

MUSEUM OF IDAHO

ECONOMIC CONTRIBUTION STUDY

2023

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Executive Summary

This study examines the economic contribution of the Museum of Idaho (MOI), located in Idaho Falls, Idaho. The museum has grown to become a cultural icon for the East Idaho region and the largest science and history museum in Idaho. The facility is important for generating tourism revenues, enhancing the quality of life in the region, and assisting in the recruitment and retention of many of the high-quality employees to the region.

This report was conducted by a collaboration of faculty and students from the University of Idaho (UI), Moscow Idaho, and the Research Business and Development Center (RBDC), Rexburg, Idaho. Coauthors include Cameron Kimball from the RBDC; and Steven Peterson, Jarrett Peha, Jimmy Bulger, Zachary Mckenna, Connor Spencer from the UI. This study was completed in April 2024. In 2023 MOI had a total of \$514,623 in donations, a total revenue of \$2,074,364 and total expenses of \$2,113,633. The Museum had a total of 72,282 paying visitors that year, 49,314 of which were provided discounts, and 26,022 free visitors for a total of 98,304 patrons served in the year 2023.

A Bonneville County IMPLAN input-output model was created to fit the needs of the analysis. It was assumed that approximately 50% of the revenues were new monies to the local economy, from nonresident patrons or residents who would have spent their money elsewhere in the absence of the museum. These were counted towards the economic contributions.

Total direct visitor revenues counting towards the economic contributions were \$6.14 million. In addition, the same proportion (50%) of the direct museum revenues (expenditures) were counted towards the calculation of the economic contributions.

Total contributions: The Museum of Idaho created \$9.80 million in sales; \$3.05 million in total compensation (wages and salaries), and 107 jobs (Including the multiplier effects).

Total Tax Contributions: The museum's operations and visitor spending created \$137,488 in property annual tax revenues, and \$679,171 in state sales, excise tax contributions, and income taxes, totaling \$816,659 ([Figure 1](#)).

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Purpose of the Study

The research team was tasked with investigating the economic impact of the Museum of Idaho on Bonneville County. Specific focuses requested by the Museum included the money multiplier effect and value-added effect of the Museum on stakeholder donations. While analyzing the data the team decided that regression analysis was unsuited to the time series nature of the dataset; this is due to the limited number of data points and limited understanding of time series regression of the writers. As such the team will be providing an explanation of the IMPLAN Input/Output model constructed and used in the study.

About the Museum

The Museum of Idaho (MOI) traces its history back to 1975 with the establishment of the Bonneville County Historical Society. Initially housed within the confines of a modest basement room in the County Courthouse, the society's mission to preserve and interpret the rich tapestry of local and regional history quickly gained traction. In 1985, this growing interest facilitated a move to an abandoned library building, and in 2003 the Museum of Idaho was established (Museum of Idaho, 2023). This transition reflected an expansion in vision and scope, a commitment to bringing global narratives to Idaho and showcasing Idaho's unique story to the world (Museum of Idaho, 2023). Over the past 20 years, that vision has helped MOI grow to one of the largest history and science museums in Idaho.

Within its walls, the MOI has hosted many diverse exhibits, each carefully curated to ignite wonder and discovery among its visitors. From the enchanting journey through the Toytopia exhibit, which captivated tens of thousands, to the immersive experience of "Dinos of the Deep," the museum has consistently provided educational and engaging content. A

significant milestone in 2023 was the introduction of the "Under the Canopy: Animals of the Rainforest" exhibit. This showcase represented a bold step, introducing live animals to provide an authentic and interactive rainforest experience, thereby deepening visitors' understanding of biodiversity and the importance of ecological conservation. These exhibits, alongside the annual and seasonal showcases, exemplify MOI's dedication to educational excellence and its commitment to serving as a link between Idaho and the world.

Over the course of 2023, the Museum of Idaho has made several significant changes that have helped usher in an era of strategic expansion, deepening educational and greater community outreach. From recent shifts in leadership with Jeff Carr's appointment as Executive Director and Chloe Doucette as Managing Director, to the launch of the innovative Museum of Idaho 101 class and international travel programs, MOI is continuing to push for greater success and Innovation (Carr, 2023 Notable Events, 2024).

