

Seattle Center Economic Impact Assessment

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February 2006

A Report Prepared for Seattle Center Foundation

Executive Summary

Seattle Center had 4.6 million visitors in the year 2005. These people spent \$396 million in relation to their visits to Seattle Center. Seattle Center is also home to many non-profit and for-profit businesses, who had revenue from their business activity of \$313 million in the year 2005. Over \$135 million of this revenue came from tickets and admissions to events or performances that took place on Seattle Center campus.

The spending of Seattle Center visitors and businesses created \$1.15 billion in business activity, some 15,534 jobs, and \$387 million in labor income in King County in the year 2005. In addition, state and local governments receive \$41.1 million in tax revenues as a result of this business activity at Seattle Center. An estimated 6,489 people are directly employed by businesses at Seattle Center. Most of these are part-time or seasonal / temporary employees, but 32% (1,860) have full-time employment.

Seattle Center is a major tourist attraction, with about 50% of its visitors coming from outside King County. Most of these people make their trips primarily to go to events or activities at Seattle Center. Their spending, plus the income that businesses at Seattle Center receive from sources other than visitors from outside King County, results in economic impacts that would not occur if Seattle Center were not located here or if businesses located there were not in King County. The magnitude of these economic impacts is referred to as “new money” impacts. They yielded \$597 million in business activity, 7,349 jobs, \$193 million in labor income, and \$23 million in tax revenues in the year 2005.

A typical group of visitors to Seattle Center was composed of two or three people. Over 90% of them made their visit to Seattle primarily to visit Seattle Center. They are roughly evenly split between men and women, and encompass all age categories. They are primarily working full-time or are self-employed, but include retired people, those not working, students, and other classes of people. They tend to be middle-income people, with household income between \$60 thousand and \$75 thousand, and come from households with an average of 2.8 persons. Local visitors to Seattle Center typically come to a variety of events at Seattle Center each year, while non-local visitors have a much more targeted visitation pattern. Typical visitors stay either for 2-3 hours, or for 4-8 hours. Most visitors are Caucasian, in line with the racial makeup of western Washington.

Businesses at Seattle Center spend most of their revenues on labor (60%), with 25% of their revenues spent on services, 3% on utilities and telephone, 2% on taxes, and 10% on other goods and services. About 9% of employees were administrative or clerical, 41% were artistic / professional / technical, 13% were in sales occupations, 26% were employed as contract workers, and 11% had other occupational status. Contract workers include actors performing at particular plays at Seattle Center theatres and professional basketball players.

This report is primarily based on two surveys. A survey of 2,837 groups of patrons was conducted in many locations from April 2005 through December 2005. A survey of most businesses at Seattle Center was completed in this same time period.

Table of Contents

Executive Summary	i
Table of Contents	ii
Acknowledgements	ii
I. Introduction	1
II. Seattle Center Visitor Survey	2
Characteristics of Seattle Center Visitors	3
Seattle Center Visitor Activities	10
Visitor Spending	15
III. Seattle Center Business Survey	19
Revenue of Seattle Center Businesses	19
Employment	20
Expenses	23
IV. Economic Impact Analysis	27
Overall Economic Impacts	27
New Money Impacts	32
V. Concluding Comments	34
Appendix I Patron Questionnaire and Sampling Plan	35
Appendix II Seattle Center Business Questionnaire	45
Appendix III I/O Model Technical Appendix	48

Acknowledgements

This study would not have been possible without the help of thousands of patrons visiting Seattle Center. It would also not have been possible without the help of all of the businesses and resident organizations located on Seattle Center campus. While these three groups contributed the data that made this study possible, the real foundation for making sure that this study happened was the staff of Seattle Center Foundation. In this regard, we must thank Orit Sarfaty (Seattle Center Foundation Staff) and David Heurtel (City of Seattle Staff) for their unending efforts to get data that we needed to complete this complex project. We also wish to acknowledge the strong and longstanding support of Tracy Robinson, Executive Director of Seattle Center Foundation, and Virginia Anderson, Director of Seattle Center, for this research project. Linnea Johnson, a Seattle Center Foundation intern during the summer of 2005, provided valuable assistance in the conduct of this study.

