

Economic Impact of Arts, Cultural, and Entertainment Activities in Centre County

Date: July 29, 2024

Submitted to: Happy Valley Adventure Bureau

Status: FINAL



Source: Bryce Jordan Center

Executive Summary

Centre County, Pennsylvania, also known as Happy Valley, is home to Pennsylvania State University (Penn State), which is the county's primary economic driver and activity generator. While the county is a renowned college sports destination, it is also Central Pennsylvania's primary hub of arts and cultural activity supporting permanent jobs across the creative industries and attracting hundreds of thousands of visitors annually for visual arts, concerts, fine arts, performances, theater, cultural events, and festivals. Recognizing the scale and importance of these activities, the Happy Valley Adventure Bureau, in partnership with the Happy Valley Sports & Entertainment Alliance, commissioned this study to describe and quantify their annual impact.

Defining the Industry

In this context, the impacts of arts, cultural and entertainment activities are defined by:

- **Employment and Operations of Arts, Cultural and Entertainment Establishments:** Includes venues like theaters, museums, performance spaces, and galleries as well as arts advocacy organizations and film and sound production activities. The employment for these types of establishments in Centre County were based on select industry sector categories by North American Classification System (NAICS) from the Bureau of Labor Statistics (BLS).¹
- **Employment and Operations of Penn State's Venues and Relevant Colleges:** Not captured within the BLS employment data described above are the economic activities and employment by Penn State, which is a significant contributor to the arts and cultural landscape both in terms of attracting and developing talent as well as operating major performing arts venues, including the Center for the Performing Arts and Bryce Jordan Center. The operational spending of the College of Arts and Architecture and the Film Production and Media Studies program at the Donald P. Bellisario College of Communications were considered for this study.
- **Ancillary Spending by Patrons of Events, Festivals, and Performances:** Leveraging visitor counts in 2023 for 22 arts and cultural venues and 20 festivals in Centre County, a visitor spending model was derived to estimate ancillary spending – or spending off-site at restaurants, hotels, retailers, and other service providers – to quantify the impacts of arts and cultural patrons within the county. The spending model considered visitor origin to determine local, daytrip and overnight visitors, who have different spending patterns (e.g., overnight visitors spend more, on average, per trip since they spend more on accommodation and meals).

¹ The selected NAICS included Motion Picture & Sound Recording (512), Performing Arts & Related Industries (711), and Museums, Historical Sites & Similar (712).

Summary of Economic and Tax Impacts

This study applied input-output modeling to estimate the average annual economic impacts of the operations of arts, cultural, and entertainment entities in Centre County and spending by patrons at performance venues, festivals, and events. Fiscal benefits of these economic activities are analyzed for the Commonwealth of Pennsylvania.² The total economic and fiscal impact of these activities are outlined below and summarized in Figure E.1 and Figure E.2:

- The annual operations of arts, cultural, and entertainment establishments in the county, relevant activities at Penn State, and spending by patrons, generates a total economic impact of \$317 million in Pennsylvania, supporting approximately 2,710 full time jobs and \$80 million in employee compensation.
- Within Centre County, the total annual economic impact is \$282 million, supporting 2,560 full-time equivalent (FTE) jobs, and \$70 million in employment compensation.
- The economic activities listed previously generate approximately \$5.2 million in annual state tax revenue.

Figure E.1: Average Annual Economic Impact for Centre County and Pennsylvania³

	Centre County	Pennsylvania
Direct Impact (\$M)	\$181	\$181
Indirect and Induced Impacts (\$M)	\$101	\$137
Total Impact (\$M)	\$282	\$317
Employment (FTE)	2,560	2,710
Employee Compensation (\$M)	\$70	\$80

Source: Happy Valley Adventure Bureau (2024), Lightcast (2024), Penn State University (2024), IMPLAN (2024), ESI (2024)

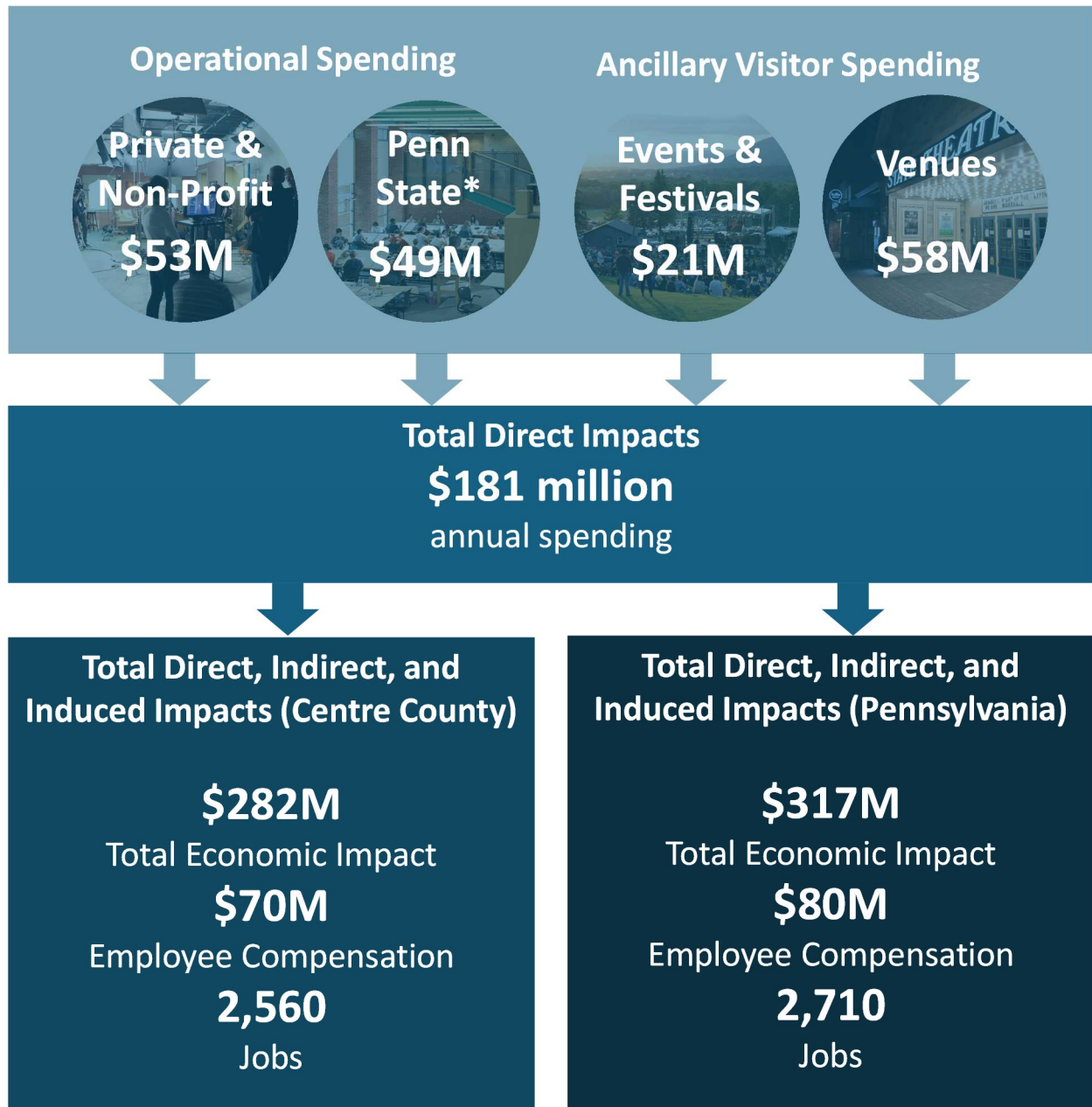
Figure E.2: Average Annual Fiscal Impact to the Commonwealth of Pennsylvania

	Commonwealth of Pennsylvania
Wage/Income Tax (\$M)	\$1.4
Sales Tax (\$M)	\$2.6
Business Tax (\$M)	\$1.1
Total (\$M)	\$5.2

Source: PA Department of Revenue (2023), Happy Valley Adventure Bureau (2024), Lightcast (2024), Penn State University (2024), IMPLAN (2024), ESI (2024)

² While not quantified in this report, these activities are also a significant contributor to College Township’s amusement tax base and PILOT payments by Penn State.

