**Regional Economic and Potential Tourism Impacts in Rhode Island of NOS4A2 and The Gilded Age**

IEc



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Overview of Analysis

Seasons 1 and 2 of *NOS4A2*, produced by AMC Studios and released on AMC, is a supernatural horror drama television series that was filmed primarily within the state of Rhode Island between 2018 and 2020. This report evaluates the regional economic impacts of *NOS4A2* Seasons 1 and 2 on the Rhode Island economy.

Season 1 of *The Gilded Age*, produced by Universal Television and released on HBO, is a historical drama television series, parts of which was filmed Rhode Island, most notably at and around the Newport Mansions. The first season of the series was filmed in 2021 and was released in January 2022. This report discusses available literature and methods for evaluating potential tourism effects that may be associated with *The Gilded Age,* and provides an initial assessment of the advertising value associated with *the Gilded Age Season 1*.

KEY FINDINGS

Film and television productions often expend substantial funds in the states in which they are produced. These expenditures result in regional economic benefits to those states. These productions also have the potential to draw tourists to areas where filming occurs. This study evaluates these effects in Rhode Island for two recent productions.

**Regional Economic Benefits**

* The production of the television series, *NOS4A2 Seasons 1 and 2,* spent $57 million that contributed directly to the economy of Rhode Island through payments to businesses and individuals in Rhode Island between 2018 and 2020.
* *NOS4A2* expenditures were distributed across at least 37 municipalities in Rhode Island (95% of all municipalities in the state), including many far from major metropolitan areas.
* The production utilized over 650 vendors based in Rhode Island during the course of filming.
* The $57 million in *NOS4A2* expenditures generated approximately $93 million in economic activity in the State across a wide range of industries, including rental of real estate and equipment, transportation, food and hospitality, retail, and construction, between 2018 and 2020.
* *NOS4A2* expenditures created demand for approximately 1,532 full-time equivalent jobs in Rhode Island between 2018 and 2020.
* The production of *NOS4A2* received $17 million in tax credits, which is 30% of all qualified expenditures.
* Each $1.00 of tax credit issued by the State of Rhode Island related to the production of *NOS4A2* generated approximately $5.44 of economic activity in the state.

**Tourism Benefits**

The production and release of film and television series can result in increases in local tourism at filming locations and settings under specific circumstances. *The Gilded Age* has characteristics that increase the likelihood for it to attract film tourists to Rhode Island, including a potential for iconic identification with a particular location (Newport), the potential for popularity and longevity, the setting as a period drama, and support from a major production company and multiple Rhode-Island based partners. While initial returns for of *The Gilded Age* are encouraging (with increasing viewership across its first seven episodes, appearance in the top 10 in-demand series, and a second season already green-lit), it is premature to estimate specific impacts of *The Gilded Age* on future Rhode Island tourism, as the production has just been released and its future popularity and longevity are currently unknown.

Chapter 1 | Introduction and Background

Film and television productions often expend substantial funds in the states in which they are produced. These expenditures result in regional economic benefits to those states. These productions also have the potential to draw tourists to areas where filming occurs. The Newport County Development Council (NCDC) requested IEc’s support in analyzing the regional economic impacts of two seasons of AMC’s *NOS4A2* television series, and in assessing potential tourism benefits associated with HBO’s recently released series, *The Gilded Age*.

# 1.1 Recent Motion Picture Production Activity in Rhode Island

In 2005, the State of Rhode Island enacted a film and television production tax credit, commonly known as the “motion picture tax credit” (herein “tax credit” for brevity).[[1]](#footnote-2) The program provides a tax incentive for motion picture and other film projects filmed primarily in the State. Specifically, the program allows companies to claim a state tax credit on 30 percent of state-certified production costs incurred directly attributable to activity within the state provided that 1) the primary locations are in the State of Rhode Island and the total production budget is a minimum of $100,000; or 2) the motion picture production incurs and pays a minimum of $10 million in state-certified production costs within a 12-month period. The credit currently has a statewide annual cap of $20 million, and a cap per production of $7 million; this latter requirement can be waived for qualifying motion picture and television productions. **In contrast, neighboring states’ tax credit programs (such as Massachusetts and Connecticut) have no cap**.

Between 2005 and 2020, 94 film and television productions received tax credits in Rhode Island. Productions receiving the tax credit have included 22 television series, 47 feature films, 8 documentaries, 2 commercials, 12 theatrical productions, and 3 web series (see Figure 1-1). Qualified production expenses of these 94 qualifying productions ranged from $110,000 to $38 million, and received tax credits range from $27,000 to $9.5 million.[[2]](#footnote-3) An additional 12 productions between 2021 and 2022, if qualified, may also receive a tax credit.

From the tax credit’s inception in 2005 to 2020, approximately $115 million was distributed to qualifying productions (an average of approximately $7 million per year). Figure 1-1 details yearly tax credit payments by the State from 2005 to 2020, and Figure 1-2 shows the number of productions that received the tax credit, split by production category. As presented in Figure 1-2, feature films (50 percent) and television series (23 percent) comprise the majority of productions that received the tax credit. The introduction of the annual cap to the tax credit in 2010 may explain the subsequent drop in tax credit payments post-2010 seen in Figure 1-1.

Figure 1-3 provides Bureau of Labor Statistics (BLS) data for the Motion Picture and Video Production industries (NAICS Code 51211) in the State of Rhode Island between 2000 and 2020 (BLS 2022). As shown, employment in this industry has varied year to year, but overall shows an upward trend that starts in 2005. This suggests that the tax credit likely influenced the level of reported employment in this industry in the State during this period. Specifically, the industry averaged 64 employees between 2000 and 2005, when the tax credit was implemented, and averaged 275 employees after that (2006 to 2020), representing a 430 percent increase in direct industry employment during the period following tax credit implementation (BLS Annual Data, 2000-2020).

Recent BLS data suggests that the tax credit likely influenced the level of reported employment in the film and television industry in the State since its implementation. Specifically, the industry averaged 64 employees between 2000 and 2005, when the tax credit was implemented, and averaged 275 employees after that (2006 to 2020), representing a 430 percent increase in direct industry employment during the period following tax credit implementation (BLS Annual Data, 2000-2020).

Figure 1-1. Annual Rhode Island Motion Picture Tax Credit Payments, by Type of Production (2005-2020)

Figure 1-2. Number of Productions that Received Rhode Island Motion Picture Tax Credits by Production Type (2005-2020)

**Figure 1-3. Employment in the Motion Picture and Video Production Industries in Rhode Island, 2000-2020**

Source: Bureau of Labor Statistics, Quarterly Census of Wages and Employment, Annual Data, NAICS Code 51211, Motion Picture and Video Production.

# 1.2 Scope of AnalysEs

This report focuses on 1) assessing the impacts of the television production, *NOS4A2* Seasons 1 and 2, on the economy of Rhode Island; and 2) evaluating potential tourism benefits of *The Gilded Age*. These examples are intended to provide case studies that describe the impacts of the film industry on the State of Rhode Island.

## 1.2.1 Case Study: NOS4A2

*NOS4A2* is a supernatural horror drama television series based on the 2013 novel of the same name by Joe Hill.The first season of *NOS4A2* was in production between September 2018 and early 2019, and premiered on AMC on June 2, 2019. The second and final season was in production between 2019 and early 2020, and premiered on AMC on June 21, 2020. Filming for both seasons primarily occurred in the State of Rhode Island, including set locations in Providence, West Warwick, and Warren. The first season of *NOS4A2* received $8.2 million in tax credits, and the second season is expected to qualify, for but has not received, a tax credit of similar magnitude.

To estimate regional economic impacts from *NOS4A2* Seasons 1 and 2, we use expenditure data provided by AMC to identify all accounts payable (AP) and payroll expenditures that qualified for the tax credit. Estimates in this report exclude “above the line” (e.g., director, principal cast), employee payroll or AP expenditure data. To the extent that these employees spent some of their income from the production in Rhode Island, this report underestimates impacts. It should also be noted that above the line employees are subject to Rhode Island income taxes per Section 280-RICR-20-20-5 of the Rhode Island Administrative Code.

We apply an “input-output” economic model (IMPLAN) to analyze how specific project expenditures flow through the Rhode Island economy. This process is described further in Chapter 2. We treat AMC’s expenditure data as the direct economic impacts of *NOS4A2*’s two seasons and estimate indirect and induced economic impacts of these expenditures using the IMPLAN modeling framework.

## 1.2.2 Case Study: The Gilded Age

*The Gilded Age* is an historical drama television series created by *Downtown Abbey* creater Julian Fellowes. The first season of *The Gilded Age* was in production between February and June 2021, and premiered on HBO on January 24, 2022. While some filming took place in New York, a substantial amount of project filming also took place in Rhode Island, including multiple locations in Newport such as the mansions Chateau-sur-Mer, The Elms, and The Breakers.

To evaluate potential tourism benefits from *The Gilded Age*, we conducted a literature review to summarize available studies that estimate the benefits of television and film productions on local and regional tourism, and discuss potential relevance to productions in Rhode Island.

Rhode Island Department of Revenue (DOR) Report

The Rhode Island DOR released a report (last updated in December 2021) that also evaluates regional economic impacts of the motion picture industry in Rhode Island, but has a different focus. Our report is different from the DOR report in several ways. First, our report focuses on one example production filmed primarily in Rhode Island between 2018 and 2020, while the DOR report considers 11 productions that were filmed between 2016 and 2018. Next, our study evaluates the economic contribution of film production spending to the Rhode Island economy, while the DOR report focuses on understanding whether the taxes paid to Rhode Island that are associated with film production spending are more or less than the amount of state taxes that are forgone by Rhode Island by granting the tax credit. Our report utilizes an expansive dataset from AMC that includes details for all qualified expenditures on *NOS4A2* other than above the line payments. The DOR report does not have complete access to all data provided to the Rhode Island Department of Taxation by tax credit recipients and appears to rely on a subset of available data, which may underestimate the total income taxes paid related to production spending. It is not surprising, then, that these two reports have different findings, and we cannot make apples-to-apples comparisons between them.