I. Introduction

Seattle Center is a complex of facilities located north of downtown Seattle which functions in many ways as Seattle's cultural heart (See Figure 1). It is a legacy of the 1962 World's Fair, redeveloped to provide a multitude of cultural and recreational opportunities for Seattle residents and visitors from around the world. Seattle Center is primarily owned by the City of Seattle, and it serves as the location of over fifty resident organizations engaged in a wide variety of non-profit and for-profit business activities.

This report was funded by Seattle Center Foundation to document the economic impacts of Seattle Center, and to provide additional information related to the use of Seattle Center. It is based upon two surveys. One survey was of visitors to Seattle Center in many of the venues that constitute its campus. Section II reports results of this visitor survey. GMA Research Corporation interviewed 2,837 groups of patrons on the Seattle Center grounds from April 2005 through December 2005. While the visitor survey's primary purpose was to provide data for the economic impact study, other data were gathered that were of relevance to this research project and of interest to staff at Seattle Center. The second survey was of resident organizations or businesses located on the Seattle Center campus. They were asked to provide information on their business activity that could be used with the economic impact estimates. Seattle Center Foundation and Seattle Center staffs were responsible for requesting from most resident organizations at Seattle Center data regarding their business activity at Seattle Center. These data were provided directly by these resident organizations to the consultants. All resident organizations or businesses located at Seattle Center provided us with data that has been used in this study, and their results are presented in Section III.

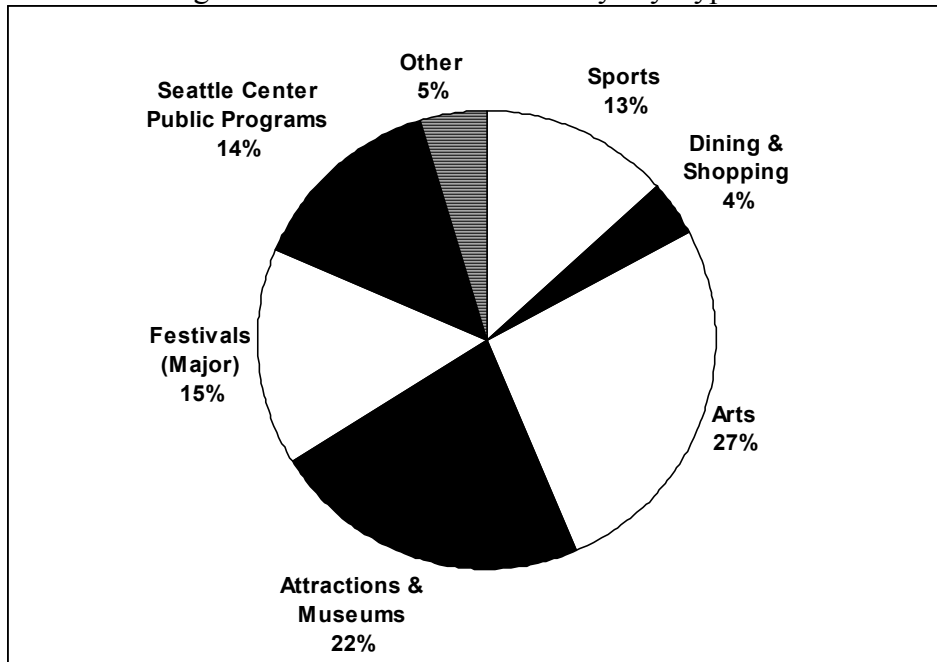
This report is organized as follows. First, we present results from the survey of visitors to Seattle Center. Then, we report results from the survey of businesses located on the Seattle Center campus. The next section of the report presents results of the economic impact analysis. This part of the report is divided into two components. The first section presents aggregate economic impacts, while the second section presents economic impacts associated with "new money"—income that comes from outside the region that would not flow here if the activities at Seattle Center were not present in the local economy. The final section of the report reflects on the results presented here, and includes some suggestions for future research. Appendix I contains a copy of the questionnaire used for the patron sample, and a tabulation of the sources of survey data. Appendix II contains a copy of the questionnaire that was answered by most businesses located at Seattle Center¹. Appendix III provides a technical description of the input—output model used for this study.

