support workers. Their contribution may therefore be

underestimated when analysis focuses only on output shares. A labour-sensitive model better reflects the social and economic structure of creative industries.

The robustness results further show that creative-economy concentration may be linked to resilience. High-arts states show lower average output-growth volatility than low-arts states. This does not mean that creative industries protect economies from all shocks. Rather, it indicates that arts-intensive places may have more diverse service ecosystems, stronger cultural infrastructure, and greater place-based attractiveness. These features can support recovery, adaptation, and entrepreneurship. The finding supports the broader argument that creative industries contribute to development by improving the quality, diversity, and attractiveness of local economies, rather than functioning as a single, isolated sector.

Future research should extend this design in four directions. City- and county-level analysis would allow more precise examination of arts districts, festivals, museums, galleries, and performance venues. Sector-disaggregated analysis could separate visual arts, performing arts, museums, design, media, and arts education. Mixed-method research could combine panel estimation with interviews or case studies to explain how specific arts ecosystems generate local spillovers. Comparative international research could test whether the results hold in countries with different cultural-policy regimes, tourism structures, and informal creative economies.

Overall, the findings strengthen the argument that investment in visual and performing arts should be understood as part of economic development policy. However, the evidence also warns against promotional overstatement. Arts investment is most likely to contribute to development when it is connected to education, tourism, urban planning, creative entrepreneurship, fair work, cultural infrastructure, and inclusive access. Without these conditions, the economic benefits may remain concentrated in already advantaged places or may produce limited spillovers. The main implication is that creative industries are not a substitute for broader development policy; they are a strategic component within it.

VIII. CONCLUSION

This study examined the contribution of visual and performing arts to creative industries and economic development using a state-level panel framework. The evidence shows that arts employment intensity is positively associated with real output per capita after controlling for population, income, industrial composition, state effects, and common period effects. The findings also suggest that arts-intensive states may experience lower average output-growth volatility, although the evidence for immediate annual growth effects is weaker. These results support a balanced conclusion: the arts matter for development, but their contribution is structural, cumulative, and ecosystem-based rather than automatic or instantaneous. Visual and performing arts create value through labor, skills, cultural entrepreneurship, tourism appeal, symbolic identity, and local service linkages. Their economic contribution is strongest when supported by cultural infrastructure, fair work, education, inclusive governance, and policy coordination. The paper therefore argues that investment in creative industries can strengthen both cultural vitality and sustainable economic development, provided that cultural policy is integrated with broader development planning. For scholars, the study offers a measurable framework for examining arts-based development. For policymakers, it shows that investment in the arts should be evaluated not only as cultural spending but also as a strategic component of employment, entrepreneurship, tourism, and regional resilience.

Author Contributions

The author conducted the conceptualization, methodology, data analysis, investigation, writing, review, editing, and final approval of the manuscript.

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Data Availability

The dataset will be available from the author upon reasonable request.

Conflicts of Interest

The author declares no conflict of interest.

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Appendices

Appendix A. Supplementary sample profile.

Region	States	Arts GDP share (%)	Arts employment share (%)	Real GDP pc	Unemployment
Midwest	12	3.087	1.817	55,256	4.925
Northeast	8	4.146	1.820	62,114	5.543
South	17	3.246	1.761	58,696	5.683
West	14	4.050	1.886	54,995	5.492

This appendix table reports regional averages used to contextualize the state-level panel.

Appendix B. Top arts-concentration states.

State	Arts GDP share (%)	Arts employment share (%)	Real GDP pc
District of Columbia	9.205	8.453	195,308
Washington	7.542	2.229	65,284
New York	7.464	2.399	75,684
California	7.317	1.968	63,937
Nevada	4.793	1.732	56,214