Methodology and Results

Study Overview and Sources of Data

Primary data for this study was supplied by the Museum of Idaho. A Bonneville County IMPLAN input-output model was created to fit the needs of the analysis. IMPLAN (Impact Analysis for Planning) is the most widely used and cited economic impact software and data (IMPLAN Group LLC).ⁱ Lightcast (formerly Emsi) provided labor force and industrial account data was utilized in this study.ⁱⁱ

Methodology

Economic Base Assessment

This analysis is grounded in economic base theory, which categorizes a local or regional economy into two main types of industries: base and non-base. Base industries are those that bring external money into the local economy, encompassing a diverse range from high-technology companies to medical services, retail trade, and government operations. Notably, even services catering to individuals outside the region's central business hub, like medical and legal services, are considered part of the region's economic base. Additionally, payments from state and federal governments, such as Social Security, Medicare, university funding, and welfare payments, are recognized as sources of outside income and are included in the economic base. Import substitution, where local activities prevent residents from leaving the region, is also acknowledged as a form of basic expenditure.

Conversely, non-base industries are defined as economic activities within the region that primarily support local consumers and businesses. These industries contribute to the local economy by circulating income internally. Examples of non-base activities include shopping malls serving the local population, business and personal services consumed locally, medical services for local residents, and local construction contracts.

In essence, the distinction between base and non-base industries lies in their role in either attracting external income or supporting local economic activity, respectively, providing a comprehensive framework for understanding the economic dynamics of the region.

Base industries and non-base industries can be easily confused, as seen in some county economies with sizable retail trade sectors. Despite employing a significant percentage of the workforce, these retail sectors paradoxically contribute less to economic impacts because most sales are local, bringing in little new money to the community. The apparent size of the retail trade sector, when considering employment and earnings, might suggest a substantial contribution to the economy. However, when viewed from an economic base perspective – which identifies the true economic drivers – the retail trade sector appears much smaller. The majority of employment and earnings in this sector are, in reality, attributed to other local "export" industries that generate revenue from outside the community. From this perspective, only the retail trade activities catering to visitors from outside the area are considered economic base activities and employment.

Economic base analysis plays a crucial role in identifying a region's vital export industries, while non-base industries are essential for retaining money within the region and driving local economic activity. Interestingly, non-base industries can function similarly to export industries in stimulating the local economy. For instance, if an Idaho resident opts for surgery at a local hospital instead of traveling to Salt Lake City, Utah, this represents a substitution of local services for an imported one, resulting in increased demand for local business services. Retaining income within the community enhances the multiplier effects of export industries, and the overall impact of import substitution can be likened to a boost in demand for export industries. Our economic models are built on economic base theory, where, for instance, museum visitors from outside Bonneville

County are considered as part of the economic base, along with local residents who would have spent outside the county if the museum did not exist.

Defining and Explaining Economic Impacts

Economic impacts measure the magnitude or importance of the expenditures of basic (export) industries. Our economic model estimates multipliers for each industrial and service sector. Suppose you have a (hypothetical) multiplier of 1.45. Every dollar of direct expenditure creates \$1.45 dollars of total new spending in the community economy. Impacts are apportioned into two levels. The first level is the direct impact of the museum on Bonneville County; jobs, payroll, and earnings, value-added, and sales that are directly created by the museum as an export business. The second is comprised of two parts: the impacts on other regional businesses that provide goods or services to the museum (the indirect impacts) and the effect of employee and related consumer spending on the economy (the induced impacts). The indirect and induced impacts are the so called “ripple” or multiplier effects of the museum in the Bonneville County economy. The multiplier or ripple effects are driven by the exports of an economy. Exports, the new money coming into an economy, set off a web of transactions as each business seeks to fulfill the demands of their customers. The museum’s impact upon the economy is thus comprised of the magnitude of the multiplier(s) and the magnitude of the exports. The sum of the direct, indirect, and induced effects measures the total impact of an industry on an economy.

Multipliers

The IMPLAN modeling framework is robust and capable of modeling changes in the expenditures affecting any specific industry or any multiple industries at the same

time. The IMPLAN model created an effective average output (sales) multiplier for each expenditure pattern under analysis.