³ Throughout this report, not all summary numbers total due to rounding.



*Estimated operational spending for College of Arts & Architecture, Film Production and Media Studies program at the Donald P. Bellisario College of Communications, and operations of on-campus venues, including Bryce Jordan Center and the Center for Performing Arts.

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1. Introduction

Purpose of Report

Centre County, Pennsylvania, also known as Happy Valley, is a community that has seen consistent growth in population and economic vitality in recent decades. The county is home to Pennsylvania State University (Penn State), which is the region’s primary economic driver and activity generator with a total Fall 2023 enrollment of just over 49,000 students and directly employing around 6,000 full-time faculty, staff, and administrative positions.^{4 5} While the county is a renowned college sports destination, it is also Central Pennsylvania’s primary hub of arts and cultural activity supporting permanent jobs across the creative industries and attracting thousands of visitors annually for visual arts, concerts, fine arts performances, theater, cultural events, and festivals.

Building off economic momentum over the last several decades, the Happy Valley Adventure Bureau (HVAB), the official destination marketing organization for Centre County, and the Happy Valley Sports & Entertainment Alliance, with a mission to promote Centre County as a national destination for sports and entertainment activities, recognized the need to analyze and further communicate the importance of arts, cultural, and entertainment activities within the county as crucial drivers of tourism, quality of life, and regional economic competitiveness. HVAB, in partnership with the Happy Valley Sports & Entertainment Alliance, hired Econsult Solutions, Inc. (ESI) to conduct a study on the impacts of employment and operational spending that support these activities as well as ancillary spending by patrons to concerts, cultural institutions, festivals, and performances. The purpose of this study is to quantify the current economic impacts from arts, entertainment and cultural events and activities and the associated visitor activity within Centre County, which can then serve as a baseline for future growth driven by the work of the HVAB and the Sports & Entertainment Alliance.

About Happy Valley Adventure Bureau

The HVAB is a nonprofit organization that works on the fundamental principle that “cooperative group action” can attract meetings and visitors to the area more effectively than independent action. As Centre County’s official destination marketing organization, HVAB’s mission is to develop, promote and participate in travel-related activities and coordinate visitor services aimed at improving the county’s economic activities and quality of life. Happy Valley is promoted as a vacation and meeting destination to certain target audiences. Being a membership-based organization, HVAB offers benefits to its members such as a



⁴ <https://datadigest.psu.edu/student-enrollment/>

⁵ <https://datadigest.psu.edu/faculty-and-staff/>

network of business professionals who value travel and tourism as an integral step in creating a wealthy and financially strong region.

About Happy Valley Sports & Entertainment Alliance

While Penn State football is a major driver of economic activity in the county, there is recognition that arts, culture, and entertainment also add considerable value to the regional economy in terms of economic activity, but also quality of life. To support



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growth within these areas, the Happy Valley Sports & Entertainment Alliance was created by HVAB in 2021 “to carry out the goal of attracting, retaining, and facilitating sports and entertainment events that contribute to the vibrancy of Happy Valley, PA.”

Centre County Tourism

Special events help build destination awareness and encompass a wide variety of activities, including festivals, fairs, exhibitions, and shows.⁶ Arts and cultural events are vital in drawing significant attention to a destination by showcasing local culture. These events and activities can effectively build destination awareness and attract tourists, contributing to the local economy.

In 2022, visitor spending in Pennsylvania recovered significantly from the pandemic losses, reaching \$45.4 billion, just 1.5 percent below the pre-pandemic level of 2019. This recovery was driven by an increase in both the number of higher-spending travelers and international arrivals, with total visitor volume surpassing 192 million. Specifically, lodging spending grew to \$6.1 billion, which is 95 percent of its pre-pandemic levels.⁷

Entertainment events are a significant draw for visitors to Centre County year-round. A visitor intercept survey conducted by researchers in the Penn State Department of Recreation, Park, and Tourism Management for the HVAB from May 2019 to February 2020 found that a substantial portion of visitors were attracted by entertainment-related activities. This includes attendance at music festivals, theatrical performances, film screenings, and cultural festivals, which collectively draw thousands of visitors to the area. A reported 8.7 percent of visitors participated in art, gallery and exhibition visits, 8.4 percent in museum or historic site visits, while 2.5 percent participated in dance or theatrical performances visits.

⁶Dimanche, F. (2002). The contribution of special events to destination brand equity. In K. W. Wöber (Ed.), *City Tourism 2002: Proceedings of European Cities Tourism's International Conference* (pp. 73-80). Vienna: Springer. Retrieved from <https://www.researchgate.net/publication/267925161>

⁷ Tourism Economics. (2024, February). Economic Impact of Travel and Tourism in Pennsylvania - 2022. Pennsylvania Office of Tourism.

Importance of the Arts and Cultural Ecosystem

The arts and cultural ecosystem is crucial for enhancing tourism and improving the quality of life in a community. According to Americans for the Arts, the nonprofit arts industry generated \$166.3 billion in economic activity in 2015, supporting 4.6 million jobs and generating \$27.5 billion in government revenue.⁸ This industry attracts tourists who spend money on local businesses, including hotels, restaurants, and retail stores, thereby stimulating the local economy. The presence of vibrant arts and cultural activities not only draws visitors but also makes communities more desirable places to live and work.

Access to cultural activities significantly boosts the quality of life for residents by promoting social cohesion, community engagement, and a sense of belonging. Arts and cultural events provide opportunities for individuals to connect, celebrate their heritage, and participate in communal experiences.⁹ These activities also offer educational benefits, fostering creativity, critical thinking, and empathy while enhancing academic performance. Additionally, the arts contribute to mental and emotional well-being, reducing stress and providing joy, which improves overall life satisfaction.

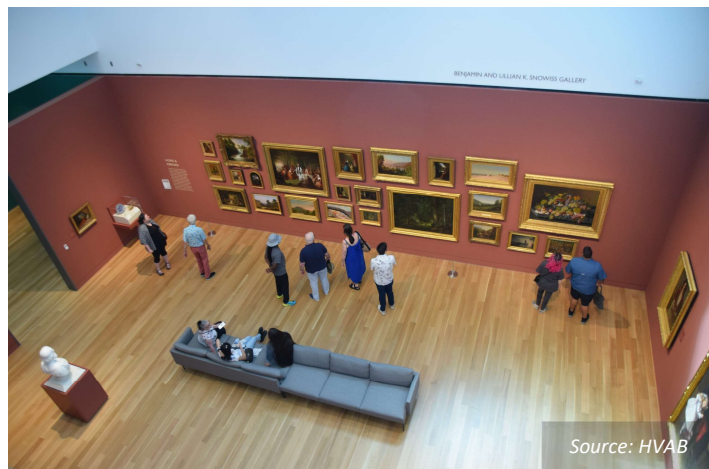
Penn State plays a pivotal role as an activity generator within the arts and cultural ecosystem, creating numerous spin-off opportunities for the creative industries. The university hosts a wide array of events, such



Source: HVAB



Source: HVAB



Source: HVAB

⁸ Americans for the Arts. (2017). Arts & Economic Prosperity 5: The economic impact of nonprofit arts and cultural organizations and their audiences. Retrieved from <https://www.americansforthearts.org/>.

