SECTOR ANALYSIS OF ECONOMIC IMPACTS FROM HERITAGE CENTERS

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The economic impact of six of America's Industrial Heritage Project visitor centers was evaluated within a nine-county region of Pennsylvania. The total sales impact of these expenditures was $29.2 million. Over 60% of the direct sales impact was in the lodging and food service sectors. The labor-intensive character of both sectors created a substantial induced impact within the region. Although both sectors generated considerable employment within the region, their pay scales were below the regional average.

Introduction

The Southwestern Pennsylvania Heritage Preservation Commission contracted with The Pennsylvania State University in 1991 to determine the economic impact of its Heritage visitor centers. Each year, a particular set of centers is evaluated in terms of their regional impact and visitor characteristics. This year-by-year build of information will provide an overview of the entire Heritage system and an ability to project its future economic and marketing features.

The 1992 study included six Heritage centers with an annual visitation of over 330,000 non-resident tourists (Strauss et al. 1993). During their stay this audience spent $15.1 million. In turn, these expenditures generated a direct sales impact of $10.5 million and secondary sales impacts of $18.7 million. On a value added basis, this represented an $18.8 million net gain to the regional economy, with $11.8 million directed to wages and salaries in support of 844 annual jobs.

These results suggested the need to further evaluate the principal sectors receiving these impacts and their commercial linkages with other sectors. This review will also consider the economic prerequisites for growth in Heritage tourism and related policy issues in reaching this potential.

Procedures

In the 1992 study, visitors were surveyed at five Heritage centers during the June to mid-October tourist season. This included the Allegheny Portage Railroad National Historic Site, Horseshoe Curve National Historic Landmark, Johnstown National Flood Memorial, Johnstown Flood Museum and Johnstown Inclined Plane. On-site interviews were conducted to secure the respondent's socio-demographics and related trip information, with mail-back questionnaires used to obtain further details on trip expenditures. Over 2000 interviews were taken at the five visitor centers with 1766 questionnaires returned, representing a response rate of 83%. A sixth center, Altoona Railroaders Museum, was added to the 1992 study on the basis of having been surveyed in an identical fashion during 1991.

Average expenditures per visitor day were identified for the resident and non- resident visitors at the individual centers and for the types of purchases these people made within the nine-county region. Expenditures were also prorated among the different travel destinations identified on the visitor's travel itinerary. Total regional expenditures for non-resident visitors were built on the basis of the annual attendance records from the individual centers.

The financial impact of Heritage-related expenditures was modeled with the Impact Analysis for Planning (IMPLAN) System. The IMPLAN model was originally constructed for the USDA Forest Service to estimate the regional economic impacts of National Forest management plans (Alward et al. 1985). The model is based upon a national technology matrix describing the interrelationships between as many as 528 economic sectors in any particular economy. IMPLAN then uses county specific economic data to produce input-output models on a county-by-county basis, or for any aggregate region within the U.S.

Final demands, or direct sales, were analyzed by IMPLAN in terms of two types of secondary impacts; (1) the indirect impact upon sectors having commercial linkages to the direct and other indirect sectors and (2) the induced impact from the income spent by households employed in the direct and indirect sectors. The combination of direct, indirect, and induced impact was measured in terms of the total sales of goods and services, the value added to the region's economy, and annual employment.

The expanded analysis of impacts in this paper focused on the 1992 Heritage study (Strauss et al. 1993). Included are a review of the key sectors involved in the major types of economic impact and the input-output structure of these sectors. This effort also considers the growth potential of the Heritage system and related policy considerations.

Results

Overview of the 1992 Study

For the six Heritage centers, the direct sales impact was $10.5 million, with 85% placed in two groups of economic sectors; the Service group and the Wholesale and Retail Trade group (Table 1). An additional 12% of the direct impact was distributed among three other groups; Transportation /Communication/Utilities, Government Enterprises, and Manufacturing. Secondary sales of $18.7 million contributed to a total of $29.2 million for 1992 (Table 1). The major groups involved in this secondary process were: Finance/ Insurance/Real Estate with 27% of the secondary sales, Services with 25%, and Wholesale and Retail Trade with 19%.