Study Approach

This study created a Bonneville County economic model to estimate the economic contributions of MOI and related tourism and visitor spending. The total economic contributions are derived from two sources: The first source consists of basic museum expenditures, their impact on the community and the impact of their loss if the museum didn't exist in the community. The second source of contribution comes from MOI visitor spending on food, drink, lodging, retail, and spending on services in the community associated expenditures caused by their visit to the museum.

Data and Assumptions

There were approximately 98,304 museum visitors in 2023. It is estimated that approximately 50% are basic (i.e., nonresident visitors) or about 49,152 of these visitors constitute new spending and new money in the community. A spending template (model) was created from data provided in the previous 2009 museum study and with input from the MOI staff. It is assumed that the nonresident visitors (i.e., 50% of the total visitors) purchased an average of one meal at \$30 each, totaling \$1,474,560. It was also assumed that about 25% of the nonresident visitors stayed an average of one night in a local motel (or equivalent lodging) at \$100 per night, totaling \$2,457,600. Approximately 25% of the nonresident visitors were assumed to have spent \$40 each on other recreational and service-related spending, totaling \$983,040. Travel (mostly fuel expenditures) averaged \$50 for 25% of the nonresident visitors, totaling \$1,228,800. The grand total of visitor spending was \$6,144,000 ([Figure 2](#)).

Total museum revenues in 2023 was \$2.114 million, and approximately 50% of the expenditures tied to those revenues were considered basic and counted in the economic contributions, roughly \$1,056,816.

Results

Summary Results

The reported economic impacts include the direct impacts of the museum operations and visitor spending, as well as the backward linkages of that spending as it circulates throughout the economy, i.e., the multiplier effects. It also includes the impacts of consumer spending relating to this economic activity. The following economic model outputs were reported:

- Direct (actual) annual employment (not including the multiplier effects)
- Sales transactions (i.e., output)– reflects the total transactions from all sources in dollars by direct, indirect, and induced economic activity (i.e., including the multiplier effects).
- Gross Regional Product¹ – the overall net contribution to the economy (a subset of sales transactions) from the final goods and services in a specific region Gross regional product includes employee compensation, proprietor income, other property income, and indirect taxes.
- Total Compensations (payroll) – (a subset of gross regional product) includes wage, salary, proprietor income payments, and fringe benefits (i.e., supplements) to workers (including the multiplier effects).

¹ Gross regional product (GRP) is the local or multi-county version of gross state product (GSP) or gross domestic product (GDP) at the U.S. level of geography.

- Total Employment – represents the total employment resulting from economic activity (including the multiplier effects).
- Local and State Taxes – includes local property taxes, sales taxes and excise taxes, and all other state taxes (including the multiplier effects).

Economic Contributions of the Museum of Idaho

Total Contributions

The total sales (output) contributions derived from MOI is \$9.80 million. Gross regional product is \$5.26 million, wage and salary earning contributions (including supplements) are \$3.05 million. A total of 107 jobs are created by the museum. Taxes (state sales, income, and property taxes) are \$816,659. Sales (output) is a gross measure of contributions. Gross regional product (GRP) is a net measure of contributions and a subset of sales. Total earnings (payroll and benefits) are a subset of gross regional product ([Figure 3](#)). Total Tax Contributions: the museum's operations and visitor spending created \$137,488 in property annual tax revenues, and \$679,171 in state sales, excise tax contributions, and income taxes, totaling \$816,659.

Contributions by Direct, Indirect, and Induced Factors

MOI contributions are reported by their constituent parts: The direct, indirect, and induced factors ([Figure 4](#)). The direct contributions are the actual expenditures, jobs, and payroll of MOI, and direct visitor community spending. The indirect contributions are the business-to-business transactions resulting from direct expenditure. The museum, for example, purchases goods and services from other businesses in the economy. They, in turn, purchase goods and services from yet other businesses. The induced contributions are the consumer-to-

business transactions. The museum employees purchase goods and services in the economy, creating consumer ripple effects as these transactions circulate throughout the economy.

The combined direct, indirect, and induced contributions constitute the multiplier effects. The average overall multipliers are reported in [Figure 4](#) in the bottom row for jobs, labor income (i.e., payroll and benefits), gross regional product (GRP), and output (sales). For example, the jobs multiplier is 1.24. For every museum-related job, a total of 1.24 jobs are created in the community or an additional 0.24 job for each direct museum job.