¹ The Space Needle provided limited information with regard to this questionnaire.

II. Seattle Center Visitor Survey

The questionnaire included in Appendix I was administered by the intercept method on the grounds of Seattle Center. A sampling plan was developed by GMA Research Corporation that was designed to gather patron surveys from a statistically reliable sample for 26 businesses and interview sites at Seattle Center. The number of interviews conducted at each of these sites is reported in Appendix I. The individual activities located at or taking place at Seattle Center were grouped into the seven categories reported in Figure 1, which shows the percentage of valid surveys done in each type of attraction. A total of 2,837 surveys was completed, of which 2,772 (or 97.7%) were considered to be valid surveys providing useable data. The small percentage of surveys not considered to be valid excluded key information needed to calculate visitor spending, such as the number of persons in the group, their primary trip reason, and spending estimates. Tables below report sample sizes (N), that can be compared against the overall valid sample size (2,772 cases and 9,975 individuals) to obtain some feeling for the level of response to individual questions.

Figure 1. Percentage Share of Valid Visitor Surveys by Type of Attraction



Survey data for sports came from visitors interviewed at Sonics, Storm, and Thunderbirds games. People classified as Dining and Shopping patrons were interviewed at the International Food Court. (Many other patrons were engaged in dining and shopping as a part of their visit to Seattle Center, as will be reported below in the section on visitor activity at Seattle Center.) Arts patrons were interviewed at Key Arena Concerts, Intiman Theatre, Pacific Northwest Ballet, Seattle Opera, Seattle Repertory Theatre, and Seattle Children's Theatre. Attractions and Museum patrons were interviewed at the Children's Museum, Experience Music Project / Science Fiction Hall of Fame, the Fun Forest, Pacific Science Center, Space Needle, and the Monorail.

Patrons interviewed at major festivals included Bumbershoot, the Northwest Folklife Festival, the Bite of Seattle, and the Seattle International Children's Festival. Patrons classified with Seattle Center Public Programs were interviewed at Festal (a series of free cultural festivals held throughout the year) and Winterfest. Visitors classified in the "other" category were interviewed at Seattle Center School, at the Fisher Pavilion, the International Fountain, and at McCaw Hall meetings.

Characteristics of Seattle Center Visitors

This section presents an overview of responses that describe the characteristics of the people interviewed, including the size of the groups visiting Seattle Center, their primary trip purpose, and a set of responses regarding their socioeconomic characteristics. The tables report responses from visitors interviewed at the various categories of activities at Seattle Center as described in Figure 1, and for the entire sample. The statistics reported for the total are not weighted by the relative importance of patron activity in each category of activity, but, rather, represent the composite sample of patrons.

Patrons were asked if the primary reason for their trip was to attend the performance/exhibition/event at which they were interviewed. Table 1 presents results from this question, and it indicates that nearly 80% of trips were made primarily to visit Seattle Center. In cases where people indicated that they had some other primary trip reason, they were asked to indicate what was their primary trip reason. An analysis of the text responses to this question was undertaken to help in adjusting reported spending on travel and hotels for those indicating they had another primary trip reason. More than 70% of these responses identified a primary trip reason that was in fact indicating that their primary trip reason was to visit Seattle Center. For example, a patron interviewed at the Folklife Festival said that their primary trip reason was not to visit Seattle Center, and entered this text: "To go to the Space Needle." A patron interviewed at the Monorail and replying "no," then said: "Visit the Science Museum." Table 2 does not adjust the yes/no responses, but overall this adjustment would raise primary trip reasons from 78% to about 93% of trips. Clearly, sports, arts, and major festival patrons reported that an overwhelming share of their trips were to primarily to go to Seattle Center. In contrast, those interviewed at the International Food Court, at Attractions and Museums, and at Seattle Center Public Programs, were much more likely to indicate that they had another primary trip reason. Over 80% of those indicating "no" to this question interviewed at Attractions and Museums or Seattle Center Public Programs were from outside the local area, and many of these people were on a vacation, going to or coming from a cruise ship trip, were visiting friends and relatives, or were on business. These people made a trip to Seattle Center as a part of their visit to Seattle. In summary, most trips to Seattle Center are made primarily to engage in some set of activities there.