Impact by Sector

The principal sectors receiving direct impact from Heritage tourism were Hotel and Lodging Places, Eating and Drinking Establishments, and Other Non-profit Organizations (Figure 1). Together, these three sectors captured 77% of the direct impact, with the remaining impact parceled in relatively small shares to over 30 other sectors. The non-profit sector largely represented the combination of public and private Heritage centers.

The relative importance of lodging and food services paralleled the expenditure profile of the non-resident visitor (Strauss et al. 1993). Nearly 60% of their expenditures were for lodging and food services, with 17% directed to travel costs (largely gasoline purchases), 10% to site-related costs, and 13% to other purchases. However, since gasoline was an out-of-region product, only a small proportion of these expenditures was credited as direct sales to the region. As such, the percentages of direct impact for lodging, food services, and site costs were higher than for those of expenditures.

Table 1. Total regional impact of six AIHP visitor centers, 1992.[a]

Economic Group	Direct Sales	Total Sales	Value Added	Employee Income	Employment
Agriculture, Forestry & Fisheries	$41,300	$457,800	$141,800	$50,900	8.01
Mining	$35,100	$78,200	$59,700	$10,400	0.36
Construction	$55,300	$739,300	$415,300	$314,500	15.25
Manufacturing	$325,100	$2,144,900	$725,500	$470,100	22.11
Transportation, Communications and Utilities	$465,400	$2,375,600	$1,327,400	$603,300	28.20
Wholesale and Retail Trade	$3,723,500	$7,266,800	$5,098,200	$3,734,800	374.38
Finance, Insurance & Real Estate	$208,600	$5,240,800	$3,691,800	$595,600	32.89
Services	$5,235,300	$9,914,300	$5,336,900	$4,064,500	298.31
Government Enterprises	$456,700	$990,000	$727,100	$660,000	15.02
Special Industries	$0	$0	$0	$0	0.00
National Park Service			$1,298,650	$1,298,650	50.00
Total	$10,546,300	$29,207,700	$18,849,350	$11,802,750	844.53

a/ Source: Strauss, C. H., B. E. Lord and S. C. Grado. 1993. Economic Impact and User Expenditures from Selected AIHP Visitor Centers, 1992.

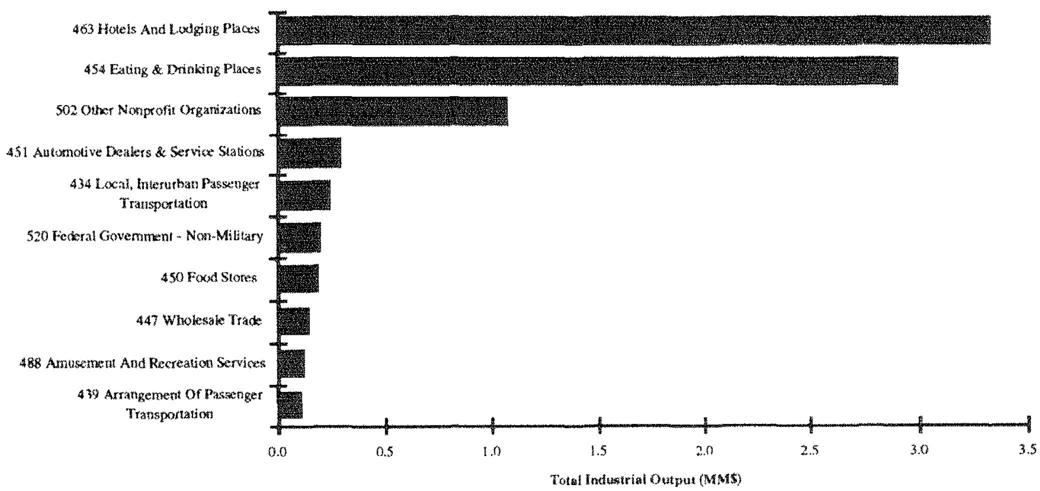

Figure 1. Direct sales impact by sector from AIHP Tourism, 1992.