# 1.3 Organization of Report

Chapter 2 of our report presents the modeling framework and findings of our regional economic impacts analysis for both seasons of *NOS4A2*. Chapter 3 presents the findings of our potential tourism benefits analysis for *The Gilded Age*. Chapter 4 provides concluding remarks and the main takeaways from our analyses.

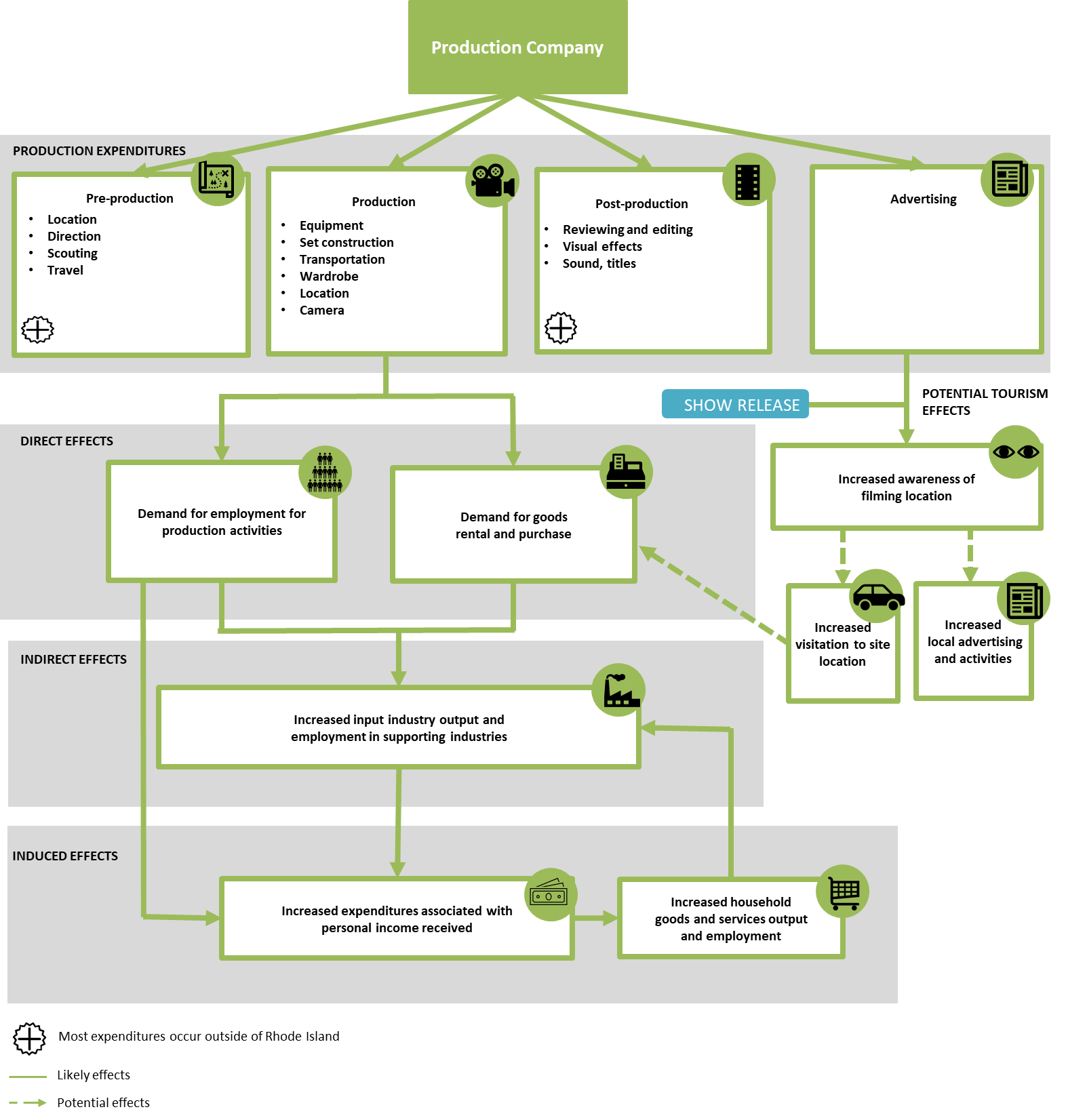
Chapter 2 | Case Study of NOS4A2: Regional Economic Impacts of a Television Series on the State of Rhode Island

# 2.1 Introduction to Regional Economic Impacts Assessment

The basic theory of regional economic impacts assessment is that a new influx of spending in a particular area will result in increased demand for goods that would not have occurred without that spending influx.

The analysis estimates the regional economic impacts from production expenditures by a television series in the State of Rhode Island. Direct expenditures within an economy create demand for goods and services and provide employment. As such, by increasing expenditures on goods as well as demanding direct employment, the production generates economic activity in areas where these expenditures occur. This increased demand for goods and services increases the outputs of the suppliers of those services, and, in turn, increases demand for employment in those sectors. Expenditures by wage earners who receive income generated by both direct and indirect expenditures further ripples through the economy. Because the interplay of industries within each regional economy is complex, we utilize an existing model of economic interactions between industries for this analysis. This model captures all of the existing relationships between industries so that we can fairly easily understand how increases in expenditures in one or several sectors is likely to ripple throughout other sectors. Specifically, this analysis utilizes the input-output model, IMPLAN, to conduct this analysis. These concepts are illustrated in Figure 2-1. Figure 2-1 also depicts the potential for tourism-related expenditures to provide additional regional economic benefits. The potential for tourism-related effects are discussed in Chapter 3 of this report.

* Section 2.2 provides an overview of the IMPLAN model, our approach to modeling the expenditure data in IMPLAN, as well as limitations of IMPLAN.
* Section 2.3 presents the expenditures from the *NOS4A2* production that we use as the basis for estimating regional economic effects of the production on the State.
* Section 2.4 describes the industry sectors included in the analysis.
* Section 2.5 presented the regional economic impacts of *NOS4A2* expenditures on the Rhode Island economy.

Figure 2-1. A Conceptual Model for Regional Economics Impacts of film and television Production Spending on the State of Rhode Island

# 2.2 Overview of the Economic Modeling Framework

In this analysis, we estimate direct, indirect, and induced regional economic impacts of the first and second season of *NOS4A2* in Rhode Island using the IMPLAN model and AMC’s expenditure data.

The IMPLAN model is a standard input-output model that is used to analyze the economic effects associated with expenditures in one or more sectors of the economy, including how these expenditures indirectly change demand across other related sectors. IMPLAN uses data from several federal agencies, including the U.S. Bureau of Economic Analysis and the U.S. Bureau of Labor Statistics, to model the linkages and spending patterns between different industries in the U.S. economy. These relationships are geography-specific and sector-specific.[[3]](#footnote-4) IMPLAN uses these data to estimate economic impacts by sector and in the aggregate for a specified geographic region.

The IMPLAN model estimates economic impacts for four metrics: employment, labor income, value added, and output.

* **Employment** reflects a mix of full-time and part-time job-years[[4]](#footnote-5) that result from additional employment demand created by a project.
* **Labor Income** captures all employment income received as part of the project-related employment demand, including wages, benefits, and proprietor income.
* **Value Added** reflects the total value of all output or production minus the costs of intermediate outputs (value added is analogous to gross domestic product); Value Added includes payroll taxes, sales taxes, excise taxes, and property taxes.
* **Output** reflects the total value of all output or production, including the costs of intermediate and final outputs.

For each of these metrics, IMPLAN breaks the impacts out into direct, indirect, and induced effects:

* **Direct effects** are the production changes or expenditures that directly result from an activity or policy. In this analysis, the direct effects are equal to the costs and labor hours that go into the production of the first and second season of *NOS4A2*, which we assign to appropriate economic sectors.
* **Indirect effects are** “ripple” impacts that result from changes in the output of industries that supply goods and services to industries that are directly affected.
* **Induced effects** are changes in household consumption arising from changes in employment and associated income that result from direct and indirect effects.

For analyzing the first and second season of *NOS4A2*, we use the “IMPLAN Online” version of the IMPLAN model. We specify a study area region consisting of the entire state of Rhode Island and used the 2019 IMPLAN dataset (the most current available for Rhode Island) to conduct the economic modeling. We inflate the expenditures to 2021 dollars using the Consumer Price Index for all urban consumers to align with IMPLAN’s nominal dollar year (BLS 2021). The methodology we use to conduct our IMPLAN analysis was developed in consultation with an IMPLAN staff economist.

# 2.3 Expenditure Data for the Television Series, *NOS4A2*, Seasons 1 and 2

In support of our economic analysis, AMC provided comprehensive data for expenditures in the State of Rhode Island for the television series, *NOS4A2.* These data include both AP and payroll expenditures for the entire period of production Seasons 1 and 2. The AP data contain AMC’s business expenditures remitted to vendors for goods and services, while the payroll data contain employee compensation (*i.e.*, salaries and fringe benefits) for individuals on *NOS4A2’s* payroll.[[5]](#footnote-6)

The expenditure data report fringe expenditures by industry category separately from the payroll and AP expenditure line items with which they are associated. We re-distribute these expenditures by payroll and AP according to each line item’s industry category.

AMC’s data indicate that a total of approximately $32 million in production expenses were eligible for Rhode Island’s motion picture tax credit for the first season of *NOS4A2*, and approximately $34 million in expenses were eligible for the tax credit for the second season.[[6]](#footnote-7) In sum, the production team for Seasons 1 and 2 of *NOS4A2* spent approximately $66 million (2021 dollars) that they considered to be eligible for the film and television production tax credit in Rhode Island. We assume that these expenditures represent in-state expenditures that had a direct impact on the Rhode Island economy.