Scott, M. M., Santos, R. L., Arena, O., Hayes, C., & Simon, A. (2020). Community Ties: Understanding what attaches people to the place where they live. Urban Institute. Retrieved from Urban Land Institute: <https://knightfoundation.org/wp-content/uploads/2020/05/Community-Ties-Final-pg.pdf>

as performances, exhibitions, and lectures, attracting large audiences and sustaining a vibrant cultural scene. As an educational hub, Penn State draws students from diverse backgrounds, fostering a new generation of artists and cultural leaders. The university's presence supports the growth of related businesses and enhances the capacity for innovative programming through partnerships and collaborations. Moreover, Penn State conducts valuable research on the economic and social impacts of the arts, shaping policies and initiatives to strengthen the cultural ecosystem.

Methodology

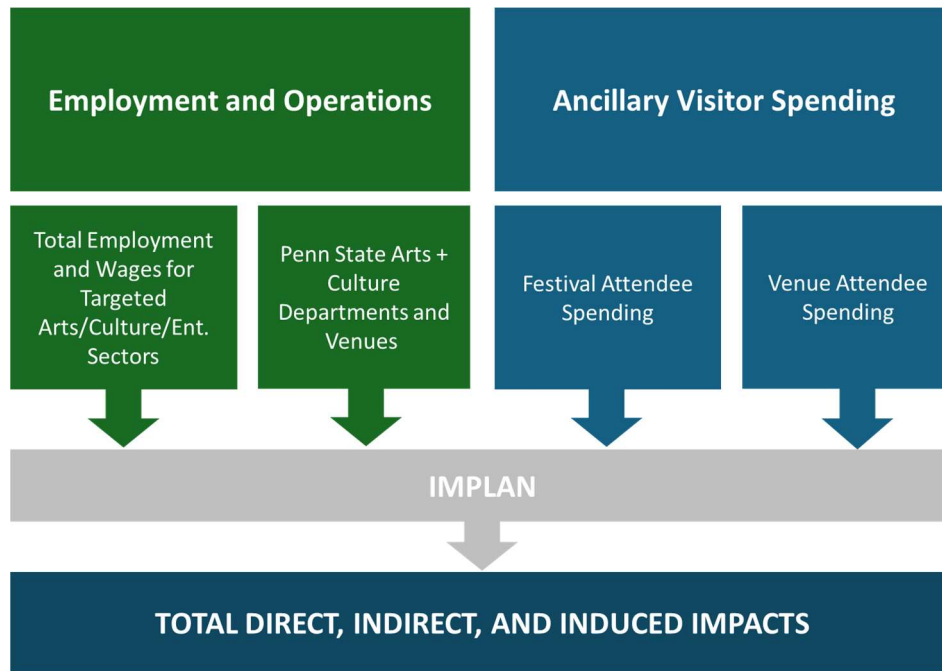
Economic and Tax Revenue Impact Modeling Approach

Measuring the total economic and tax impacts from arts, cultural, and entertainment activities and spending from patrons required a two-phased approach. First, arts and cultural organizations and creative industries establishments spend money in the local economy on business services and hire Centre County residents to support their operations. These activities generate economic and tax impacts within the county. Given the focus of this study, relevant activities at Penn State were also considered, including the operations of cultural venues such as the Center for Performing Arts or activities within the College of Arts & Architecture. Second, patrons of arts, cultural, and entertainment venues and events also generate economic impacts throughout their spending off-site that could be attributed to their trip (“ancillary spending”).

Economic impacts are the sum of direct activity attributable to this economic activity and the spillover impacts of that direct activity. Within an interconnected economy, each dollar of direct expenditures generates multiple waves of spillover impacts through spending on goods and services purchased within a given region (“indirect impacts”) as well as spending resulting from the labor income generated by the initial activity that ripples through the region (“induced impacts”). ESI used IMPLAN modeling software to estimate indirect and induced impacts and sums them with the direct activity to produce total economic impact. IMPLAN also estimates the number of jobs that are supported by the spillover impacts (indirect and induced impacts). For ease of comprehension, ESI converts these jobs into full-time equivalent (FTE) jobs, and all jobs expressed in this report are FTE jobs. ESI also created a custom fiscal impact model to translate economic impacts into their commensurate effect the state tax base. See the Appendix for additional details on ESI’s economic and fiscal impact model methodology.

In total, the employment and operations and patron spending generate direct impacts that then create a ripple effect throughout the countywide economy supporting jobs, economic activity, and taxes in a wide range of sectors. This activity is measurable using IMPLAN as presented in Figure 1.1.

Figure 1.1: Summary of Economic Impact Modeling Approach



Source: ESI Analysis (2024)

Data and Sources

This study relied upon several data sources to analyze employment and wages in key arts, cultural, entertainment, and creative industries, relevant Penn State activities, and visitation patterns and spending.

- **Lightcast** – Employment and wage data by target sectors (described in following section) aggregated from the Bureau of Labor Statistics (BLS) and other federal sources.
- **Penn State** – Penn State’s Data Digest portal includes departmental operational spending information, specifically for the College of Arts & Architecture and Donald P. Bellisario College of Communications.¹⁰ Data specific to the Bryce Jordan Center, including operational data and attendance by event, were obtained directly from the Bryce Jordan Center.
- **Placer.ai** – A cell phone tracking and aggregator data service that includes visitor counts by location as well as summary data on visitor origin, among other variables. The analysis was provided by HVAB.
- **HVAB** – The visitor spending model used survey data provided by HVAB. Through conversations with HVAB and Penn State, and analysis of industry data, ESI developed differential profiles of visitors’ spending patterns for the *Economic Impact of Sports Events in Centre County* report in 2022. Distinctions were made between local, day trip and overnight visitors. The same spending profiles were used for this study after adjusting for inflation.

¹⁰ <https://datadigest.psu.edu/>

Organization of the Report

The subsequent sections of the report are organized as follows:

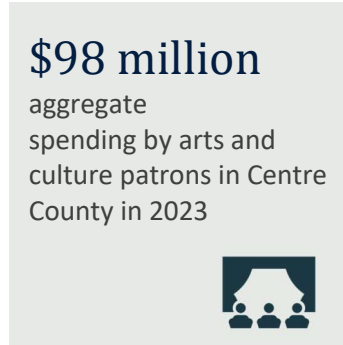
- **Section 2: Impact from Centre County Arts, Entertainment and Cultural Event Attendee Spending:** This section examines visitor spending and the resulting economic impact from visitors to cultural events, venues, and festivals in Centre County. It considers Penn State cultural programming, particularly through the Bryce Jordan Center and the Center for Performing Arts, as well as other venues and cultural events and festivals throughout the county.
- **Section 3: Impact from Operational Spending and Employment:** In addition to visitor dollars, arts, cultural, and entertainment establishments throughout Centre County spend money to support operations and hire staff. Additionally, Penn State directly supports the arts and cultural ecosystem through the operation of major venues, like the Bryce Jordan Center, and its academic programs. These activities in turn have a multiplier effect on the county and state economies.
- **Section 4: Total Impacts of Arts, Culture, and Entertainment Activities in Centre County:** The concluding section summarizes the annual economic impacts from both attendee and organizational spending to Centre County and the Commonwealth of Pennsylvania.