Secondary impacts were of interest due to their size and distributions between indirect and induced impacts. As previously identified, secondary sales impacts were $18.7 million, with 11% originating from indirect impacts and 89% from induced impacts. Herein, is an important structural characteristic of tourism. Most of the direct impacts were placed in the lodging and food service sectors. Both sectors were labor intensive and had limited secondary ties with other regional sectors. Their labor dependency was also evident in the large induced impact.

In contrast to the direct impacts, indirect impacts were distributed over a wide variety of sectors. The three lead sectors; Maintenance and Repair Services, Electric Services, and Real Estate only had 25% of the indirect impact (Figure 2). Indirect impacts among the ten lead sectors were still under 50% of the total. For the most part, indirect sectors were also labor intensive and could be characterized as service trades in the business, maintenance, and communication fields.

Induced impacts were also distributed over a wide range of sectors, with the ten lead sectors capturing only 53% of this activity. The distribution of induced impacts followed the personal consumption pattern of the U.S. population (BEA 1992). The top sector was Owner-occupied Dwellings, representing household payments to the equity and maintenance of homes (Figure 3). This sector received nearly 16% of the induced impacts from IMPLAN and it represented 15% of personal expenditures for the U.S. (BEA 1992). Health care received the second largest induced impact. Hospital and doctor/dentist expenditures were 12% of induced impacts from IMPLAN and 10% of personal expenditures for the U.S.

Analysis of Key Sectors

Over 60% of the direct sales impact from non-resident Heritage tourists went to Sector 454, Eating and Drinking Establishments (EDE) and Sector 463, Hotel and Lodging Places (HLP). Within the nine-county region, the total output for Eating and Drinking Establishments was $373 million (Table 2).

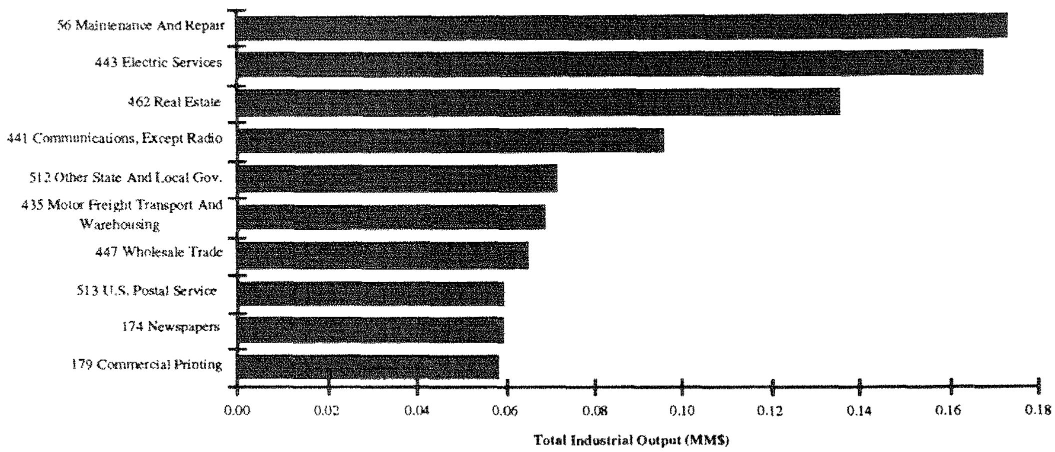

Figure 2. Indirect sales impact by sector from AIHP Tourism, 1992.