## 2.3.1 Payroll Expenditures

We assume that qualified payroll expenditures paid to Rhode Island addresses would be spent within the state using typical saving and expenditure patterns reflected in the IMPLAN model. Some payroll expenditures in AMC’s *NOS4A2* data were paid to out-of-state addresses (approximately 32 percent of reported payroll expenses). These payments represent work performed by employees that do not reside in the Rhode Island but performed work in the state. The majority of these qualified out of state expenditures were paid to residents in the northeastern U.S, including Massachusetts (30 percent) and New York (12 percent), but some were paid to residents of other states, including California (28 percent).[[7]](#footnote-8) While these expenditures to out-of-state residents qualify for the tax credit, and it is reasonable to assume that a portion of these wages would be spent in Rhode Island, some portion of wages for employees who permanently reside elsewhere would likely not be spent within the state of Rhode Island. As discussed above, above-the-line expenditures were excluded for confidentiality purposes from this assessment.

To estimate the percentage of non-resident payroll expenditures that can reasonably be assumed to be spent in the state of Rhode Island, we utilize Bureau of Labor Statistics (BLS) spending data for the Northeast U.S. (BLS 2017). BLS’ Consumer Expenditure Surveys publish data on the typical average household expenditures by region, including the total annual average expenditures and expenditures by category. We assume that spending patterns of non-residents employed as part of the *NOS4A2* production would be consistent with other individuals in the Northeast region as reflected in the BLS data. Using this data, we can separate typical expenditures that would be spent in home states such as housing, healthcare, insurance, vehicle purchases, and eduction from expenses that would be more likely to be spent in Rhode Island, such as gasoline, food, entertainment, and personal care products. Table 2-1 shows that, using BLS data assumptions, we can estimate that non-residents working in Rhode Island would likely have spent approximately 36 percent of their *NOS4A2* income within the State of Rhode Island. While the specific spending patterns of these non-resident employees is uncertain, this assumption provides a reasonable estimate of potential expenditues in the state, and avoids the need to assume that all income that non- residents received would be spent within the state of Rhode Island, or that none of it would be.

Table 2-1. Distribution of Payroll Expenditures by Non-Rhode Island Residents by Type and Location, Percent

|  |  |
| --- | --- |
| **Item** | **Percent of Total Payroll Expenditures\*** |
| % payroll assumed tobe spent in home state | 64.2% |
| Housing | 35.4% |
| Personal insurance and pensions | 11.6% |
| Health insurance | 5.5% |
| Vehicle purchases | 4.7% |
| Cash contributions | 3.5% |
| Education | 3.4% |
| % payroll assumed to be spent in Rhode Island | 35.8% |
| Food | 12.2% |
| Gasoline, other fuels, motor oil public transportation, other vehicle expenses | 8.9% |
| Entertainment | 4.7% |
| Apparel and services | 3.1% |
| Medical services and supplies, pharmaceutical drugs | 2.3% |
| Miscellaneous expenditures | 1.9% |
| Personal care products and services | 1.2% |
| Alcoholic beverages | 0.9% |
| Tobacco products and smoking supplies | 0.6% |
| **Total Expenditures** | **100%** |
| **\***Payroll expenses do not include per diem payments.  Source: U.S. Bureau of Labor Statistics, Average annual expenditures and characteristics, 2016-2017, and IEc analysis. | |

## 2.3.2 Accounts Payable Expenditures

For all AP expenditures, we assume that regardless of whether the vendor address is outside Rhode Island or is unknown, expenses that AMC considered to be qualified for the tax credit were made in Rhode Island, and thus, the expenses had a direct impact on Rhode Island economic activity.[[8]](#footnote-9)

## 2.3.3 Summary of NOS4A2 Expenditures in Rhode Island

As shown in Table 2-2, we estimate that approximately $57 million was directly spent in Rhode Island during two seasons of *NOS4A2*. This estimate excludes non-qualified expenditures as well as payroll expenditures paid to out of state employees, other than the percent discussed in section 2.3.

Table 2-2. Expenditures in Rhode Island for the Television Series NOS4A2, Seasons 1 and 2 (2021 dollars)

|  |  |  |  |
| --- | --- | --- | --- |
| **Production** | **AP** | **Payroll** | **Total** |
| NOS4A2 Season 1 | $10,600,000 | $16,500,000 | $27,100,000 |
| NOS4A2 Season 2 | $10,800,000 | $18,700,000 | $29,500,000 |
| Total qualified expenditures in Rhode Island | $21,400,000 | $35,200,000 | $56,600,000 |
| Note: Includes tax-credit qualified expenditures, but excludes approximately $9.2 million in payroll expenses that where paid to out-of-state employees and are assumed not to contribute to the Rhode Island economy. We inflate the expenditures to 2021 dollars using the Consumer Price Index for all urban consumers.  Source: AMC data. | | | |

Table 2-3summarizes how the approximately $57 million spent in Rhode Island was distributed over both seasons of *NOS4A2*’s production. As shown, the largest categories of expenditures were transportation (21 percent), set constuction (9 percent), and locations (8 percent). Transportation includes expenditures such as drivers, truck rentals, and gas. Set construction includes construction labor, purchases and rentals, and scenic. Locations includes location fees, location restoration and parking, equipment rentals, catering, and security. Expenditures within Massachusetts were lower for parts of the production process that predominantly occurred in other locations (*e.g.*, post-production costs were primarily not qualified in Rhode Island). Figure 2-2presents the distribution of expenditures across expenditure types graphically.

Table 2-3. AP and Payroll Expenditures in Rhode Island by Category for the Television Series *NOS4A2*, Seasons 1 and 2 (2021 dollars)1

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Category** | **S1 Expenditures** | **S2 Expenditures** | **Total Expenditures** | **Percent of Total** |
| Transportation | $ 5,600,000 | $ 6,150,000 | $ 11,800,000 | 21% |
| Set Construction | $ 2,460,000 | $ 2,890,000 | $ 5,350,000 | 9% |
| Location | $ 2,510,000 | $ 2,280,000 | $ 4,790,000 | 8% |
| Set Operations | $ 2,070,000 | $ 2,670,000 | $ 4,740,000 | 8% |
| Lighting | $ 2,150,000 | $ 2,410,000 | $ 4,560,000 | 8% |
| Production | $ 1,820,000 | $ 1,570,000 | $ 3,390,000 | 6% |
| Camera | $ 1,670,000 | $ 1,280,000 | $ 2,950,000 | 5% |
| Set Dressing | $ 1,510,000 | $ 1,380,000 | $ 2,890,000 | 5% |
| Office & Facilities | $ 1,050,000 | $ 1,540,000 | $ 2,590,000 | 5% |
| Wardrobe | $ 1,200,000 | $ 1,300,000 | $ 2,500,000 | 4% |
| BTL Travel & Living2 | $ 1,200,000 | $ 1,110,000 | $ 2,310,000 | 4% |
| Special Effects | $ 726,000 | $ 1,210,000 | $ 1,930,000 | 3% |
| Make-Up & Hairdressing | $ 947,000 | $ 911,000 | $ 1,860,000 | 3% |
| Extras & Crowds | $ 510,000 | $ 486,000 | $ 996,000 | 2% |
| Art Direction | $ 461,000 | $ 379,000 | $ 840,000 | 1% |
| All other categories3 | $ 1,320,000 | $ 2,130,000 | $ 3,400,000 | 6% |
| **Total** | **$ 27,100,000** | **$29,500,000** | **$56,600,000** | **100%** |
| Source: AMC data. Excludes above-the-line costs.  1 The expenditure categories correspond to top-level expenditure categories in AMC’s chart of accounts.  2 “Below the line” refers to the separation of production costs between script and story writers, producers, directors, actors, and casting ("above the-line") and the rest of the crew, or production team, who are “below the line.”  3 Includes a wide range of expenditures, including sound and visual effects, picture vehicles and animals, and property. | | | | |

Figure 2-2. AP and Payroll Expenditures in Rhode Island by Category for the Television Series *NOS4A2*, Seasons 1 and 2

## 2.3.4 Distribution of Expenditures Across Rhode Island Communities

The expenditure data for *NOS4A2* does not provide complete vendor location information for all line items. However, for expenditures with known vendor locations, across the filming of both seasons, the production resulted in purchases of goods and services from more than 650 unique vendors in all but two of the 39 municipalities (New Shoreham and Richmond) in the State of Rhode Island, or 95 percent of cities and towns in the state. As AMC data did not include specific location data for all expenditures, the total number of vendors that received direct payments (and the total amount spent in each municipality) in Rhode Island is not known with certainty.[[9]](#footnote-10)

Figure 2-3 depicts the geographic distribution of all AP and payroll expenses across both seasons of *NOS4A2* with an identified Rhode Island vendor by municipality. As mentioned previously, these expenses only represent a subset of total qualified expenditures. *NOS4A2*’s direct expenditures were widely distributed throughout the state, with a notable concentration of economic activity in major urban centers and areas of principal filming. In Providence and North Kingstown alone, the production spent approximately $5.8 million on location fees to local businesses, residents, and to the town government during production and filming.

Map

Description automatically generatedFigure 2-3. *NOS4A2*’s Season 1 and 2 Expenditures in Rhode Island by Municipality

Source: AMC data. Note: Location data was not available for all expenditures.