Economic Versus Political Boundaries

In terms of political boundaries, Idaho is a single state. In terms of economic boundaries, Idaho has three distinct economies. The U.S. Bureau of Economic Analysis divides the state of Idaho into: first, The Boise economy, which includes eastern Oregon, southwest Idaho, and central Idaho; Second, The Spokane economy, comprised of eastern Washington, northern Idaho, the southwestern region of Canada, and part of western Montana; and Third, The Salt Lake City economy, which includes most of Utah, a portion of northwestern Nevada, and southeast Idaho. Political boundaries rarely coincide with the integrated economic regions focused on these market centers. MOI is in the eastern Idaho and Salt Lake City economic region ([Figure 9](#)).

Idaho trade patterns run mostly east-west while the political boundaries run north-south. Bonneville County, the City of Idaho Falls, and the regional economies are closely tied to the Southeast Idaho economy with links to the city of Pocatello, its surrounding area, and the Salt Lake City corridor.

Idaho: A Contrast of Urban Versus Rural

Idaho is a state with two economies: one urban and one rural. The rural economy is based on agriculture and other natural resource industries, while the urban economy is based on tourism, trade, and rapidly growing high-technology and service companies. These two separate economies reflect Idaho's past, present, and future. The two economies complement each other and compete for resources. The economic region of Bonneville County is situated in the southeast corridor of the state, reflecting the transition to the new economy of the future.

The population and economic growth of the urban portions of the state have been rapid and robust (particularly those regions with tourism, high-technology industries, and related services), while the growth of the rural regions and natural resource-based economies have been modest or negative. The most impoverished regions of the state tend to be the most rural.

Idaho's economic performance over the last decade has made it one of the fastest-growing states in the nation and this trend will likely continue into the next decade. Between 2010 and 2020, Idaho's population increased by 271,525. During these ten years, Idaho was the 2nd fastest growing state in the U.S., reaching 1,839,106 people and supporting a population growth rate of 17.3%. Only Utah had a faster population growth rate of 18.4%.

Idaho was 2nd place in 2021-2022 in population growth (1.8%) behind only Florida (1.9%). From 2020 to 2021, Idaho was first in the nation (2.9%). Idaho's population has been fast-growing since 1990, ranking in the top five fastest-growing states annually, interrupted only occasionally by recessions (U.S. Census).

Overview Regional Economy

Bonneville County's regional economy runs north-south from the epicenter at Idaho Falls to the City of Pocatello (Bannock County), and to the broader Salt Lake City region. Bonneville County's population was 114,488 in 2017 and increased to 129,496 in 2022, growing by 15,008 people (13.1%). Bonneville County's population is predicted by Lightcast to grow by 21,414 over the next 5 years.

Figure 5 presents the employment by industry and jobs as a percentage of total employment. Bonneville County's overall employment grew 37%: from 48,392 jobs to 66,436 jobs, an 18,043-job increase. The average salary and benefits are \$55,779.

The region's largest employers include Idaho National Laboratory (Most of the facilities are situated in Butte County, but most of the workers live in Bonneville County), Bonneville School District, Melaleuca, Eastern Idaho Regional Medical Center and Idaho Falls School District ([Figure 6](#)).

Bonneville County's largest industries, measured by direct employment (at the 2-digit North American Industrial Classification System - NAICAS Code), are health care at 12,551 jobs, retail trade with 8,945 jobs, accommodation and food service at 6,451 jobs, and construction at 5,012 ([Figure 7](#)).

Commuting Patterns

The Bonneville County economy is the central place to the broader regional economy. That is, most of the regional jobs are situated inside of the county. According to the U.S. Census, in 2021 70.2% of all Bonneville County, Idaho workers were employed in Bonneville County, ID (United States Census Bureau, n.d.) with over 2,000 residents employed in Madison

County, ID ([Figure 8](#)). In comparison, only 58.7% of total Bonneville Jobs are held by local residents, the remaining 41.3% of the jobs within the county are held by in-commuters from the surrounding counties.