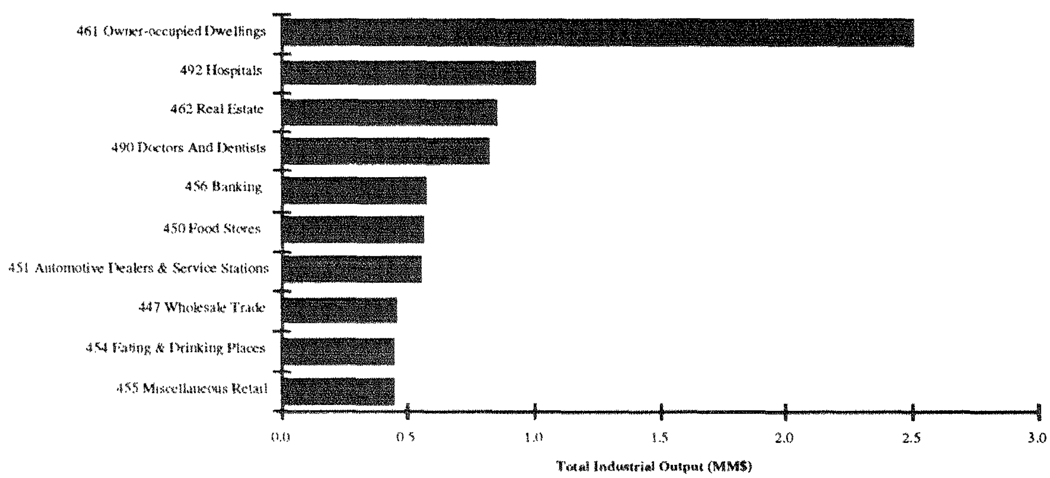

Figure 3. Induced sales impact by sector from AIHP Tourism, 1992.

Table 2. Financial profile of sector 454, eating and drinking establishments, and sector 463, hotel and lodging places.[a,b]

	Sector 454 ($MM)	Sector 463 ($MM)
Inputs to Sector	160.39	38.91
Employee Compensation	196.47	50.52
Indirect Business Tax	34.91	7.41
Proprietary Income	16.87	-2.83
Other Property Income	-35.32	12.79
Total Value Added	212.94	67.90
Total Sector Output	373.33	106.80

a/ Source: 1990 IMPLAN model for a nine-county southwestern Pennsylvania region.
b/ Note: Total sector output equals value added plus inputs to sector. Negative values in Other Property Income and Proprietary Income represented insufficient income to cover property rent and self employed salaries, respectively.

In comparison, the total impact of Heritage tourism on EDE ($3.4 million) was about 1% of this sector's regional output. Employee compensation within this sector was 53% of its total output. In contrast, employee compensation across all sectors in the region averaged 33% of total output. The cost of intermediate inputs to EDE from all other sectors was 43% of EDE's total output.

The twenty lead input sectors to EDE provided 67% of EDE's intermediate input costs (Table 3). About 70% of this input was food products, with the remaining 30% coming from business and utility services. However, only 30% of all input was purchased within the region.

Table 3. Twenty lead input sectors to Sector 454, Eating and Drinking Establishments.[a]

Sector	Gross Input ($MM)	Regional Input ($MM)
Vegetables	5.33	3.01
Meat Packing Plants	6.34	2.24
Sausages and Other Prepared Meats	6.71	.96
Poultry Processing	6.58	.00
Creamery Butter	3.57	.72
Cheese Products	7.15	1.35
Ice Cream	2.98	1.72
Pickles/Sauces	3.56	.01
Frozen Specialties	9.97	3.79
Malt Beverages	5.40	2.00
Soft Drinks	2.84	1.05
Seafood	11.02	.00
Food Prep, N.E.C.	3.80	.16
Electric Service	5.71	3.42
Wholesale Trade	6.84	3.42
Real Estate	6.99	2.90
Advertising	4.61	3.26
Other Business Services	2.81	.94
Personnel Supply Services	2.99	.49
Mgt/Consult. Services	2.95	.92
Totals	108.15	32.36

a/ Source: 1990 IMPLAN model for a nine-county southwestern Pennsylvania region.

Table 4. Twenty lead sectors providing input to Sector 463, Hotel and Lodging Places.[a]

Sector	Gross Input ($MM)	Regional Input ($MM)
Landscape Services	.72	.39
Maintenance, Other Facilities	2.43	2.35
Petroleum Refining	.58	.02
Misc. Plastic Products	.69	.00
Communications, except radio/TV	3.10	1.55
Electric Services	5.02	3.01
Gas Production and Dist.	.89	.70
Water Supply/Sewerage Systems	1.06	1.06
Credit Agencies	.86	.68
Real Estate	4.15	1.72
Advertising	3.07	2.17
Other Business Services	1.06	.36
Services to Bldg.	.62	.38
Personnel Supply Services	2.03	.37
Legal Services	1.07	.28
Acctg. Services	.62	.34
Mgt. Services	1.32	.41
R&D Services	.83	.59
Other State Enterprises	.79	.56
U.S. Postal Services	.59	.42
Totals	31.50	17.36

a/ Source: 1990 IMPLAN model for a nine-county southwestern Pennsylvania region.