Table 1. Responses to “Was the primary reason for your trip today/tonight to attend this performance/exhibition/event?”

		Dining &	Attractions	Seattle Center				
	<u>Sports</u>	<u>Shopping</u>	<u>Arts</u>	<u>Museums</u>	<u>Major Festivals</u>	<u>Public Programs</u>	<u>Other</u>	<u>Total</u>
Yes	97.3%	32.4%	98.2%	50.5%	93.2%	58.7%	82.0%	77.9%
No	2.7%	67.6%	1.8%	49.5%	6.8%	41.3%	18.0%	22.1%
Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Sample	372	108	731	620	425	378	128	2,762

Table 2 reports the size of the groups interviewed at Seattle Center. It shows the percentage of the groups in each category of visitors by party size. For example, 10.5% of those interviewed at sports events were alone, while 55.6% of the parties had two people in them. Table 1 also indicates the mean (average) size of parties, and the size of the median (group size halfway through the sample). Generally the mean is higher than the median, because of the skewing effect that relatively few large parties in each category have on the calculation of the mean. It is clear from Table 1 that Seattle Center Public Programs, Major Festivals, and Attractions and Museums draw larger groups than is the case for the other categories of activities at Seattle Center. The relatively larger number of one person groups in the “other” category stems from interviews undertaken at the Center School, located on campus, where students reported themselves as individual groups.

Table 2. Number of People in Party

		Dining &	Attractions	Seattle Center				
# People	<u>Sports</u>	<u>Shopping</u>	<u>Arts</u>	<u>Museums</u>	<u>Major Festivals</u>	<u>Public Programs</u>	<u>Other</u>	<u>Total</u>
1	10.5%	9.2%	11.0%	6.9%	17.3%	10.0%	45.5%	12.4%
2	55.6%	25.7%	55.9%	28.7%	30.5%	29.3%	33.6%	40.0%
3	13.2%	23.9%	12.2%	17.4%	16.8%	20.1%	9.7%	15.6%
4 or 5	15.9%	29.4%	15.9%	30.3%	19.1%	24.8%	7.5%	21.0%
6 to 10	4.3%	9.2%	4.2%	14.7%	10.4%	11.3%	3.7%	8.7%
Over 10	0.5%	2.8%	0.8%	1.9%	5.9%	4.5%	0.0%	2.3%
Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Mean	2.74	3.52	3.07	3.97	4.35	4.65	2.00	3.60
Median	2	3	2	3	3	3	2	2
Sample Size	372	109	730	620	423	379	134	2,767

The visitors were asked to identify their gender and age, and to also report the gender and age of up to seven other people in their party. Table 3 presents a summary of

responses to this question. Overall, slightly more females appear to be in visitor groups to Seattle Center than males. There are some differences across the categories in the gender of Seattle Center visitors, with distinctly higher proportions of females interviewed at arts and major festivals than was the case in other visitor categories.

Table 3. Gender of Seattle Center Patrons

		Dining & Shopping Arts		Attractions & Museums	Festivals (major)	Seattle Center Public Programs	Other	Total
Male	51.3%	43.1%	38.8%	44.7%	40.5%	47.3%	47.2%	43.9%
Female	48.7%	56.9%	61.2%	55.3%	59.5%	52.7%	52.8%	56.1%
Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
N	907	371	1,773	2,158	1,303	1,250	267	8,029

Each person responding to the question regarding gender was asked to indicate their age and the age of each of up to seven additional persons in their group. Table 4 presents the results of an analysis of responses to this question. Somewhat fewer of those interviewed revealed their age compared to their gender (N on age = 7709 versus N = 8029 on gender), and both are about 80% of the total number of people included in the valid sample. The data in Table 4 indicate a slightly varying mean age of visitors to Seattle Center across venues in which interviews were conducted, but generally people had a mean age in their thirties (question: it would be interesting to have two means: one taking into account all persons, including children; the other, would be the mean of persons over 18). Arts and sports patrons are somewhat older on average, while those at other venues were typically somewhat younger than the average.