# 2.4 Industry Sectors Included in this Analysis

The IMPLAN model uses NAICS and other Bureau of Labor Statistics data to classify all business and government spending into 546 modeled industries. In order to estimate the regional economic impacts of *NOS4A2*’s first and second season expenditures in Rhode Island, we first need to translate the expenditure categories as they are reported in the AMC data into industry sectors recognized in the IMPLAN model. To do this, we reviewed data descriptions and payments in the AMC data and matched them to appropriate North American Industry Classification System (NAICS) codes, which are fit to match the expenditure types to IMPLAN sectors. The result of our review is that we classified the *NOS4A2* expenditures into 35 unique IMPLAN industry sectors across Seasons 1 and 2. Table 2-4 summarizes the results of this classification of *NOS4A2* expenditures for Seasons 1 and 2 combined. Figure 2-4 displays the percentage distribution of *NOS4A2* expenditures by IMPLAN industry sector. After assigning these expenditures to the IMPLAN industry sectors, we modeled the regional economic effects of these expenditures using IMPLAN. In our analysis, we treat AP data as business expenditures and payroll data as employee compensation in the IMPLAN model per the categorization provided in AMC’s expenditure data.

Table 2-4. Television Series *NOS4A2* Expenditures Classified by IMPLAN Industry Sector, Seasons 1 and 2 (2021 dollars)

|  |  |  |  |
| --- | --- | --- | --- |
| **Sector** | **AP** | **Payroll** | **Total** |
| Motion picture and video industries | $1,950,000 | $15,700,000 | $17,600,000 |
| Transit and ground passenger transportation | $491,000 | $6,680,000 | $7,180,000 |
| Commercial and industrial machinery and equipment rental and leasing | $6,030,000 | $654,000 | $6,690,000 |
| Specialized design services | $31,000 | $4,830,000 | $4,860,000 |
| Construction of other new nonresidential structures | $700,000 | $2,530,000 | $3,220,000 |
| Automotive equipment rental and leasing | $2,590,000 | $302,000 | $2,890,000 |
| Retail - Miscellaneous store retailers | $2,320,000 | $392,000 | $2,720,000 |
| Other real estate | $2,500,000 | $165,000 | $2,670,000 |
| All other food and drinking places | $1,450,000 | $878,000 | $2,330,000 |
| Hotels and motels, including casino hotels | $517,000 | $715,000 | $1,230,000 |
| Personal care services | $41,000 | $1,140,000 | $1,180,000 |
| Investigation and security services | $552,000 | $0 | $552,000 |
| Other support services | $436,000 | $85,500 | $521,000 |
| Retail - Gasoline stores | $406,000 | $69,300 | $475,000 |
| Labor and civic organizations | $409,000 | $0 | $409,000 |
| All other sectors1 | $977,000 | $1,060,000 | $2,070,000 |
| **Total Expenditures** | **$21,400,000** | **$35,200,000** | **$56,600,000** |
| Source: AMC data and IEc analysis.  1 Remaining expenditures were distributed across 20 additional IMPLAN sectors including (1) accounting, tax preparation, bookkeeping, and payroll services, (2) landscape and horticultural services, and (3) nonresidential structure maintenance and repair construction, among others. | | | |

Figure 2-4. *NOS4A2* Seasons 1 and 2 Expenditures, Classified by IMPLAN Industry Sector

Source: AMC data and IEc analysis.

# 2.5 Regional Economic Impacts of NOS4A2 on the State of Rhode Island

Table 2-5 presents the results of our analysis of the regional economic impacts of the production of *NOS4A2* Seasons 1 and 2 in Rhode Island. The total effects, including direct, indirect, and induced effects, are reported for employment, labor income, value added, and output. In total, we find that the $57 million in expenditures within Rhode Island associated with two seasons of *NOS4A2* generated regional economic impacts of approximately 1,532 full-time equivalents,[[10]](#footnote-11) $50 million in labor income, $65 million in value added, and $93 million in total output within the state. In addition, we estimate that $57 million of in-state expenditures generated $4.7 million in state and local tax impacts.[[11]](#footnote-12)

Table 2-5. Regional Economic Impacts of the Television Series *NOS4A2,* Seasons 1 and 2 (2021 dollars)

|  |  |  |  |
| --- | --- | --- | --- |
| **Employment  (Full-Time Equivalents)** | **Labor Income** | **Value Added  (Gross State Product)** | **Output** |
| 1,532 | $50,000,000 | $65,000,000 | $93,000,000 |
| Source: AMC data, IMPLAN, and IEc analysis. | | | |

Based on these results, we find that *NOS4A2’s* first and second season combined generated approximately $1.64 in economic output per dollar spent within Rhode Island.[[12]](#footnote-13) Assuming that *NOS4A2* will claim a Rhode Island tax credit of approximately $17.1 million for both seasons (which is 30 percent of the $57 million of in-state expenditures), we estimate that the two seasons of *NOS4A2* generated approximately $5.44 in economic output in Rhode Island per tax credit dollar.[[13]](#footnote-14)

Table 2-6presents additional detail by breaking out the total effects for the top ten industry sectors, as ranked by output. Consistent with the nature of filming activities, production of the production of *NOS4A2* Seasons 1 and 2 had the greatest effect on the motion picture and video, commercial and industrial equipment rental, real estate, and transportation industries. Table 2-7presents the top ten industry sectors that generate the most employment, which also include the motion picture industry, transportation, and equipment rental industries (in full-time equivalents). Figure 2-5summarizes graphically the economic output for the top ten industry sectors as represented by the percentage of total economic output across all industry sectors.

Table 2-6. Economic Impacts of *NOS4A2* Season 1 and Season 2 by Industry Sector in Rhode Island, Ranked by Output (2021 dollars)

| **Sector** | **Employment (Full-Time Equivalents)** | **Labor Income** | **Value Added** | **Output** |
| --- | --- | --- | --- | --- |
| Motion picture and video industries | 337 | $16,000,000 | $16,000,000 | $18,000,000 |
| Transit and ground passenger transportation | 520 | $7,000,000 | $7,000,000 | $7,300,000 |
| Commercial and industrial machinery and equipment rental and leasing | 28 | $1,150,000 | $3,800,000 | $6,900,000 |
| Other real estate | 39 | $550,000 | $1,840,000 | $5,300,000 |
| Specialized design services | 92 | $4,900,000 | $4,900,000 | $4,900,000 |
| Construction of other new nonresidential structures | 62 | $2,600,000 | $2,700,000 | $3,200,000 |
| Automotive equipment rental and leasing | 19 | $520,000 | $1,700,000 | $3,000,000 |
| All other food and drinking places | 47 | $1,100,000 | $1,500,000 | $2,800,000 |
| Hospitals | 11 | $900,000 | $1,200,000 | $2,200,000 |
| Retail – miscellaneous store retailers | 60 | $630,000 | $780,000 | $1,900,000 |
| All Other Sectors | 319 | $14,600,000 | $23,600,000 | $37,500,000 |
| Total Effect | 1,532 | $50,000,000 | $65,000,000 | $93,000,000 |
| Source: AMC data, IMPLAN and IEc analysis. | | | | |

Table 2-7. Employment (Full-Time Equivalents) of *NOS4A2* Season 1 and Season 2 by Industry Sector in Rhode Island

|  |  |
| --- | --- |
| **Sector** | **Employment  (Full-Time Equivalents)** |
| Transit and ground passenger transportation | 520 |
| Motion picture and video industries | 337 |
| Specialized design services | 92 |
| Personal care services | 83 |
| Construction of other new nonresidential structures | 62 |
| Retail – miscellaneous store retailers | 59 |
| All other food and drinking places | 47 |
| Other real estate | 39 |
| Commercial and industrial machinery and equipment rental and leasing | 28 |
| Hotels and motels, including casino hotels | 20 |
| All Other Sectors | 245 |
| **Total Effect** | **1,532** |
| Source: AMC data, IMPLAN and IEc analysis. |  |

Figure 2-5. *NOS4A2* Seasons 1 and 2 Economic Output, Classified by IMPLAN Industry Sector

Source: AMC data, IMPLAN and IEc analysis.

Using IMPLAN’s Rhode Island data, we do not estimate output or economic activity generated by this spending in Rhode Island that may have occurred outside the state – *i.e.*, indirect or induced economic activity that may have “leaked” beyond Rhode Island into neighboring states. We also do not capture economic activity related generated from spending in on the *NOS4A2* series outside of Rhode Island, including in other nearby states. As such, the broader regional and national effects of *NOS4A2* spending are not captured in this report.

Chapter 3 | Potential Impacts of Film and Television Production on Tourism in Rhode Island

Film and TV productions have the potential to increase local tourism. However, the mere creation and production of a show is a far cry from certainty that tourism in an area where filming occurred, or where a production is set, will increase. In this section, we review and summarize existing literature regarding factors that affect the likelihood that film tourism will occur, the potential impacts of film tourism, and the potential relevance of existing literature for estimating film tourism impacts in Rhode Island. Specifically, we consider potential film tourism that could occur in response to a new television series, HBO’s *The Gilded Age*, which is being partially filmed at the Newport Mansions.

# 3.1 Literature Review

Film tourism, or film-induced tourism, can be defined as tourist visits to a destination or attraction as a result of a destination’s being featured on a television, video, or cinema screen (Hudson 2006). There is widespread anecdotal evidence that film tourism has occurred in response to some film and television productions. For example, some popular productions have resulted in tourism interest and visitation to scene locations even when the setting does not provide conventional advertising scenery (e.g., *Breaking Bad* and *the Sopranos* have both resulted in local tourism in filming locations).[[14]](#footnote-15) Table 3-1 provides a summary of some estimates of film tourism effects that have been cited in various publications. As shown, estimates of impacts vary widely.

Despite the large number of anecdotal observations, empirical research on the observed effects of film and television productions on tourism is generally lacking, as has been noted in several studies, including ShiNna Li (2017). Table 3-2 also provides a table of academic and industry literature on film tourism that we reviewed. We find that literature that attempts to estimate film tourism fall into three primary categories: case studies, regional or national studies, and estimates of advertising value. We discuss each of these categories below.