Hotel and Lodging Places had a total output of $107 million in the nine-county region (Table 2). The impact from Heritage tourism ($3.5 million) represented 3% of this sector's total regional output. Employee compensation was 47% of total output, also above the regional average of 33%. Inputs from all other sectors were 36% of HLP's total sales. The twenty lead input sectors to HLP provided 81% of all input (Table 4). Nearly 55% of this input was purchased from regional suppliers. Most of these inputs were business, utility, and communication services.

Summary

The direct sales impact from Heritage tourism was largely channeled into two sectors; Eating and Drinking Establishments and Hotel and Lodging Places. The indirect impact of these sales on other regional sectors was modest. In the case of Eating and Drinking Establishments, about 30% of their input was purchased regionally, and for Hotel and Lodging Places about 50% was from regional suppliers.

Both sectors were labor-intensive, devoting nearly 50% of the their total sales value to employee compensation. In turn these wages and salaries generated a substantial induced impact in other retail and service sectors.

Conclusions

Over the next ten years, the addition of seven new Heritage centers and an increased attendance at all other centers should generate 1.8 million visitor days of use by the year 2003 (Strauss and Lord 1993). Annual regional expenditures from non-resident visitors are estimated at $105 million. Assuming the region maintains the same level of economic self-sufficiency, these expenditures would provide a total impact of $185 million.

This expansion would represent a six fold increase to the impacts found in Table 1. In terms of the two leading sectors, this would increase regional sales to Hotel and Lodging Places by 16% and to Eating and Drinking Establishments by 5% (based upon the 1990 IMPLAN model). In turn, this would generate nearly 1900 new jobs within these two sectors.

Although the lodging and food services sectors have a positive effect upon regional employment, they also represent a lower paying and seasonal source of employment. A comparison of the key employment sectors within IMPLAN, found these sectors below the regional average of $19,991 per job (Table 5).

Table 5. Major Employment Sectors within the AIHP Region.[a]

Sector	Total Output (MM$)	Employee Compensation (MM$)	Employment (# jobs)	Annual Comp/Job ($/jobs)
State/Local Govt.	876.8	876.8	28,291	30,992
Eating/Drinking Est.	373.3	196.5	24,968	7,869
Wholesale Trade	902.2	522.5	19,660	26,577
Hospitals	1,052.3	436.1	17,440	25,006
State/Local Govt.	303.2	303.2	16,335	18,564
Food Stores	343.3	162.6	15,825	10,273
Main./Repair	520.9	250.1	11,774	21,240
Auto Dealers/Service	364.8	184.3	11,472	16,062
Labor/Civic Organ.	113.7	73.8	10,857	6,799
Gen. Merch. Stores	229.9	127.5	10,283	12,403
Motor Freight	610.5	217.7	9,992	21,787
Doctors/Dentists	483.2	273.8	7,872	34,784
Indust/Comm. Const.	513.7	143.2	6,655	21,515
Residential Const.	580.9	92.3	6,421	14,377
Coal Mining	621.3	292.0	6,238	46,813
Engin/Arch.	404.0	199.6	6,124	32,593
Hotel/Lodge Places	106.8	50.5	4,275	11,818
All Regional Sectors	26,793.7	8,753.2	437,857	19,991

a/ Source: 1990 IMPLAN model for a nine-county southwestern Pennsylvania region.

One of the potential challenges to tourism is identifying the general character of its employment market. This includes the types of job opportunities and assignments, educational and training needs, and the communications network between workers and employers. Local government could also assist this process by offering job training programs at high schools and vo-tech centers geared to the tourism industry. A coordinated effort among business and government could upgrade the calibre and stability of employment within these sectors and raise the general welfare and expectations of these people.

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