Table 4. Age Distribution of Visitors

		Dining & Shopping Arts		Attractions & Museums	Festivals (major)	Seattle Center Public Programs	Other	Total
Years	Sports	Shopping Arts	Arts	Museums	(major)	Public Programs	Other	Total
Up to 11	7.5%	24.2%	15.5%	22.1%	18.8%	23.6%	2.0%	18.1%
12 to 17	5.9%	11.6%	4.0%	9.7%	9.1%	7.1%	15.7%	7.8%
18 to 24	10.6%	8.2%	5.4%	7.6%	11.0%	4.3%	20.6%	7.9%
25 to 34	18.9%	12.1%	11.9%	13.9%	16.4%	16.4%	33.1%	15.3%
35 to 44	26.3%	16.5%	19.3%	17.9%	19.1%	21.9%	16.1%	19.8%
45 to 54	17.5%	13.9%	19.7%	15.6%	14.2%	13.6%	9.3%	15.9%
55 to 64	10.6%	7.2%	12.8%	8.3%	7.0%	8.3%	3.2%	9.1%
65+	2.8%	6.4%	11.3%	5.0%	4.4%	4.8%	0.0%	6.0%
Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Mean Age	36	30	39	32	31	32	29	34
N	859	389	1,747	2,056	1,230	1,180	248	7,709

People responding to the visitor questionnaire were asked to indicate their highest level of educational attainment. Table 5 presents results from this question. About one-third of the respondents had up to a high school degree, another one quarter had some college, while over 43% indicated that they had a bachelors or post-baccalaureate degree. It is likely that some respondents checking postgraduate degree should have checked four year college / university degree, as the layout of the questionnaire was not as clear as it could have been for this question. The one category with a strikingly different response pattern is “other,” where the some high school category is much higher. This is a by-product of interviews with children at Seattle Center School, who all answered “some high school” on their questionnaires.

Table 5. Educational Attainment of Interviewed Visitors

				Attractions & Museums	Festivals (major)	Seattle Center Public Programs	Other	Total
	<u>Sports</u>	<u>Dining & Shopping</u>	<u>Arts</u>					
Some High School	3.0%	0.9%	1.4%	2.9%	4.1%	1.6%	36.8%	4.1%
High School Graduate	35.4%	30.8%	24.0%	24.8%	28.4%	27.3%	30.8%	27.5%
Some College/ vocational/technical	19.2%	25.2%	33.1%	22.8%	22.6%	28.1%	9.0%	25.2%
Four-year college/ university degree	11.0%	9.3%	7.8%	10.4%	13.3%	9.1%	6.0%	9.8%
Postgraduate Degree	<u>31.3%</u>	<u>33.6%</u>	<u>33.7%</u>	<u>39.1%</u>	<u>31.6%</u>	<u>34.0%</u>	<u>17.3%</u>	<u>33.5%</u>
Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
N	364	107	709	588	412	374	133	2,687

Respondents were asked to identify their occupation, using the categories listed in Table 6. These are not occupation categories typically used that define positions by type of work (such as executive/managerial, professional/technical, sales, clerical, or blue collar), but rather are another grouping deemed appropriate for this study. It is clear that most respondents to this question were either working full-time or were self-employed. However, those interviewed in the “other” group included a number of students at the Center School. Differences in other categories were not striking, except for the relatively high percentages of retired patrons at arts venues (correlated with age), and part-timers at festivals.