## 3.1.1 Case Studies

Surveys of visitors to sites where films have been shot or set provide the most direct evidence of actual film and television tourism. However, because these surveys are labor intensive to conduct, typically requiring on-the-ground survey efforts, they have been uncommon. Riley, Baker, and Van Doren (1998) was among the first studies to attempt a survey of visitors that would capture film tourism. Riley et al. estimated the impact of 12 U.S. motion pictures on visitation to specific locations by comparing visitation after the motion pictures’ release to what might have been expected based on prior trends. They found that the effect of the motion pictures was to increase tourist visits to the sites, on average, by 40 to 50 percent for at least four years following release. This study has been widely cited as providing evidence of film tourism. More recently, Olsberg SPI (2015) conducted in-person and online surveys at eight sites in England where television or movie series had been filmed. Olsberg found that nine percent of visitors to these sites could be considered “core screen tourists,” or visitors that cited a film or TV production as the primary motivator for their visit. At the site where *Downton Abbey* was filmed (Bampton, England), Olsberg found that 87 percent of the 67 international visitors that responded to their survey were core screen tourists (Olsberg 2015).

Riley et al. (1998) identified a number of ways in which motion pictures could support increased tourism, including 1) providing prolonged exposure to locations; 2) developing emotional connections to locations through engagement with movie storylines and their characters; 3) providing compelling images of locations through cinematography, special effects, and the presence of actors; 4) distributing images of locations through a popular medium; and 5) functioning as a non-sales form of communication that potential tourists can experience from wherever they are. Riley asserted that for productions to have a positive impact on tourism in a location, they must contain “strong iconic identification with a particular location” (Riley et al. 1998). Later research has supported the idea that television productions can generate strong emotional connections with viewers due to extended and repetitive contact (Vila et al. 2021).

Consistent with Riley, Olsberg SPI found that sites with the highest tourist appeal were home to iconic locations that featured very prominently in the related screen productions, and played host to key dramatic screen moments (Olsberg 2015). Olsberg further found that other factors increasing the likelihood of higher film tourism potential include longevity of a production, positive appeal, and location near other tourist attractions. They also found that presence of a well-established financier or backer and wide international distribution are likely factors that influence the likelihood that film tourism would occur (Olsberg 2015).

## 3.1.2 State, Region, and Countrywide Studies

A number of studies have evaluated countrywide (New Zealand, England, Northern Ireland) efforts to estimate the level and impacts of film tourism on their economies. Most typically, these are based on surveys of international travelers about the influence of films, or a particular film, on their choice to visit that country. For example, several studies in New Zealand addressed effects of the *Lord of the Rings* trilogy, finding a range of nine to 30 percent of visitors that may have visited the country due to the influence the film series (Croy 2010; Beeton 2006 and Buchmann et al. 2010, as cited in Vila et al. 2021). In Northern Ireland and Croatia, studies suggest that *Game of Thrones* television series may have influenced decisions of travelers to visit those countries, with estimates ranging from 17 to 37.9 percent (Tourism Northern Ireland 2021; Mitev et al. 2017)

While most publications of film tourism are focused on international travelers to countries other than the U.S. (U.S. travelers typically comprise a large segment of the international travelers to those countries), some domestic studies that include assessments of film tourism have been conducted as well. For example, HR&A advisors (2015) surveyed 1,381 recent visitors to Louisana and found that 14.5 percent of them could be considered “motion picture- and/or television- induced tourists” based on the percentage of survey respondents who indicated that their awareness positively affected their decision to visit Louisiana, was “very important” to their decision, did at least one film- or television-related activity while they were in the state; and chose to extend their stay for reasons related to things they had seen on films, television shows, and/or documentaries shot there. By assuming that 14.5 percent of all visitors to Louisiana are film typically tourists, and assuming typical tourism expenditures per tourist could be attributed to film tourism, estimates total annual spending-related output due to tourism-induced spending of $2.4 billion. The study notes that these are likely to be high end estimates.

## 3.1.3 Advertising Exposure Value

Cloudberry (2011) argues that “Successful exposure of a region in a successful film puts the location higher up in the consumer’s mind and the exposure may cause people to consider travelling to the region without making any conscious association between the region and the film. However, the effect on travel to a region is usually marginal, despite film exposure.” Some authors (Macionis and Sparks 2009 and di Cesare et al. 2009, as cited in Croy 2010) have argued that film is an incidental experience of general tourists rather than a primary motivator, and consider tourists unlikely to make a relatively high-risk travel decision to a long-haul destination based on just a film.

An alternative method for considering the potential influence of films on tourism that does not rely on measuring behavioral change is using an advertising concept to capture the potential “exposure value” of a film or television series. Using this method, analysts evaluate the costs that would need to be incurred to promote an area for tourism purposes to an equivalent audience using conventional advertising channels. This can also be called “contact cost,” or what it could cost in advertising dollars to reach an individual viewing the medium at a particular point in time (Cloudberry 2011). As such, exposure analysis can be used as a proxy for estimating the value of film and its potential influence on tourism (HR&A Advisors 2013). While this analysis is relatively easy to undertake, there is some subjectivity in determining which images provide sufficient duration, quality, and image to serve as a proxy for location advertising.

In one example, the New Zealand Institute for Economic Research developed estimates for the advertising worth of the cinema viewership of the *Lord of the Rings* series using estimates of the number of cinema viewers, minutes of destination coverage minus a dilution factor, and the typical costs of advertisements. The study estimated the exposure value of 76 million views of the *Lord of the Rings* films at $41 million as of 2002 (New Zealand Institute of Economic Research 2002). In another example, HR&A Advisors, Inc (2013) counted the number of distinct exposures of Massachusetts locations, defined as discrete scenes or shots where a clearly identifiable Massachusetts location is presents, in five feature films. They combined exposure counts (57) with theater attendance (81 million) to estimate a total number of audience impressions (4.6 billion). They then estimated an average price for a 30-second TV spot ($236,000) and average audience size for a top 20 rated show (15.7 million) to estimate a cost per audience impression of $0.015 (2015 dollars), or $70 million for the five films. Cloudberry (2011) conducted a similar analysis for films in the Stockholm region.