2. Impact from Arts, Cultural, and Entertainment Visitor Spending

Centre County hosts various arts, entertainment, and cultural events, performances, and festivals each year, which attract both local and non-local attendees. Patrons of these activities make a significant economic impact on the local community as they dine in local restaurants, shop at local stores, and in some cases stay overnight. This visitor spending represents “new dollars” in the county economy, generating subsequent spillover impacts and supporting hundreds of jobs.

This section reviews the range of events taking place in Centre County across multiple venues and festivals, estimates the visitor spending associated with these events annually, and models the total economic impact within the county and state.

The nearly 900,000 arts, culture, and festivals visitors to Centre County in 2023 spent \$98 million annually. This influx of spending generates an annual economic impact of \$120 million within Centre County, supporting more than 1,200 FTE jobs.



Overview of Venues, Events, and Festivals

Activity Generators

Special events that help build destination awareness encompass a wide variety of formats, including festivals, fairs, exhibitions, and shows.¹¹ Entertainment and cultural events are also vital in drawing significant economic activity and visibility to a destination. These activities can effectively attract tourists, contribute to the local economy, and further build destination awareness. This study focuses on spaces such as museums, galleries, performance spaces, and event venues, while excluding sports and recreational activities (e.g., college sports, camping, hiking, water sports, bowling). This includes assessing the economic contributions of these venues, festivals and events through visitor spending and local business support, as well as recognizing their role in enhancing community engagement and quality of life.

Arts and Cultural Venues

For the purposes of this study, “venues” include museums, galleries, theaters, music venues, and performance spaces – effectively physical spaces that host performances and cultural events. ESI worked closely with HVAB to identify 22 venues deemed to be significant contributors to the arts, cultural, and entertainment ecosystem. The largest venues in Centre County are owned and operated by Penn State, including the Bryce Jordan Center, Center for the Performing Arts, and Palmer Museum of

¹¹Dimanche, F. (2002). The contribution of special events to destination brand equity. In K. W. Wöber (Ed.), *City Tourism 2002: Proceedings of European Cities Tourism's International Conference* (pp. 73-80). Vienna: Springer. Retrieved from <https://www.researchgate.net/publication/267925161>

Art, although there are a number of independently operated spaces throughout the county. See Appendix for full list.

The **Bryce Jordan Center** is a 15,261-seat multi-purpose arena owned and operated by Penn State. It opened in 1996 and is the largest such arena between Philadelphia and Pittsburgh. The arena hosts a variety of events, including college basketball, sports exhibitions, commencements and other university events, and concerts and performances. For the purposes of this study, only events related to arts, culture, and entertainment were considered, and not sporting events or university events. In total, about half of Bryce Jordan's patrons attended arts, cultural, and entertainment-oriented events.



Schwab Auditorium, located on Penn State's campus, seats around 900 people and hosts a variety of events, including musical performances, theater productions, lectures, and academic ceremonies as well as events for Penn State School of Music.



Center for the Performing Arts is Penn State's primary performing arts venue that includes the 2,500-seat Eisenhower Auditorium and features a wide array of performances, including Broadway shows, concerts, dance, and lectures.

Palmer Museum of Art, founded in 1972, is the largest art museum between Pittsburgh and Philadelphia. The previous museum building has been replaced by a



newly constructed 73,000 square foot facility that opened on June 1, 2024. The permanent collection has more than 11,000 works of art.

The State Theatre is a 591-capacity theater located in downtown State College. It is a historic venue that hosts a variety of events, including live music, theater productions, film screenings, and community events. It plays a significant role in the local arts and entertainment scene.



The Rowland Theatre in Philipsburg is a historic 870-seat venue built in 1917. It shows current movies, classic films, and independent movies, and hosts live performances like concerts and plays. The theater also serves as a community event space.

Festivals and Events

In this context, these types of activities (“festivals”) include performances, arts fairs, and other special events that occur seasonally and primarily occur outdoors.¹² While the vast majority of festival visitors attend the county’s two largest festivals – Central Pennsylvania Festival of the Arts and Phillipsburg Heritage Days – this study also considered attendance and impacts for 18 other outdoor events and festivals.

Central Pennsylvania Festival of the Arts is held every year in July and known locally as "Arts Fest." It features an extensive sidewalk sale and exhibition, live music, dance performances, and a variety of food vendors. The festival also includes a children’s day with activities tailored for young visitors.



People’s Choice Festival is held in July and typically runs concurrently with Phillipsburg Heritage Days and includes live music performances, food and beverage, hundreds of arts and crafts vendors, and activities for kids. Recently, it has been held at Grange Park in Centre Hall and draws over 15,000 visitors annually.

¹² To avoid double counting, attendance for events that occur at indoor venues like a film festival at The State Theatre are already included as part of the “venue” attendance. However, since the Nittany Valley Sports Centre was not included as a venue, attendance for HV ComicCon at Nittany Valley Sports Center was considered an event/festival.

Phillipsburg Heritage Days is held the week following the 4th of July and is a companion event to Arts Festival and People’s Choice Festival to allow for joint marketing to increase attendance. It has grown through the years to become recognized as one of the premiere events in Central Pennsylvania. Many class reunions, family reunions, homecomings, and weddings are planned around the Heritage Days celebration. Attendance has grown throughout the years and has been estimated at over 12,000 for the five-day event.



See Appendix for full list of venues and festivals and events.

Visitation Patterns

In 2023, Centre County’s venues and festivals attracted just under 900,000 visitors, of whom around 35 percent came from 50 or more miles away. Among those attending events and performances at venues, the majority came from within 50 miles; however, festivals and outdoor events had a much broader draw with more than 57 percent coming from 50 or more miles away (see Figure 2.1).¹³

Figure 2.1: Venues and Festivals Visitor Origin Breakdown

	Venues	Festivals	Total Attendance	Percentage
<50 miles	509,000	75,000	584,000	65%
50 - 100 miles	34,000	24,000	58,000	6%
>100 miles	179,000	75,000	255,000	28%
Total	722,000	174,000	897,00	100%

Source: Placer.ai (2024), HVAB (2024), ESI (2024)

¹³ It is assumed that a small portion of visitors attend two events or venues in a single day; therefore, the total visitor count was adjusted downward to 897,000 to avoid double counting of spending impacts.

Modeling Visitor Spending

Visitor Spending Assumptions

Visitor spending associated with these venues and events are estimated through a multi-step process. Spending profiles were developed by attendee type based on tourism industry data points to reflect the variation in the level and composition of spending for day and overnight visitors.