Table 6. Occupation of those Interviewed

				Attractions & Museums	Festivals (major)	Seattle Center Public Programs	Other	Total
	<u>Sports</u>	<u>Dining & Shopping</u>	<u>Arts</u>					
Working Full-time	66.4%	50.5%	53.3%	57.4%	46.8%	55.9%	37.1%	54.4%
Homemaker	2.5%	13.1%	5.6%	7.9%	9.3%	5.6%	2.3%	6.4%
Retired	7.9%	13.1%	15.5%	9.1%	9.0%	10.1%	0.8%	10.5%
Working Part-Time	4.6%	4.7%	6.9%	6.0%	11.9%	8.5%	6.8%	7.3%
Military	2.2%	1.9%	0.8%	0.7%	0.2%	1.1%	2.3%	1.0%

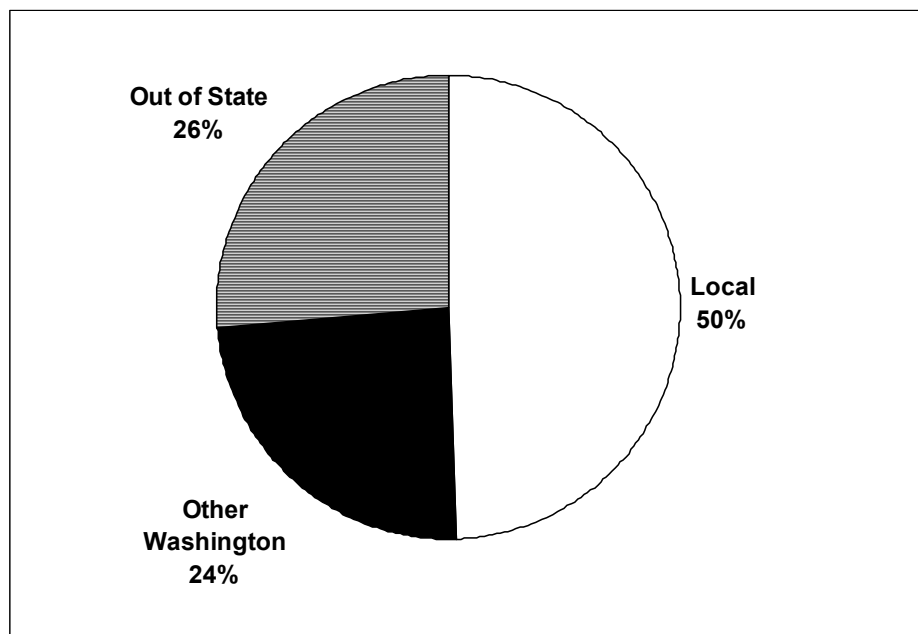
Not Employed	2.5%	0.9%	1.1%	1.8%	5.7%	2.1%	2.3%	2.4%
Self Employed	8.7%	5.6%	10.5%	10.1%	6.9%	9.0%	9.8%	9.2%
Student	3.6%	4.7%	3.2%	2.8%	7.1%	3.2%	33.3%	5.3%
Other	<u>1.6%</u>	<u>5.6%</u>	<u>3.1%</u>	<u>4.3%</u>	<u>3.1%</u>	<u>4.5%</u>	<u>5.3%</u>	<u>3.6%</u>
Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
N	366	107	715	605	421	376	132	2,722

Visitors to Seattle Center come from a wide variety of geographic locations, as reported in Table 7. Local visitors (people living in King County) account for the largest share in sports, arts, major festivals, at Seattle Center Public Programs, and in the “other” visitor category. In contrast, visitors interviewed at attractions and museums or in the International Food Court were more frequently from outside the local area. The total estimated visitation in Table 7 and Figure 2 is based on the estimated number of visitors to categories used to estimate the total number of Seattle Center visitors (See the next section of this report and Appendix I for a discussion of this estimation process). Of the King County visitors, 47% are from Seattle zip codes.