Table 3-1. estimateS of FILM TOURISM

| Film or TV Series | Location | Impact on Visitor Numbers or Tourist Revenue | Source | |
| --- | --- | --- | --- | --- |
| U.S.-Based Film and Television Series | | | | |
| Walking Dead | Grantville, Georgia | 3,600 tours in one season | a | |
| Breaking Bad | Albuquerque, NM | Dramatic increase in visitors to film sites | b | |
| Twilight | Forks, WA | 6,000 annual visitors before the series, increased to 70,000 in 2009, and peaked at 73,000 in 2010 when the third film in the series was released. The number of visitors dropped to 45,000 in 2011; Hotel nights increased by 1000%; | d, m | |
| Cheers | Location in Boston | $7 million in unpaid promotional advertising annually | e | |
| Miami Vice | Miami | 150% increase in German visitors 1985 to 1988 | e | |
| Dallas | Southfork Ranch, Dallas | 500,000 visitors per year | e | |
| Shawshank Redemption | Richland County, Ohio | 18,000 visitors, $3 million in spending since release | f | |
| Field of Dreams | Iowa | 35,000 visits in 1991 Steady increase every year; 65,000 visits per year | e, g | |
| Forrest Gump | Savannah, Georgia | 7% increase in tourism | e | |
| Deliverance | Rayburn County, Georgia | 20,000 film tourists a year; Gross revenues $2 to 3 million; | m | |
| Dances with Wolves | Fort Hayes, Kansas | 25% increase compared with 7% for previous 4 years | e | |
| Thelma and Louise | Arches National Monument in Moab, Utah | 19.1% increase in 1991 | e | |
| Close Encounters of the Third Kind | Devils Tower, Wyoming | 75% increase in 1975; 20% continue to visit because of the film | e | |
| Steel Magnolias | Louisiana | 48% increase year after release | e | |
| Last of the Mohicans | Chimney Rock Park, North Carolina | 25% increase year after release | e | |
| The Fugitive | Dillsboro, North Carolina | 11% increase year after release | e | |
| Little Women | Orchard House, Concord, Massachusetts | 65% increase year after release | e | |
| Bull Durham | Durham, North Carolina | 25% increase in attendance year after release | e | |
| International Films | | | | |
| Game of Thrones | Various | Increases in Spain of 107% in comparison to the same period in the previous year; 37.9% increase in visitors to Dubrovnik, Croatia between 2011 and 2015; 17 percent of out-of-state visitors to Ireland in 2018 were influenced by Game of Thrones, added a total of £251 million total into the local economy | h, n, o | |
| Harry Potter | Various locations in U.K. | All locations saw an increase of 50% or more over 3 years; 13 million EUR per year | e, m | |
| The Lord of the Rings | New Zealand | 10% increase every year 1998 to 2003 from UK; increase of 30% visits | e, i | |
| Outlander | Scotland | Some areas seeing a 92 percent increase in visitors | c | |
| Mission: Impossible 2 | National parks in Sydney | 200% increase in 2000 | e | |
| Frozen | Norway | 65% increase in bookings to Norway | g | |
| Gorillas in the Mist | Rwanda | 20% increase in 1998 | e | |
| Braveheart | Wallace Monument, Scotland | 300% increase in visitors to monument in the year after release; 4 percent increase in Scotland in year after release | e, j, k | |
| Heartbeat | Goathland, North Yorkshire, England | Three times the number of normal visitors in 1991 | e | |
| Crocodile Dundee | Australia | 20.5% increase in U.S. visitors 1981 to 1988 | e | |
| The Beach | Thailand | 22% increase in youth market in 2000 | e | |
| Middlemarch | Stamford, Lincolnshire, England | 27% increase in 1994 | e | |
| Four Weddings and a Funeral | The Crown Hotel, Amersham, England | Fully booked for at least 3 years | e | |
| Mrs. Brown | Osborne House, Isle of Wight, U.K. | 25% increase | e | |
| Notting Hill | Kenwood House, England | 10% increase in 1 month | e | |
| Saving Private Ryan | Normandy, France | 40% increase in American tourists | e | |
| Sense and Sensibility | Saltram House, England | 39% increase | e | |
| Pride and Prejudice | Lyme Park in Cheshire, UK | 150% increase in visitors | e | |
| Troy | Canakkale, Turkey | 73% increase in tourism | e | |
| Captain Corelli’s Mandolin | Cephalonia, Greece | 50% increase over 3 years | m | |
| Sound of Music | Austria | Influenced decision to visit Salzburg | l | |
| Sources:   1. Martin, Jeff. October 7, 2013. “‘The Walking Dead’ Is Turning Small Georgia Towns Into Popular Tourist Destinations,” *Business Insider*. <https://www.businessinsider.com/the-walking-dead-is-turning-georgia-into-a-tourist-attraction-2013-10>. 2. Faust, Chris Gray. August 11, 2013. “‘Breaking Bad’ has been very good for Albuquerque,” *USA Today*. <https://www.usatoday.com/story/travel/destinations/2013/08/11/breaking-bad-albuquerque-tourism/2636859/>. 3. Taylor, Elise. February 5, 2018. “How the Golden Age of TV Is Changing Tourism Around the World,” *Vogue*. <https://www.vogue.com/article/tv-locations-changing-global-travel-tourism>. 4. Wright, Daniel. W. M., David Jarratt and Emma Halford. 2021. “The Twilight Effect, post-film tourism and diversification: the future of Forks, WA,” *Journal of Tourism Futures*. <https://doi.org/10.1108/JTF-07-2020-0115>. 5. Riley and van Doren 1992, Tooke and Baker 1996, Grihault 2003, Croy and Walker 2003, Cousins and Anderek 1993, Busby, Brunt and Lund 2003, and Riley, Baker, and van Doren 1998, as cited in Hudson, Simon. 2006. “Promoting Destinations via Film Tourism: An Empirical Identification of Supporting Marketing Initiatives,” *Journal of Travel Research,* 44(4):387-396. <http://dx.doi.org/10.1177/0047287506286720>. 6. Schulz, Bill. August 4, 2014. “Visiting ‘Shawshank’ Sites, 20 Years Later,” *The New York Times*. <https://www.nytimes.com/2014/08/10/travel/visiting-shawshank-sites-20-years-later.html?_r=0>. 7. Motion Picture Association. 2014. “Film and Tourism: Infographic: Touring Film and TV Around the Globe.” <https://www.motionpictures.org/press/infographic-touring-film-and-tv-around-the-globe/>. 8. Andalucía Film Commission 2015, as cited in Vila, Noelia Araújo, José Antonio Fraiz Brea, and Pablo de Carlos. 2021. “Film tourism in Spain: Destination awareness and visit motivation asdeterminants to visit places seen in TV series,” *European Research on Management and Business Economics,* 27(1):100135. <https://doi.org/10.1016/j.iedeen.2020.100135>. 9. Beeton 2006 and Buchmann et al. 2010, as cited in Vila, Noelia Araújo, José Antonio Fraiz Brea, and Pablo de Carlos. 2021. “Film tourism in Spain: Destination awareness and visit motivation as determinants to visit places seen in TV series,” *European Research on Management and Business Economics*, 27(1):100135. <https://doi.org/10.1016/j.iedeen.2020.100135>. 10. Bolan & Williams 2008 and Frost 2006, as cited in Vila, Noelia Araújo, José Antonio Fraiz Brea, and Pablo de Carlos. 2021. “Film tourism in Spain: Destination awareness and visit motivation as determinants to visit places seen in TV series,” *European Research on Management and Business Economics,* 27(1):100135. <https://doi.org/10.1016/j.iedeen.2020.100135>. 11. Garrison, Stephanie, and Claire Wallace. 2021. “Media Tourism and Its Role in Sustaining Scotland’s Tourism Industry,” *Sustainability*, 13(11):6305. <https://doi.org/10.3390/su13116305>. 12. Im and Chon 2008, as cited in Vila, Noelia Araújo, José Antonio Fraiz Brea, and Pablo de Carlos. 2021. “Film tourism in Spain: Destination awareness and visit motivation as determinants to visit places seen in TV series,” *European Research on Management and Business Economics,* 27(1):100135. <https://doi.org/10.1016/j.iedeen.2020.100135>. 13. Cloudberry Communications. 2011. “The Millenium Report: Economic Impact and Exposure Value for the Stockholm region in the Swedish Millenium Feature Films,” Prepared for the Sörmland Regional Council, Filmregion Stockholm-Mälardalen, Stockholm Business Region Development, the Municipality of Nyköping and Film i Sörmland. <https://www.mynewsdesk.com/investstockholm/documents/the-millennium-report-economic-impact-and-exposure-value-for-the-stockholm-region-in-the-swedish-millennium-feature-films-13227>. 14. Mitev, Ariel, Anna Irimiás, Gábor Michalkó, and Mariangela Franch. 2017. ““Mind the scenery!” Landscape depiction and the travel intentions of Game of Thrones fans: some insights for DMOs,” *Regional Statistics*, 7(2):58-74. <http://dx.doi.org/10.15196/RS07201>. 15. Tourism Northern Ireland. 2021. “Northern Ireland Game of Thrones Territory: The Making of a Screen Tourism Destination.” <https://www.tourismni.com/globalassets/business-development/support-by-sector/activities--attractions/grow-your-business/game-of-thrones/the-making-of-a-screen-tourism-destination.pdf>. 16. Note: Our current study has not attempted to verify the estimates reported here. | | | |

table 3-2. impacts of film and television productions on tourism - literature review