Other Economic and Regional Metrics (Lightcast)

Measuring educational attainment, 21.5% of Bonneville County, ID residents possess a bachelor's degree (0.6% above the national average), and 10.8% hold an associate degree (2.0% above the national average). The median household income in Bonneville is \$74,154 (U.S. Department of Labor, n.d.).

Conclusion

In conclusion, this study sheds light on the Museum of Idaho's economic impact on Bonneville County. As the Museum of Idaho has grown from its humble beginnings as the Bonneville County Historical Society to the Museum it is today, its contribution to the world around has continued to grow. Using economic base theory and the IMPLAN model, this research indicates tangible contributions, such as \$9.80 million in sales output, a gross regional product of \$5.26 million, and the creation of 107 jobs. These numbers reflect the sustained growth of MOI, especially when compared to the \$6.02 million in sales output and \$3.02 million in gross regional product of 2022. Beyond the numbers, the Museum's role in cultural enrichment and community vitality is apparent, steering Bonneville County towards economic growth and well-being.

Appendix

Figures

Figure 1: Economic Contributions of the Museum of Idaho (Including the Multiplier Effects)

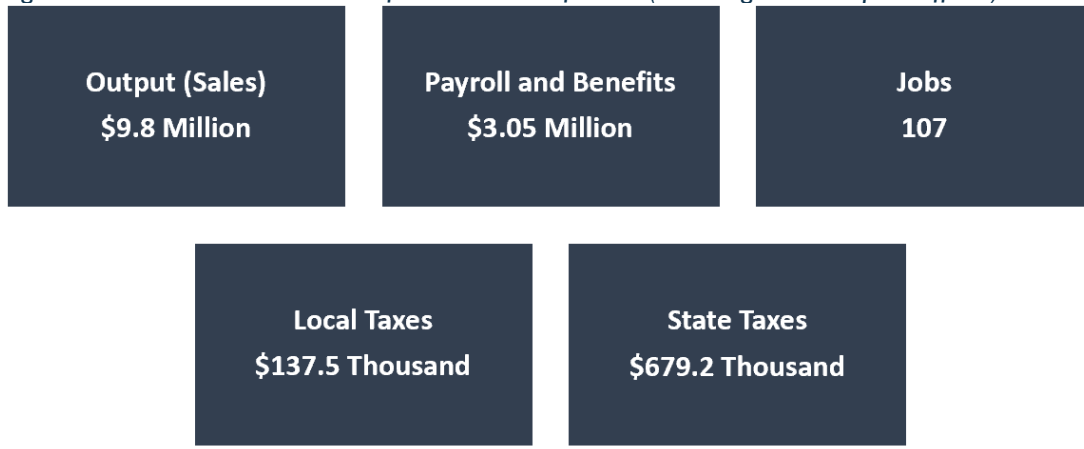


Figure 2: Spending Expenditures for Nonresident Visitors of the Museum of Idaho

Food	49,152	\$ 30	\$ 1,474,560
Hotel	24,576	\$100	\$ 2,457,600
Travel	24,576	\$ 50	\$ 1,228,800
Other	24,576	\$ 40	\$ 983,040
Total			\$ 6,144,000

Source: IMPLAN

Figure 3: The Total Economic Impacts of the Museum of Idaho (Including the Multiplier Effects)

Operations	\$1,886,609	\$ 832,215	\$ 582,349	18
Visitors – Eating and Drinking	\$ 2,272,670	\$1,172,046	\$ 736,481	27
Visitors – Lodging	\$ 3,496,054	\$ 2,030,948	\$ 906,295	28
Visitors – Services and Other Spending	\$1,557,920	\$ 897,665	\$ 617,388	29
Visitors – Travel and Other Shopping	\$ 587,057	\$ 329,995	\$ 207,811	5
Total Visitor Spending	\$ 7,913,701	\$ 4,430,654	\$ 2,467,975	89
Grand Total	\$ 9,800,310	\$ 5,262,869	\$ 3,050,324	107
	Property	Sales/Excise/Income	Total	
Taxes	\$137,488	\$ 679,171	\$ 816,659	