Table 7. Origin of Seattle Center Visitors

	<u>Sports</u>	<u>Dining & Shopping</u>	<u>Arts</u>	<u>Attractions & Museums</u>	<u>Festivals (major)</u>	<u>Seattle Center Public Programs</u>	<u>Other</u>	<u>Total</u>
King County	64.4%	43.7%	58.8%	28.4%	55.0%	57.2%	73.8%	49.5%
Other WA	28.1%	21.4%	28.5%	18.6%	25.6%	22.1%	13.1%	24.2%
Out of State	<u>7.5%</u>	<u>35.0%</u>	<u>12.7%</u>	<u>53.0%</u>	<u>19.4%</u>	<u>20.7%</u>	<u>13.1%</u>	<u>26.3%</u>
Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
N	360	103	702	587	407	367	130	2,656

Figure 2. Origin of Seattle Center Visitors



Patrons were asked to indicate how many people lived in their household, and Table 8 reports results from this question. Households in the sample have a somewhat smaller size than the size of groups interviewed (see data in Table 1), implying that in many instances visitors came with friends or relatives to Seattle Center on their trips. Household sizes are relatively similar across categories of visits, with somewhat larger sizes in the attractions & museums category. Median household sizes are lower for sports and arts patrons than for the other visitor categories, although mean household sizes are well above the medians for each of these groups.

Table 8. Household Size of Visitor Groups

# Persons	Sports	Dining & Shopping	Arts	Attractions & Museums	Festivals (major)	Seattle Center Public Programs	Other	Total
1	14.4%	13.1%	19.7%	8.7%	18.5%	16.0%	12.7%	15.2%
2	42.1%	36.4%	39.9%	30.0%	26.5%	29.6%	36.5%	34.2%
3	17.5%	18.7%	15.5%	21.6%	18.7%	22.1%	21.4%	19.0%
4	17.5%	25.2%	18.1%	23.6%	24.6%	21.8%	22.2%	21.2%
5	6.5%	5.6%	4.6%	11.9%	8.0%	7.2%	4.8%	7.4%
6	0.8%	0.0%	1.3%	3.0%	2.7%	2.2%	0.0%	1.8%
7 to 12	<u>1.1%</u>	<u>0.9%</u>	<u>1.0%</u>	<u>1.3%</u>	<u>1.0%</u>	<u>1.1%</u>	<u>2.4%</u>	<u>1.2%</u>
Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Mean	2.69	2.78	2.57	3.15	2.91	2.88	2.80	2.83
Median	2	3	2	3	3	3	3	3
N	354	107	697	607	411	362	126	2,664

The ethnicity of those interviewed is reported in Table 9. This table indicates that most of those attending all categories of Seattle Center activities are Caucasian. These data are for the person responding to the survey, so their group might have had different ethnic composition. Sports attract a more diverse crowd than the other categories of visitor activities.

Table 9. Ethnicity of Visitor Groups

	Sports	Dining & Shopping	Arts	Attractions & Museums	Festivals (major)	Seattle Center Public Programs	Other	Total
Caucasian	77.1%	88.9%	91.7%	83.5%	80.5%	79.1%	83.5%	83.9%
Asian, Pacific Islander	9.6%	1.9%	3.8%	8.7%	10.9%	13.1%	4.7%	8.0%
Native American	3.1%	1.9%	0.9%	1.5%	2.6%	1.6%	3.9%	1.9%
Hispanic, Latin	3.1%	4.6%	2.2%	5.0%	2.1%	3.7%	4.7%	3.4%
African American	<u>7.1%</u>	<u>2.8%</u>	<u>1.5%</u>	<u>1.3%</u>	<u>3.8%</u>	<u>2.4%</u>	<u>3.1%</u>	<u>2.8%</u>

Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
N	353	108	689	601	421	374	127	2,673

The final question regarding characteristics of Seattle Center visitors was related to their household income. An encouraging 87.5% of the valid sample answered this sensitive question, one that typically gets a smaller response rate than other eco-demographic questions. The results for this question are reported in Table 10. These data record a very similar distribution of income across the venues surveyed, with a slightly higher distribution of income in the arts category. The median household income is in the \$60,000-\$74,999 category. The King County median household income was estimated to be \$59,718 in 2005². However, over 50% of Seattle Center visitors are from outside King County, and it is beyond the resources of this study to analyze the comparative income distribution of the communities from which these visitors have come, and the incomes reported in this study. Overall, it appears as though incomes are predominantly in the “middle income” group for the major categories of visitors to Seattle Center, and it is clear that Seattle Center attracts patrons from a wide range of household income groups.