| Author(s) | Year | Article Title | publication | Geographic Scope and production name | study findings about Impacts of film and television productions on tourism |
| --- | --- | --- | --- | --- | --- |
| Academic Articles | | | | | |
| Wright, Daniel W. M. et al. | 2021 | The Twilight Effect, post-film tourism and diversification: the future of Forks, WA | *Journal of Tourism Futures* | Forks, Washington: *Twilight Saga* books and movies | * Based on Chamber of Commerce data, the number of visitors to Forks, WA, was 6,000 in 2005. When the first *Twilight* book was released in 2008, the number of visitors rose to 19,000. This number increased to 70,000 in 2009 and peaked at 73,000 in 2010 when the third film in the series was released. The number of visitors dropped to 45,000 in 2011 and has since hovered around 40,000 per year. |
| Garrison, Stephanie, and Claire Wallace | 2021 | Media Tourism and Its Role in Sustaining Scotland’s Tourism Industry | *Sustainability* | Scotland: Glenfinnan Viaduct: *Harry Potter*; Doune Castle: *Monty Python*, *Game of Thrones*, *Outlander*; Abbotsford: Home of Sir Walter Scott | * This study described the impact of popular culture on Scotland’s tourism industry. The article explores the sustainability of media tourism, the effect on local communities, and possible solutions for addressing “over-tourism” caused by a sudden influx of fans to an area. * Media tourism began being promoted by official bodies in the mid-1990s, with *Braveheart* (1995). The number of visitors to Scotland increased by 4 percent in 1995 due to the campaign by the Scottish Tourism Board and the film’s popularity. Approximately £15 million of tourist revenue was generated. 20 percent of U.S. visitors to Scotland stated that they were influenced to visit the country by seeing it on screen. |
| Depken, Criag A. et al. | 2020 | Television-Induced Tourism: Evidence from Croatia | *International Atlantic Economic Society* | Dubrovnik, Croatia: *Game of Thrones* | * This study finds that an additional 59,000 tourism overnight visits to Croatia can be attributed to the impact of *Game of Thrones* being filmed in Dubrovnik per year. Using a triple-difference approach, the study found that the impact of the show on overnight tourist visitors was 2,220 visitors per month in the peak season, and 5,800 visitors per month in the off-season. The additional tourism mainly occurs during the off-season when transport and lodging prices are lower. Off-season tourism is beneficial as it smooths seasonal income volatility. |
| Vila, Noelia Araujo et al. | 2021 | Film Tourism in Spain: Destination Awareness and Visit Motivation as Determinants to visit places see in TV series | *European Research on Management and Business Economics* | Spain | * Surveyed travelers and found that respondents to whom TV series have produced greater destination awareness are effectively more likely to travel to the destinations they portray than those who have lower destination awareness. |
| Giraldi, Angelo, and Ludovica Cesareo | 2017 | Film marketing opportunities for the well-known tourist destination | *Place Branding and Public Diplomacy* | Rome, Italy | * Through through an experimental study with international respondents, study finds that a film can shift consumers’ cognitive and affective destination image perceptions in coherence with the contents proposed; yet for Rome, a mature destination with a well-established heritage, the changes are not so dramatic. |
| Li, ShiNa, et al. | 2017 | The economic impact of on-screen tourism: The case of The Lord of the Rings and the Hobbit | *Tourism Management* | New Zealand: *The Lord of the Rings, The Hobbit* | * The econometric and CGE modeling results of this study found that *The Hobbit* triology increased trousim arrivals from international visitors. International tourist arrivals increased by 214,811 betweeen 2013 and 2014. *The Hobbit* films increased international tourist receipts by $771.80 million, which generated welfare gains of $186.24 million to New Zealand households. * The study also finds that demand for tourism were not affected by *The Lord of the Rings*. The authors argue that several previous efforts to estimate tourism increases were small-scale questionnaires that lack academic support. |
| Mitev, Ariel et al. | 2017 | “Mind the scenery!” Landscape depiction and the travel intentions of Game of Thrones fans: some insights for DMOs | *Regional Statistics* | Croatia, Iceland, Northern Ireland, Scotland, Spain, Malta, and Morocco: *Game of Thrones* | * Study finds that as a result of the popularity of *Game of Thrones*, Dubrovnik, Croatia, saw an increase in tourist arrivals by 37.9 percent between 2011 and 2015, and 1 million tickets were sold to see the city’s walls (an iconomic filming location) in 2016. There were also significant increases in toursim to Gozo, Malta and Belfast, Northern Ireland in the beginning of 2017 (other filming locations). |
| Busby, Graham, and Callum Haines | 2013 | Doc Martin and film tourism: The creation of destination image | *Tourism* | Port Isaac, Cornwall, England: *Doc Martin* | * This study reviewed literature and interviewed 302 visitors to Port Isaac. Finds that the television show *Doc Martin* was the primary influence (42.7 percent) on survey respondents for visiting Port Isaac. * The study found that 75.8 percent of respondents associate Port Isaac with a specific image, icon, or renowned individual, with a majority associated with places depicted in *Doc Martin* (45.4 percent) or Martin Clunes, the series’ lead actor (16.6 percent). |
| Spears, Daniel L. et al. | 2013 | Tourist See Tourist Do: The Influence of Hollywood Movies and Television on Tourism Motivation and Activity Behavior | *Hospitality Review* | U.S. | * This study conducted an online survey of 433 respondents to investigate the influence of Hollywood movies and television on US viewer’s motivation to travel to and participate in activities featured in Hollywood movies or TV productions. 41.6 percent of respondents agree/strongly agree that their ideas for travel destinations come from movies set in specific locations. * The study also found that how a destination is projected in a movie or show affects the viewer’s inclination to visit. For example, viewers are more likely to visit a destination if the program completely embraces the location. |
| Mitchell, Heather, and Mark Fergusson Stewart | 2012 | Movies and holidays: the empirical relationship between movies and tourism | *Applied Economic Letters* | New Zealand: *The Lord of the Rings,* Australia: *Mad Max*, *Crocodile Dundee*; Kazakhstan: *Borat* | * This study uses data on tourist numbers to Australia and New Zealand and hospitality employment numbers in Kazakhstan to support the conclusion that there can be an increase in tourism after the release of a movie. The data suggests that this increase does not generally last more than two years, and rates of tourism may be affected by external factors, such as the SARS epidemic in 2003. |
| Croy, W. Glen | 2010 | Planning for Film Tourism: Active Destination Image Management | *Tourism and Hospitality Planning & Development* | New Zealand: *The Lord of the Rings* | * This study argues that *The* *Lord of the Rings* films and associated advertising had a limited impact on New Zealand tourism. Instead, the author states that Tourism New Zealand employed a successful image strategy to build an association between the films and New Zealand to create awareness and familiarity of the country which did not previously exist. * The study finds that 9 percent of visitors stated that the *The Lord of the Rings* films were one reason, but not the primary reason, to visit New Zealand, and 0.3 percent of visitors stated that the films were a main, though not sole reason. The main influencing factor was the scenery presented in the films and associated publicity efforts. |
| Hudson, Simon | 2006 | Promoting Destinations via Film Tourism: An Empirical Identification of Supporting Marketing Initiatives | *Journal of Travel Research* | U.S., Canada, and United Kingdom | * Conducted online survey of 140 destination marketing organizations in order to identify critical marking factors that help attract film tourists to destinations. The study found a high correlation between proactive efforts of destinations that encourage producers and studios to film at their location and film tourism success. * Creates a model of key factors that influence film tourism: destination marketing activities; destination attributes, film-specific factors, film commission and government efforts, and location feasibility. |
| Riley, Roger, et al. | 1998 | Movie-induced tourism | *Annals of Tourism Research* | U.S. | * Measures the impact of 12 U.S. motion pictures on visitation to specific locations by comparing visitation after the motion pictures’ release to what might have been expected based on prior trends. Effect of the motion pictures was to increase tourist visits to the sites, on average, by 40 to 50% for at least four years following release. |
| Industry Studies | | | | | |
| Olsberg SPI | 2015 | Quantifying Film and Television Tourism in England | Prepared for Creative England in association with VisitEngland | 8 sites in England, including Bampton, where *Downton Abbey* was filmed | * Conducted onsite and online surveys at 8 sites in England, with 1,006 completed surveys, of which 9 percent were identified as core screen tourists. * Sites included Bampton, where *Downtown Abbey* was filmed. Surveyed 62 visitors on one date and collected online survey data. Found that 87% of international visitors were core screen tourists. * Popular and long-running productions drew the highest proportion of core screen tourists. * Develops predictive model of value of tourism using standardized expenditures, with totals ranging from £0.1 million to £4 million annually in England depending on the type and success of production. |
| HR&A Advisors | 2015 | Economic Impacts of the Louisiana Motion Picture Investor Tax Credit | Prepared for Louisiana Film and Entertainment Association and Motion Picture Association of America | Louisiana | * Based on a survey of 1,381 recent visitors to Louisiana, 14.5% of domestic, out-of-state, leisure visitors can be considered motion picture- and/or television- induced tourists based on the percentage of survey respondents who indicated that their awareness positively affected their decision to visit Louisiana, was “very important” to their decision, did at least one film- or television-related activity while they were in the state; and chose to extend their stay for reasons related to things they had seen on films, television shows, and/or documentaries shot there. * By assuming that 14.5% of visitors to Louisiana are film tourists, and assuming typical tourism expenditures per tourist, estimates total annual spending-related output due to tourism-induced spending of $2.4 billion. |
| Towson University Regional Economic Studies Institute | 2014 | Economic and Fiscal Impacts of the Film Production Tax Credit in Maryland | Prepared for the Maryland Film Industry Coalition | Maryland | * Cites (but does not present) North Carolina estimates of film-induced spending and applies the ratio of film induced spending to total tourism spending in North Carolina to Maryland, estimating an average per production impact of $1.1 million in tourism spending in Maryland. |
| Oxford Economics | 2012 | The Economic Impact of the UK Film Industry | Prepared for the British Film Institute and others | United Kingdom | * Based on a literature review and examination of visitation to specific film locations in the U.K., estimates approximately 12% of international visitors to the U.K. were motion picture and television- induced tourists, attracted by both studio productions (Harry Potter, Sherlock Holmes) and independent films (The King’s Speech) featuring the U.K.. |
| HR&A Advisors | 2013 | Economic Impacts of the Massachusetts Film Tax Incentive Program | Prepared for the Motion Picture Association of America | Massachusetts | * Conducted an exposure analysis of five films in Massachusetts. Estimated an exposure value of $70 million. |
| Cloudberry Communications | 2011 | The Millenium Report: Economic Impact and exposure value for the Stockholm Region in the Swedish Millenium feature films | Prepared for Sormland Regional Council, Filmregion Stockholm-Malarden, and others | Stockholkm region, Sweden | * Conducted an exposure analysis of the exposure value of films in the Stockhold region. Found that if the films are presumed to reach 123 million gross contacts through the end of 2011 and the region is exposed 17 times, the estimated value of exposure from the Swedish films is 106 million euros. |
| Tourism Northern Ireland | 2021 | Northern Ireland *Game of Thrones* Territory: The Making of a Screen Tourism Destination | Tourism Northern Ireland | Northern Ireland: *Game of Thrones* | * According to visitor figures from 2018, Game of Thrones helped attract 17 percent of out-of-state visitors, or approximately 350,000 people. Over its entire production, Game of Thrones added a total of £251 million into the local economy. In 2017 alone, tourism added over £50 million to the economy. * The filming of Game of Thrones has helped Northern Ireland establish an internationally recognized screen tourism sector. 90 percent Game of Thrones exhibition visitors felt that the series improved Northern Ireland’s reputation as a holiday destination. |
| MillwardBrown | 2010 | Visitor Attitudes Survey: Main Markets 2010 | Failte Ireland: National Tourism Development Authority | Ireland | * Survey of overseas travelers (n=4,816) finds that 20% of total respondents identified films as an information source that influenced their choice to visit Ireland |
| NZ Institute of Economic Research (Inc) | 2002 | Scoping the Lasting Effects of *The Lord of the Rings* | Report to the New Zealand Film Commission | New Zealand, *Lord of the Rings* | * Estimates exposure worth associated with cinema viewership of *Lord of the Rings* using estimates of the number of viewers, minutes of destination coverage minus a dilution factor, costs of advertisements. Estimates exposure value of 76 million views of the films resulting in $41 million in exposure value. |

# 3.2 Potential Application of Film Tourism Methods to the Gilded Age

Because the setting of *NOS4A2* is not identified as Rhode Island in the context of the series, the content is not of traditional tourism value (a suspense-horror genre production), and it does not appear to contain recognizable iconic buildings or landscape in the State, we would not recommend attempting to quantify film tourism for Rhode Island associated with this series.

*The Gilded Age* appears to possess several characteristics that could increase the likelihood for it to attract film tourists to Rhode Island, including a potential for strong iconic identification with a particular location (Newport and the Newport Mansions), the potential for popularity and longevity of the production, the setting as a period drama with heritage buildings, and support from a major production company and Rhode Island-based partners.[[15]](#footnote-16) The television series has also been “green-lit” for a second season after only three episodes of its inaugural season, increased in audience viewership across its first season, and ranked among the top ten in-demand series at points during this period (*Parrot Analytics*, 2022). This presents potential screen tourism opportunities for fans of *The Gilded Age* who may be motivated to visit Rhode Island to view the filming of Season 2.

Specific impacts of *The Gilded Age* on future Rhode Island tourism are difficult to forecast with any certainty, as the production have just been released (January 2022), and its future popularity and longevity are currently unknown. We also would not recommend transferring estimates of percent changes in visitation from other productions and locations without careful review. An important caveat with regard to increased film tourism is that most past studies that show dramatic increases in visitation to sites as a result of a particular production were typically not already large tourist attractions (e.g., the Wallace Monument in Scotland, which was reportedly nearly abandoned prior to the release of Braveheart; Vila et al. 2021). This does not mean that tourism would not also increase in more visited areas such as Newport; only that those tourism increases would not be as drastic as in less popular areas. Indeed, Giraldi and Cesareo (2017) evaluated the impacts of a new film on a well-known tourist destination, Rome, Italy, and found that while a film “can shift consumers’ cognitive and affective destination image perceptions…for Rome, a mature destination with a well-established heritage, the changes are not so dramatic.” Similarly, Cloudberrry Communications (2011) observes about the *Millenium* film series that “Stockholm already has a high percentage of visitors and tourists and the *Millennium* effects on increasing tourism for the entire region are limited. If, however, we look at visitor figures to the addresses featured in the stories, we can observe substantial effect.” Because Newport is already a popular tourist destination, increases in tourism from *Gilded Age* would be likely less dramatic than in less visited areas.