Source: IMPLAN

Figure 4: Contributions of the Museum of Idaho

Direct	86	\$2,112,915	\$3,670,087	\$6,371,226
Indirect	13	\$516,582	\$842,188	\$2,128,147
Induced	7	\$420,828	\$750,594	\$1,300,937
Total	107	\$3,050,324	\$5,262,869	\$9,800,310
Multipliers	1.24	1.44	1.43	1.54

Source: IMPLAN

Figure 5: Employment Profile Bonneville County 2012 to 2022

Agriculture-Forestry	617	791	174	28%	\$57,713
Mining	<10	<10	NA	NA	Insf. Data
Utilities	80	83	2	3%	\$102,046
Construction	2,881	5,012	2,131	74%	\$61,601
Manufacturing	2,678	4,239	1,561	58%	\$69,789
Wholesale Trade	3,533	3,162	(371)	(11%)	\$75,921
Retail Trade	7,049	8,945	1,896	27%	\$42,886
Transportation and Warehousing	1,683	2,236	553	33%	\$60,598
Information	996	608	(388)	(39%)	\$57,590
Finance and Insurance	1,399	2,130	731	52%	\$86,036
Real Estate and Rental and Leasing	692	980	288	42%	\$52,731
Professional, Scientific Services	2,428	3,638	1,210	50%	\$67,408
Management of Companies	100	268	168	168%	\$96,175
Administrative and Waste Management	2,520	3,807	1,287	51%	\$71,193
Educational Services	492	974	483	98%	\$42,795
Health Care and Social Assistance	8,127	12,551	4,423	54%	\$55,984
Arts, Entertainment, and Recreation	581	899	317	55%	\$20,429
Accommodation and Food Services	4,312	6,451	2,139	50%	\$23,424
Other Services	2,046	2,409	363	18%	\$33,412
Government	6,169	7,252	1,082	18%	\$66,365
Total	48,392	66,435	18,043	37%	\$55,779

Source: Lightcast

Figure 6: Region's Largest Employers Ranked by Employment

Bonneville School District	1,000-2,499
Melaleuca	1,000-2,499
Eastern Idaho Regional Medical Center	1,000-2,499
Idaho Falls School District	1,000-2,499
Walmart	1,000-2,499
City of Idaho Falls	500-999
Bonneville County	500-999
Has Industries	250-499
Idaho Falls Community Hospital	250-499
College of Eastern Idaho	250-499

Source: Idaho Department of Labor, 2021

Figure 7: Region's Largest Industries

1	Healthcare	12,551
2	Retail Trade	8,945
3	Accommodations and Services	6,451
4	Construction	5,012
5	Manufacturing	4,239

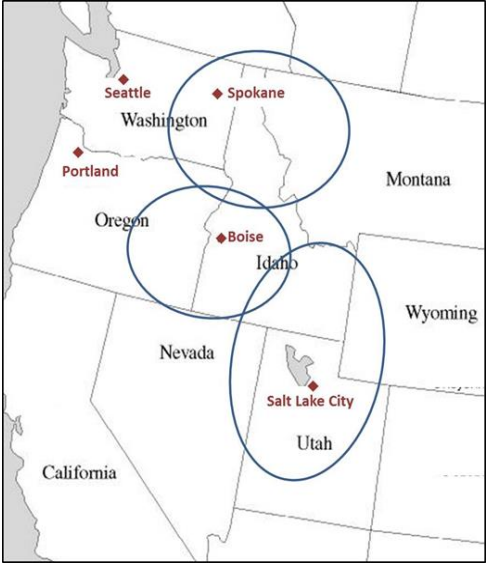
Source: Lightcast

Figure 8: Commuting Patterns

Bonneville County, ID	38,562	70.20%
Madison County, ID	2,171	4.00%
Ada County, ID	2001	3.60%
Jefferson County, ID	1991	3.60%
Bingham County, ID	1986	3.60%
Bannock County, ID	1963	3.60%
Twin Falls County, ID	758	3.60%
Teton County, WY	473	1.40%
King County, WA	356	0.60%
Canyon County, ID	303	0.60%
All Other Locations	4,368	8.00%

Source: (United States Census Bureau, n.d.)

Figure 9: The Economic Regions of Idaho and Bonneville County, Idaho



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ⁱⁱ Lightcast. (Accessed October 2023). Lightcast - A Global Leader in Labor Market Analytics