To accurately estimate visitor spending, it was necessary to not only determine a credible estimate of attendees but also sort those attendees into different spending profiles, recognizing that not all attendees have the same economic footprint. Using the visitation data presented previously, this information was used to segment event attendees into one of three categories based on travel distance:

- *Locals* (which includes students) - visitors residing within the county and visiting events, or destinations within their own locality. These visitors typically do not require accommodation since they return to their own homes at the end of their visit. It is assumed that two-thirds of visitors living within 50 miles are local visitors.
- *Day Trip visitors* - visitors traveling to a destination outside their usual place of residence and returning home on the same day. It is assumed that one-third of those living within 50 miles, two-thirds of those living between 50 and 100 miles, and one-third of those living more than 100 miles away are day trip visitors.
- *Overnight visitors* - individuals who travel to a destination and stay at least one night away from their usual place of residence. This type of visitor requires accommodations such as hotels, motels, rented homes, or staying with friends/family and more spending on meals compared to day trip visitors or locals. It is assumed that one-third of those living between 50 and 100 miles and two-thirds of those living beyond 100 miles are overnight visitors.

Based on these assumptions, the following figure provides the breakdown of visitors by type for venues and festivals.

Figure 2.2: Visitor Type Assumptions

	Local	Day Visitor	Overnight	Total
Venues	339,000	252,000	131,000	722,000
Festivals/Events	50,000	66,000	58,000	174,000
Total	389,000	318,000	189,000	897,000

Source: Placer.ai (2024), HVAB (2024), ESI (2024)

This categorization of attendees is used to account for differences in travel and spending patterns within each visitor type. Through analysis of industry data, ESI developed differential profiles of participants' spending patterns. Distinctions are made between day trips and overnight visitors.

Day trip and overnight visitor spending profiles were established using these four major expenditure categories: 1) hotel/lodging, 2) food, 3) transportation, and 4) retail expenditures. Regional attendees

will incur more transportation, food, and retail expenditures as they are traveling from a farther distance to the event. Overnight attendees, who are traveling from an even farther distance that warrants an overnight stay, will incur hotel/lodging expenses in addition to food, transportation, and retail expenses.

One significant aspect of this analysis is capturing the expenditures of local residents who would have otherwise traveled to other locations for recreational activities if the event were not held. By retaining this spending within the local economy, these venues, events, and festivals create direct, indirect, and induced economic benefits.

In addition, recreational spending (in the form of event tickets) is directly captured by arts venues and supports the operational activity modeled in Section 3 and was therefore excluded; however, festival attendee spending directly supports vendors, and thus, recreational spending was considered for these types of visitors. The following per visitor spending profiles were utilized as presented in Figure 2.3.

Figure 2.3: Estimated Per Visitor Spending in Centre County by Visitor Type

	Local	Day Visitor	Overnight Visitor
Lodging	\$0	\$0	\$81
Food	\$19	\$27	\$67
Transportation (local)	\$3	\$51	\$66
Retail	\$5	\$28	\$45
Recreation (Festivals Only)	\$30	\$28	\$25
Total	\$56	\$134	\$283

Source: Longwoods (2022), Americans for the Arts (2016), ESI (2024)

Total Visitor Spending

Given the spending assumptions outlined in Figure 2.3 and visitor type assumptions outlined in Figure 2.2, total ancillary spending by venue visitors amounts to \$69 million (See Figure 2.4)

Figure 2.4: Total Venue Visitor Spending by Visitor Type and Spending Category (\$M)

	Local	Day Visitor	Overnight Visitor	Total
Lodging	\$0	\$0	\$11	\$11
Food	\$6	\$7	\$9	\$22
Transportation (local)	\$1	\$13	\$9	\$22
Retail	\$2	\$7	\$6	\$15
Total	\$9	\$27	\$34	\$69

Source: ESI (2024)

Given the spending assumptions outlined in Figure 2.3 and visitor type assumptions outlined in Figure 2.2, total ancillary spending by venue visitors amounts to \$28 million (See Figure 2.5)

Figure 2.5: Total Festival Visitor Spending by Visitor Type and Spending Category (\$M)

	Local	Day Visitor	Overnight Visitor	Total
Lodging	\$0	\$0	\$5	\$5
Food	\$1	\$2	\$4	\$7
Transportation (local)	\$0	\$3	\$4	\$7
Retail	\$0	\$2	\$3	\$5
Recreation	\$1	\$2	\$1	\$5
Total	\$3	\$9	\$17	\$28

Source: ESI (2024)

Aggregate Impact from Visitor Spending

Ancillary spending from venue and festivals/events visitors totals \$97 million, with \$5 million in recreation spending attributed to festivals/events only (See Figure 2.6).

Figure 2.6: Total Visitor Spending by Visitor Type and Spending Category (\$M)

	Local	Day Visitor	Overnight Visitor	Total
Lodging	\$0	\$0	\$15	\$15
Food	\$7	\$9	\$13	\$28
Transportation (local)	\$1	\$16	\$12	\$30
Retail	\$2	\$9	\$8	\$19
Recreation (Festivals Only)	\$1	\$2	\$1	\$5
Total	\$12	\$36	\$50	\$97

Source: ESI (2024)

The \$69 million in ancillary spending by venue visitors at Centre County’s arts and culture venues was adjusted to \$58 million in direct impacts by IMPLAN. The difference between \$69 million and \$58 million in direct impacts is the “leakage effect”. This occurs when the money spent within the region is used to purchase goods and services from outside the region, thereby reducing the local economic impact.

The \$58 million in direct impacts generated \$104 million in indirect and induced impacts statewide. This economic activity supported 980 full-time jobs and \$32 million in employee compensation.

The \$28 million in ancillary spending by venue visitors at Centre County’s arts and culture festivals amounted to \$21 million in direct impacts. As discussed above, \$7 million was lost to other regions where goods and services were purchased.

The \$21 million in direct impacts from festival/event spending generated \$17 million in indirect and induced impacts within the state. This economic activity supported approximately 360 full-time jobs and \$12 million in employee compensation.

Figure 2.7: Aggregate Economic Impact from Venue and Festival Visitor Spending

	Centre County			Pennsylvania		
	Venues	Festivals	Total	Venues	Festivals	Total
Direct Impact (\$M)	\$58	\$21	\$78	\$58	\$21	\$78
Indirect and Induced Impacts (\$M)	\$31	\$11	\$42	\$46	\$17	\$63
Total Impact (\$M)	\$88	\$32	\$120	\$104	\$37	\$141
Employment (FTE)	920	340	1,250	980	360	1,340
Employee Compensation (\$M)	\$28	\$10	\$38	\$32	\$12	\$44

Source: Happy Valley Adventure Bureau (2024), IMPLAN (2024), ESI (2024)

Tax Revenue Impact from Visitor Spending

The direct and downstream effects from visitor spending also boost tax bases, generating tax revenues for various government jurisdictions each year. Notable among these are state income, sales tax, and corporate income tax (business tax). It is estimated that the economic impact from arts and cultural venue visitor spending produces \$2.1 million in tax revenues for the Commonwealth of Pennsylvania each year, while arts and cultural festival/event visitor spending produces \$800,000 in tax revenues for a total tax impact of \$2.9 million (see Figure 2.8).