It would be premature to conduct an in-person survey of visitors to Newport, or to definitively identify exposure value for it, given that only four episodes of the series have been released at the time of this study. Table 3-3 presents a hypothetical calculation of exposure value that could be developed in the future. This calculation assumes a 30-second commercial advertising Rhode Island holds the same value as one Rhode Island “impression” during *The Gilded Age*. Using these hypothetical estimates and viewership from the first four episodes of *The Gilded Age*, we would estimate that an episode could have an exposure value of $45,000 for each distinct shot of Rhode Island. In other words, this value indicates that it would have cost $45,000 to reach an equivalent-sized audience through a 30-second commercial promoting Rhode Island.

Other future efforts to evaluate tourism effects could include, once the production has matured, conducting a survey of visitors to Newport and/or to the Newport Mansions to evaluate whether visitors were motivated to visit the State by *The Gilded Age*. State or county-wide tourism surveys could also be expanded to include a question related to the influence of film and television series on their visit to the State.

Table 3-3. Hypothetical Calculation of Exposure Value of *The Gilded Age* (per View per Episode)

|  |  |
| --- | --- |
| metric | value |
| Distinct Views / Minutes of screen timea | 1 |
| Average audience per episodeb | 3 million |
| Cost per advertisementc | $260,000 |
| Value per impressionc | $0.015 |
| Exposure value per episode | $45,000 |
| a Defined as discrete scenes or shots where a clearly identifiable Rhode Island location is present. Initial estimate is based on the number of exterior shots of Rhode Island locations and scenes filmed in the interior of the Newport Mansions.  b Initial estimates available for episodes 1-4. We do not differentiate between an audience member who views the show during its initial airing versus an audience who watches the show via a streaming platform (or similar) after it’s initial airing date: <https://deadline.com/2022/02/the-gilded-age-ratings-viewership-grows-15-week-2-surpasses-white-lotus-1234924598/>  Source: HR&A, 2013. | |

# 3.3 Other Related Effects

This study captures direct, indirect, and induced effects associated with direct production expenditures. However, we are aware that repeated production activity as well as other efforts to increase awareness of the film industry in the state may act in encourage further industry development in the state. In this section, we discuss other efforts to increase awareness of the industry in the state associated with these productions, and present recent Bureau of Labor Statistics data on employment in the film and television industry.

In an effort to encourage growth of in-state crew and talent within the motion picture industry, the state has encouraged recipients of the tax credits to offer internships, on set and/or virtual set visits, lectures and public screenings, in addition to increased crew member opportunities. The DOR (2021) report states that, of the 11 productions in their study, seven reported hiring interns, for a total of 45 interns across these productions (or an average of four interns per production). While it is not clear that these interns would always be provided to Rhode Island residents, a portion of these internships are likely to be.

In addition to ‘hands-on’ production internships, various directors, producers, production crew members and the Rhode Island Film and Television Office (RIFTVO) Executive Director have lectured at Roger Williams University, Johnson and Wales University, Rhode Island School of Design, Brown University, Rhode Island College, University of Rhode Island, and New England Institute of Technology. These members have also presented at several film festivals throughout the state during the different productions, as well as engaged in one-on-one interviews for the Rhode Island Public Television series “Double Feature.” These educational interviews are recorded, distributed to a wide local audience on free television with multiple airing times and dates, made public, and are made available online for free to all schools, aspiring filmmakers, educators, and students for future use. To the extent that these actions result in additional film industry crew, productions, or infrastructure being located in the state, they will encourage future industry growth. As described in Section 1.1 of this report, the direct industry employment appears to have grown substantially within the state since the motion picture tax credit was implemented.

Chapter 4 | Conclusion

Recent BLS data suggests that the tax credit likely influenced the level of reported employment in the film and television industry in the State since its implementation. Specifically, the industry averaged 64 employees between 2000 and 2005, when the tax credit was implemented, and averaged 275 employees after that (2006 to 2020), representing a 430 percent increase in direct industry employment during the period following tax credit implementation (BLS Annual Data, 2000-2020).

This report assesses regional economic impacts and film tourism impacts on the state using two specific production examples: the regional economic impacts of *NOS4A2* and the potential tourism benefits of *The Gilded Age*, both of which are television productions that have or will receive payments through Rhode Island’s motion picture tax credit program.

We find that across both seasons of *NOS4A2*, approximately $57 million was spent in qualified expenditures, resulting in a tax credit payment from the state of approximately $17 million. We find, using the IMPLAN model, that $57 million in Rhode Island expenditures led to $93 million in economic output (sales) in the state. **As a result, the $17 million in tax credits provided by the state returned $93 million in regional spending, or $5.44 in economic activity for every tax credit dollar.** These impacts are solely the impacts associated with spending from the production of *NOS4A2*, and do not include any potential revenues from future tourism or other activities stemming from the show.

There is widespread anecdotal evidence that film tourism has occurred in response to some film and television productions. We conducted a literature review of studies evaluating potential benefits of film tourism, and identified a number of methods that have been used estimate film tourism impacts, including conducting surveys at case study sites, conducting state, regional, and national studies, and calculating advertising exposure value. For *The Gilded Age*, we identify a number of encouraging metrics of the show that may lead to some tourism benefits, including potential exposure value of $45,000 per view of Rhode Island in each episode, but remark that it is too early to make conclusive projections of the show’s effect on Rhode Island tourism.

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1. Motion pictures include feature-length films, television series, commercials, video series, and documentaries, made for theatrical or television viewing (R.I. Gen. Laws § 44-31.2-2). [↑](#footnote-ref-2)
2. Production expenses may include the company’s pre-production, production, and post-production costs and excludes costs associated with the production or marketing of the film, video, or television product. [↑](#footnote-ref-3)
3. IMPLAN organizes its industry sectors using the North American Industry Classification System (NAICS). [↑](#footnote-ref-4)
4. IMPLAN defines a “job” as a full-time job lasting 12 months, which is equivalent to two jobs lasting six months each. A job can be either full-time or part time. We convert the IMPLAN job-year results to full-time equivalents using sector-specific conversion factors developed by IMPLAN. [↑](#footnote-ref-5)
5. Estimates in this report exclude “above the line” (e.g., director, principal cast), employee payroll or AP expenditure data. To the extent that these employees spent some of their income from the production in Rhode Island, this report underestimates impacts. It should be noted that above the line employees are subject to Rhode Island income taxes per Section 280-RICR-20-20-5 of the Rhode Island Administrative Code. [↑](#footnote-ref-6)
6. Non-wage expenditures that occur outside of Rhode Island *do not* qualify as qualified expenditures for a film and television production tax credit. All non-wage qualified expenditures are from vendors that may be headquartered outside of Rhode Island, but have locations within Rhode Island for which expenditures occurred. All expenditures must be purchased or rented from a “qualified vendor” as stipulated in Section 280-RICR-20-20-5 of the Rhode Island Administrative Code. [↑](#footnote-ref-7)
7. Our data did not include payment addresses for approximately 60 percent of payroll expenditures. For these payroll expenditures, we assume that earners reside in Rhode Island. [↑](#footnote-ref-8)
8. AMC reports non-payroll expenditures as either accounts payable (AP) or petty cash (PC) expenditures. PC expenditures are non-payroll expenditures that are distributed in a discretionary manner. We treat both AP and PC expenditures as AP expenditures. [↑](#footnote-ref-9)
9. Appropximately 43 percent of expenditures do not have a specific payment city or town within Rhode Island identified. [↑](#footnote-ref-10)
10. The IMPLAN output reports 1,675 job-year impacts. We convert the IMPLAN job-year results to full-time equivalents (FTEs), using sector-specific conversion factors developed by IMPLAN in order to present a more widely-used measure of employment. [↑](#footnote-ref-11)
11. These state and local tax impacts include sales taxes, property taxes, motor vehicle taxes, corporate income taxes, and personal income taxes that were generated from production-related activities in the State. This figure does not attempt to offset payments by the State of Rhode Island to the production company as part of the tax credit program. [↑](#footnote-ref-12)
12. $93 million ÷ $57.0 million = $1.64. [↑](#footnote-ref-13)
13. $93 million ÷ $17.1 million = $5.44. [↑](#footnote-ref-14)
14. Kelly, Stephen. August 11, 2013. “The Breaking Bad tours driving a tourist boom in Albuquerque,” *The Guardian*. <https://www.theguardian.com/travel/2013/aug/11/breaking-bad-tour-albuquerque>.; Vanderhoof, Erin. January 17, 2018. “Ten years later, Albuquerque is still *Breaking Bad*’s town,” *Vanity Fair*. <https://www.vanityfair.com/hollywood/2018/01/albuquerque-breaking-bad-tourism-10th-anniversary>.; Darwish, Meaghan. January 30, 2019. “7 Sopranos Sites to Visit in Honor of the 20th Anniversary,” *TV Insider*. <https://www.tvinsider.com/gallery/sopranos-filming-locations-new-jersey-new-york/>. [↑](#footnote-ref-15)
15. Rhode Island partners include the Rhode Island Film & TV Office, the Rhode Island Commerce Corporation, Preservation Society of Newport, Discover Newport, Newport Chamber of Commerce, Newport County Development Council, and Airport Corporation. [↑](#footnote-ref-16)