Figure 2.8: Aggregate Fiscal Impact from Visitor Spending for the Commonwealth of Pennsylvania

	Venues	Festivals	Total
Income/Wage Tax (\$M)	\$0.6	\$0.2	\$0.8
Sales Tax (\$M)	\$1.1	\$0.4	\$1.5
Business Taxes (\$M)	\$0.5	\$0.2	\$0.7
Total Tax Revenue (\$M)	\$2.1	\$0.8	\$2.9

Source: PA Department of Revenue (2023), Happy Valley Adventure Bureau (2024), IMPLAN (2024), ESI (2024)

Since Centre County does not generate revenue from sales tax or income tax, the tax impacts were not calculated; however, College Township, home to the majority of arts and entertainment venues and events in the county, has an Amusement Tax of five (5.0) percent of the admission price “to each and every amusement” in the county generating roughly \$35,000 annually. Events at Penn State are not subject to this tax, but Penn State pays a payment in lieu of taxes (PILOT) as part of an Impact Agreement. In recent years, collections have exceeded \$200,000 annually, and exceeded \$500,000 in FY 2023. This PILOT payment has the potential to grow as the number of events and cost of tickets increase, providing a direct benefit to the Township’s fiscal position. A specific breakdown of the proportion of tax revenue from arts and culture events (as opposed to sporting events, or other ticketing events) is not estimated.

3. Impact from Operational Spending and Employment

Arts, culture, and entertainment establishments in Centre County, including relevant activities at Penn State, employ workers who earn wages and salaries that they spend on goods and services like food, housing, and transportation, thereby boosting the local economy. This section reviews the impact of relevant employment and operational activities and models the total economic impact within the County and state.

1,000 jobs
within arts, culture,
entertainment, and
creative industries in
Centre County

Arts, cultural, and entertainment establishments, along with relevant activities at Penn State, support approximately 1,000 direct full-time employees and spend \$102 million annually to support their operations. This spending generates an annual economic impact of \$162 million within Centre County, supporting a total of approximately 1,300 FTE jobs.

Direct Annual Employment

Defining the Industry

The 2016 National Arts Index is the sixth annual report by Americans for the Arts, evaluating the health and vitality of arts and culture in the U.S. based on select industry sectors by North American Industry Classification System (NAICS). This study initially analyzed these selected NAICS categories by the National Arts Index and then made further refinements based on a review and conversations with HVAB.

The universe of relevant sectors includes the following by three-digit NAICS:

- **Motion Picture & Sound Recording (512)**, includes industries involved in the production and distribution of motion pictures, videos, television programs, and sound recordings. It covers the entire process from creation to distribution.
- **Performing Arts & Related Industries (711)**, comprises establishments involved in the production, promotion, and participation in live performances, events, or exhibits intended for public viewing.
- **Museums, Historical Sites & Similar (712)**, includes organizations that conserve and exhibit objects and sites of historical and cultural value.

These represent all arts, culture, and entertainment jobs in Centre County outside of Penn State colleges and venue operations, which BLS does not include within its dataset. This study excludes outdoor activities/sports events, web-based design and IT-related activities, recreational amenities, and amusement parks given that they are beyond the purview of arts and culture.

Employment Trends

In total, these sectors had 369 jobs in 2023 with the majority within the Performing Arts & Related Industries sector. Since 2018, all three sectors experienced combined growth of 15 percent, whereas total employment countywide declined by around three percent.

Figure 3.1: Total Annual Employment in 3-Digit NAICS in Centre County

		2018	2019	2020	2021	2022	2023	Change 2018- 2023
512	Motion Picture & Sound Recording	72	70	55	55	81	85	19%
711	Performing Arts & Related Industries	215	209	203	200	242	250	16%
712	Museums, Historical Sites & Similar	33	34	25	30	34	34	4%
Total		320	313	283	285	357	369	15%

Source: Lightcast (2024)

The average weighted annual wages for these sectors are \$30,370, about half of average wages countywide as presented in the following table.

Figure 3.2: Average Annual Wages by NAICS Code in Centre County, 2023

NAICS	Description	Avg. Wage
512	Motion Picture & Sound Recording	\$36,381
711	Performing Arts & Related Industries	\$19,473
712	Museums, Historical Sites & Similar	\$33,346
Weighted Average		\$30,178
All Industry Sectors		\$61,412

Source: Lightcast (2024)

Operational Spending

According to IMPLAN, arts and cultural establishments generate \$53 million in direct impact for a total direct, indirect, and induced impact of \$83 million in Centre County and \$89 million in Pennsylvania. The economic activity from these sectors supports 460 total jobs in Centre County and 490 in Pennsylvania (see Figure 3.3).

Figure 3.3: Economic Impact from Arts and Culture Establishments in Centre County¹⁴

	Centre County	Pennsylvania
Direct Impact (\$M)	\$53	\$53
Indirect and Induced Impacts (\$M)	\$29	\$35
Total Impact (\$M)	\$83	\$89
Employment (FTE)	460	490
Employee Compensation (\$M)	\$10	\$12

Source: Lightcast (2024), IMPLAN (2024), ESI (2024)

¹⁴ To avoid double counting, the economic impacts were adjusted to exclude indirect and induced jobs of the selected NAICS codes in Centre County. For example, an independent writer creates opportunities for performers to present a theatrical production. Both the writer's and performer's jobs and subsequent wages are already accounted for in the model as direct jobs.

The tax revenue impact from the operational spending includes \$0.8 million in sales tax, \$0.3 million in business tax, and \$0.2 million in income tax for a total \$1.3 million to the Commonwealth of Pennsylvania.

Figure 3-4: State Tax Revenue Generated from the Operations of Arts and Culture Establishments in Centre County

Tax Type	Commonwealth of Pennsylvania
Income/Wage Tax (\$M)	\$0.2
Sales Tax (\$M)	\$0.8
Business Taxes (\$M)	\$0.3
Total Tax Revenue (\$M)	\$1.3

Source: PA Department of Revenue (2023), Lightcast (2024), IMPLAN (2024), ESI (2024)

Penn State’s Contributions to the Arts and Cultural Ecosystem

Penn State is a major driver of the arts and cultural ecosystem in Centre County, both through the operations of the county’s primary venues, including the Bryce Jordan Center and Center for Performing Arts, as well as through its academic programs, including the College of Arts & Architecture and Donald P. Bellisario College of Communication. These activities not only provide vibrant cultural experiences for residents and attract out-of-town visitors, but also Penn State’s academic programs attract and develop talent – students, faculty, and staff – within the arts and cultural space. The continued expansion of the arts and cultural ecosystem throughout Centre County then creates more opportunities for retaining talent, which then contributes to enhanced quality of life for residents and broader economic competitiveness.

College of Arts & Architecture

The Penn State College of Arts & Architecture provides academic programs in art, design, performance, and research. It offers a rich array of programs, including more than 30 undergraduate and 15 graduate degrees, spread across various disciplines such as architecture, music, theatre, visual arts, art education, art history, landscape architecture, music education, and graphic design. As of 2023, it had 1,746 students and 674 faculty and staff with an average annual budget of \$41.7 million.¹⁵ This budget includes the operation of its academic programs as well as the Center for Performing Arts, Palmer Museum of Art, Penn State Centre Stage, and The Penn's Woods Music Festival.¹⁶

Donald P. Bellisario College of Communications

The Donald P. Bellisario College of Communications at Penn State provides education in media and communication. It offers programs in journalism, media studies, advertising/public relations, film production, and telecommunications. While its core programs are outside of the scope of this study,

¹⁵ <https://datadigest.psu.edu/faculty-and-staff/>

¹⁶ <https://arts.psu.edu/about>

such as journalism and advertising, its film and media studies program directly contribute to Centre County’s arts and cultural ecosystem.

Employment and Operational Spending

Faculty and staff employed by the College of Arts & Architecture and Donald P. Bellisario College of Communications as well as jobs at the Bryce Jordan Center are not captured by the Bureau of Labor Statistics; therefore, as presented in Section 1, this study relied upon Penn State data detailing the number of part-time and full-time employees at these colleges to understand the share of university operations on the county’s arts and culture ecosystem.

While the Bryce Jordan Center did not provide a direct headcount of direct FTE jobs, these jobs were estimated using IMPLAN based on its operational spending proportional to arts, cultural, and entertainment attendance.¹⁷

Operational Spending

In total, Penn State’s direct activities for supporting arts and cultural activities and operations in Centre County generate a direct impact of \$49 million with a total impact of \$79 million supporting more than 850 jobs.¹⁸

Figure 3.5: Economic Impact from Operational Spending of Arts, Cultural, and Entertainment Activities at Penn State, 2023

	Centre County	Pennsylvania
Direct Impact (\$M)	\$49	\$49
Indirect and Induced Impacts (\$M)	\$30	\$39
Total Impact (\$M)	\$79	\$88
Employment (FTE)	850	890
Employee Compensation (\$M)	\$22	\$25

Source: Penn State (2024), IMPLAN (2024), ESI (2024)

Tax Revenue Impact from Institutional Spending

Although Penn State is a not-for-profit institution and exempt from many direct taxes, the economic impacts from its operations above still generate tax revenues. Penn State increases the Commonwealth of Pennsylvania’s tax base directly by employing staff which generates taxable income, and indirectly via spending on vendors in the private economy. It is estimated that spending activities generate approximately \$1 million in tax revenue for the Commonwealth of Pennsylvania each year (see Figure 3.6).

¹⁷ The impacts of Bryce Jordan Center captured in this report only focus on its own direct operational spending; however, out-of-town cast, crew, and artists also spend money on accommodation, meals, and supplies, which has an impact on Centre County’s economy. According to Bryce Jordan Center, depending on the size of the tour/performance, out-of-town productions can spend up to \$20,000 locally per show and supporting approximately 30 to 50 hotel rooms per night. Therefore, the impacts presented in this study are understated. It is recommended that these types of activities are tracked moving forward to better understand the total impact of Bryce Jordan Center and other relevant performance venues’ economic footprint.

¹⁸ <https://budgetandfinance.psu.edu/budget-allocations>

Figure 3.6: Fiscal Impact from Penn State’s Arts, Cultural, and Entertainment Activities and Operations

Tax Type	Commonwealth of Pennsylvania
Income/Wage Tax (\$M)	\$0.4
Sales Tax (\$M)	\$0.4
Business Taxes (\$M)	\$0.2
Total Tax Revenue (\$M)	\$1.0

Source: PA Department of Revenue (2023), Penn State (2024), IMPLAN (2024), ESI (2024)

4. Total Impacts of Arts, Culture, and Entertainment Activities in Centre County

Building upon the impacts of ancillary visitor spending in Section 2 and operational spending and employment by arts, culture, and entertainment establishments, including relevant operations at Penn State, in Section 3, the following section provides the aggregate economic and tax impacts for Centre County and Pennsylvania.

Total Economic Impacts

In the aggregate, entertainment and cultural events and associated activities generate an annual economic impact of approximately \$282 million within Centre County, of which, \$70 million is employee compensation supporting just over 2,500 jobs (see Figure 4.1).

Figure 4.1: Total Economic Impact from Arts, Cultural, and Entertainment Activities in Centre County

	Ancillary Visitor Spending	Organizational Activity	Total
Direct Impact (\$M)	\$78	\$102	\$181
Indirect and Induced Impacts (\$M)	\$42	\$59	\$101
Total Impact (\$M)	\$120	\$162	\$282
Employment (FTE)	1,250	1,300	2,550
Employee Compensation (\$M)	\$38	\$32	\$70

Source: Happy Valley Adventure Bureau (2024), Lightcast (2024), Penn State (2024), IMPLAN (2024), ESI (2024)

Within Pennsylvania, this economic activity generates \$317 million in economic impact, of which, \$80 million is employee compensation supporting more than 2,700 jobs (see Figure 4.2).

Figure 4.2: Total Economic Impact from Arts, Cultural, and Entertainment Activities in Pennsylvania

	Ancillary Visitor Spending	Organizational Activity	Total
Direct Impact (\$M)	\$78	\$102	\$181
Indirect and Induced Impacts (\$M)	\$63	\$74	\$137
Total Impact (\$M)	\$141	\$176	\$317
Employment (FTE)	1,340	1,370	2,710
Employee Compensation (\$M)	\$44	\$36	\$80

Source: Happy Valley Adventure Bureau (2024), Lightcast (2024), Penn State (2024), IMPLAN (2024), ESI (2024)

The overall tax revenue impact from visitor spending and operational activity above generates annual tax revenues of \$5.2 million (see Figure 4.3).

Figure 4.3: State Tax Revenue Impacts from Arts and Culture Activities

	Visitor Spending	Organizational Activity	Total
Income/Wage Tax (\$M)	\$0.8	\$0.6	\$1.4
Sales Tax (\$M)	\$1.5	\$1.1	\$2.6
Business Taxes (\$M)	\$0.6	\$0.5	\$1.1
Total Tax (\$M)	\$2.9	\$2.2	\$5.2

Source: PA Department of Revenue (2023), Happy Valley Adventure Bureau (2024), Lightcast (2024), Penn State (2024), IMPLAN (2024), ESI (2024)

Context of Arts, Entertainment and Cultural Activities for Centre County

In addition to the quantifiable impacts from visitor spending and ongoing operations, the arts, cultural, and entertainment ecosystem contributes significantly to the fabric of Centre County.

- **The arts and cultural ecosystem is crucial for enhancing tourism and improving the quality of life in a community.** The presence of vibrant arts and cultural activities not only draws visitors but also makes communities more desirable places to live and work.
- **Access to cultural activities significantly boosts the quality of life for residents by promoting social cohesion, community engagement, and a sense of belonging.** Arts and cultural events provide opportunities for individuals to connect, celebrate their heritage, and participate in communal experiences.¹⁹ These activities also offer educational benefits, fostering creativity, critical thinking, and empathy while enhancing academic performance.
- **Penn State plays a pivotal role as an activity generator within the arts and cultural ecosystem, creating numerous spin-off opportunities for the creative industries.** As an educational hub, Penn State draws students from diverse backgrounds, fostering a new generation of artists and cultural leaders. The university's presence supports the growth of related businesses and enhances the capacity for innovative programming through partnerships and collaborations. Moreover, Penn State conducts valuable research on the economic and social impacts of the arts, shaping policies and initiatives to strengthen the cultural ecosystem.

Scott, M. M., Santos, R. L., Arena, O., Hayes, C., & Simon, A. (2020). Community Ties: Understanding what attaches people to the place where they live. Urban Institute. Retrieved from Urban Land Institute: <https://knightfoundation.org/wp-content/uploads/2020/05/Community-Ties-Final-pg.pdf>

Appendix A – Venues, Events, and Festivals

The estimated number of visitors for arts or cultural events and festivals in Centre County was 174,000 in 2023.

Figure A-1: Centre County Events and Festivals, 2023

Event/Festival	Date
HV ComicCon at Nittany Valley Sports Centre	Feb 24, 2023 - Feb 26, 2023
Earth Day at the Arboretum	Apr 22, 2023
The Penn State Powwow	Apr 22, 2023 - Apr 23, 2023
AnthroFest	Apr 23, 2023 - Apr 29, 2023
Bellefonte Outdoor Adventure Show	May 21, 2023
Rhoneymeade Music Festival	June 2 - June 4, 2023
Central PA Theater and Dance Fest	Jun 6, 2023 - Jun 25, 2023
Pride Weekend	Jun 9, 2023 - Jun 11, 2023
Penn’s Woods Music Festival	Jun 11, 2023 - Jun 24, 2023
Bellefonte Cruise	Jun 16, 2023 - Jun 17, 2023
Juneteenth	Jun 16, 2023 - Jun 17, 2023
Central Pennsylvania Arts Festival	Jul 12, 2023 - Jul 16, 2023
People's Choice Festival	Jul 13, 2023 - Jul 16, 2023
Phillipsburg Heritage Days	Jul 14, 2023 - Jul 16, 2023
Starseed Spring Festival	Aug 26, 2023
Havanna Fest	Sep 16, 2023
Harvest Craft Show	Sep 22, 2023 - Sep 23, 2023
Pop Up Avenue	Sep 30, 2023
Pumpkin Festival	Oct 2023
Happy Valley Latin Festival	Oct 7, 2023
Dutch Fall Fest	Oct 7, 2023 - Oct 8, 2023
Centre Film Festival (held at State Theatre and Rowland Theatre)	Oct 30, 2023 - Nov 5, 2023
Bellefonte Victorian Christmas	Dec 13, 2023 - Dec 15, 2023
First Night on South Allen Street	December 31, 2023

The estimated number of visitors at arts and cultural venues in Centre County was 722,000 in 2023.

Figure A-2: Centre County Arts, Cultural, and Entertainment Venues and Organizations

Venue	Description
Bryce Jordan Center	15,000 seat multi-purpose area on Penn State’s campus
Arboretum at Penn State	A 370-acre garden that hosts outdoor concerts
The State Theatre	550-seat non-profit community theater
Eisenhower Auditorium	Penn State's primary theatrical venue with 2,500 seats
Schwab Auditorium	Penn State's theatrical venue with 900 seats
Tempest Productions	A not-for-profit 501(c)(3) professional theatre company
Stage West	A live music venue with a seating capacity of 600
Playhouse Theatre	A 383-seat theatre on Penn State’s campus
3 Dots Downtown	Downtown space with a capacity of 65, hosting artistic and innovative experiences
Pavilion Theatre	A 222-seat theatre on Penn State’s campus
Penn State Downtown Theatre Center	A 152-seat theatre in downtown State College
Recital Hall	Theatrical venue with 420 seats
Palmer Museum of Art	Recently built museum on Penn State’s campus with the largest art collection between Pittsburgh and Philadelphia
Penn State Centre Stage	The stage is a part of Penn State School of Theatre
Pine Grove Hall	Premier destination with a seating capacity of 120, for a casual upscale dining experience, live music, and drinks
Rowland Theatre	Historic theater primarily used for showing films, live performances, concerts, and community events
Millbrook Playhouse	A professional theatre company, with a seating capacity of 335
Pennsylvania Military Museum	A museum and educational center, displaying exhibits related to Pennsylvania's military heritage
Bellefonte Art Museum	Museum for celebrating and promoting visual arts
The American Philatelic Center	Headquarters of the American Philatelic Society (APS)
Columbus Chapel & Boal Mansion Museum	Amphitheater and venue for ceremonies and receptions with a seating capacity of 25
Woskob Family Gallery	A contemporary arts space hosting events and exhibitions

Appendix B – Economic and Fiscal Impact Modeling

Economic impact estimates are generated by utilizing input-output models to translate an initial amount of direct economic activity into the total amount of economic activity that it supports, which includes multiple waves of spillover impacts generated by spending on goods and services and by spending of labor income by employees. This section summarizes the methodologies and tools used to construct, use, and interpret the input-output models needed to estimate this project’s economic impact.

A.1 Input Output Model Theory

In an inter-connected economy, every dollar spent generates two spillover impacts:

First, some amount of the proportion of that expenditure that goes to the purchase of goods and services gets circulated back into an economy when those goods and services are purchased from local vendors. This represents what is called the “**indirect effect**,” and reflects the fact that local purchases of goods and services support local vendors, who in turn require additional purchasing with their own set of vendors.

Second, some amount of the proportion of that expenditure that goes to labor income gets circulated back into an economy when those employees spend some of their earnings on various goods and services. This represents what is called the “**induced effect**,” and reflects the fact that some of those goods and services will be purchased from local vendors, further stimulating a local economy.

The role of input-output models is to determine the linkages across industries in order to model out the magnitude and composition of spillover impact to all industries of a dollar spent in any one industry. Thus, the total economic impact is the sum of its own direct economic footprint plus the indirect and induced effects generated by that direct footprint.

A.2 Input-Output Model Mechanics

To model the impacts resulting from the organizational expenditures Econsult Solutions, Inc. developed a customized economic impact model using the IMPLAN input/output modeling system. IMPLAN represents an industry standard approach to assess the economic and job creation impacts of economic development projects, the creation of new businesses, and public policy changes within a county and its surrounding area.

IMPLAN has developed a social accounting matrix (SAM) that accounts for the flow of commodities through economics. From this matrix, IMPLAN also determines the regional purchase coefficient (RPC), the proportion of local supply that satisfies local demand. These values not only establish the types of goods and services supported by an industry or institution, but also the level at which they are acquired locally. This assessment determines the multiplier basis for the local and regional models created in the IMPLAN modeling system. IMPLAN takes the multipliers and divides them into 536 industry categories in accordance to North American Industrial Classification System (NAICS) codes.

The IMPLAN modeling system also allows for customization of its inputs which alters multiplier outputs. Where necessary, certain institutions may have different levels of demand for commodities. When this

occurs, an “analysis-by-parts” (ABP) approach is taken. This allows the user to model the impacts of direct economic activity related to an institution or industry with greater accuracy. Where inputs are unknown, IMPLAN is able to estimate other inputs based on the level of employment, earnings, or output by an industry or institution.

A.3 Employment and Wages Supported

IMPLAN generates job estimates based on the term “job-years”, or how many jobs will be supported each year. For instance, if a construction project takes two years, and IMPLAN estimates there are 100 employees, or more correctly “job-years” supported, over two years, that represents 50 annual jobs. Additionally, these can be a mix of full and part-time employment. Consequently, job creation could feature more part-time jobs than full-time jobs. To account for this, IMPLAN has a multiplier to convert annual jobs to full-time equivalent jobs.

Income to direct, indirect, and induced jobs is calculated as employee compensation. This includes wage and salary, all benefits (e.g., health, retirement) and payroll taxes (both sides of social security, unemployment taxes, etc.). Therefore, IMPLAN’s measure of income estimates gross pay opposed to strictly wages.

Appendix C: About Econsult Solutions, Inc.

This report was produced by Econsult Solutions, Inc. (ESI). ESI provides businesses and public policy makers with consulting and thought leadership services in urban economics, real estate, transportation, public infrastructure, economic development, public policy and finance, strategic planning, as well as expert witness services for litigation support.

ESI combines robust quantitative analysis with trusted expert insights to create sustainable solutions. The firm works collaboratively with its clients, and draws in expertise, when necessary, from our network of experts and partners across industries, regions, and management practices. Based in Philadelphia, the firm supports clients nationwide.



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