Table 10. Household Income of Seattle Center Patrons

				Attractions		Seattle Center Public		
	<u>Sports</u>	<u>Dining & Shopping</u>	<u>Arts</u>	<u>& Museums</u>	<u>Festivals (major)</u>	<u>Programs</u>	<u>Other</u>	<u>Total</u>
Under \$20000	5.9%	6.5%	3.7%	6.7%	11.5%	5.1%	8.4%	6.4%
\$20,000-\$39,999	12.5%	15.1%	13.4%	13.7%	18.1%	13.4%	20.0%	14.4%
\$40,000-\$59,999	17.2%	23.7%	14.9%	13.7%	17.9%	20.0%	13.7%	16.4%
\$60,000-\$74,999	15.4%	14.0%	15.3%	16.2%	15.1%	14.9%	18.9%	15.5%
\$75,000-\$99,999	19.9%	14.0%	16.6%	17.5%	13.5%	18.8%	16.8%	17.0%
\$100,000-\$124,999	12.8%	11.8%	17.3%	13.4%	13.0%	11.6%	9.5%	13.8%
\$125,000-\$249,999	12.2%	10.8%	14.1%	13.0%	9.4%	12.2%	6.3%	12.1%
Over \$250,000	<u>4.2%</u>	<u>4.3%</u>	<u>4.7%</u>	<u>5.8%</u>	<u>1.5%</u>	<u>3.9%</u>	<u>6.3%</u>	<u>4.3%</u>
Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
N	337	93	619	554	392	335	95	2,425

Section Summary

All categories of visitors are well represented in the survey of visitors reported in this section. Most came to Seattle Center as the primary reason for their trip. Usually 2 or 3 people made these trips, but there are many individuals making trips and many groups involving more than 3 people. The gender of visitors is roughly evenly split between men and women, with slightly more women at each visitor category except sports. The typical visitor is in their thirties, but all ages are found in Seattle Center visitors. People surveyed were generally well educated, with over 43% having at least a bachelor's degree, and 69% having at least some college. Over 60% of those interviewed

² Source: Washington State Office of Financial Management.
<http://www.ofm.wa.gov/economy/hhinc/medinc.pdf>. Accessed January 25, 2006.

were working full- or part-time, or were self-employed. About 11% were retired, and the balance was either homemaker, was unemployed, or students. Slightly more than half of the visitors to Seattle Center were from outside the local area, divided nearly evenly between people from elsewhere in Washington State, and from out-of-state. Of the visitors from King County, 47% were from Seattle. The household size of the average group of visitors was slightly less than three persons. Most people interviewed were (more or less than general population?) Caucasian (87%), and median household income was between \$60,000 and \$75,000.

Seattle Center Visitor Activities

This section reports results of questions related to activity by visitors at Seattle Center. It reports on their participation in various activities at Seattle Center on the trip at which they were interviewed, as well as over the course of a year.

Seattle Center is a complex of opportunities for visitor enjoyment in a rich variety of settings. When this study was started, it was understood that a critical issue was sorting out the activity at Seattle Center in the many venues in which it is possible to count participation, and to determine a “net” estimate of how many people were actually involved in these activities. Seattle Center and its many resident organizations count ticket holders or estimate attendance, but many of these counts involve visitors who are going to more than one Seattle Center site on a trip, and are, thus, counted multiple times in a gross estimate of Seattle Center activity. Consider a patron from San Francisco that goes to a Sonics game, rides the Monorail there from downtown Seattle, and goes up the Space Needle to see the city view. They would be recorded as 3 visitors, given data collected by each operator of these venues. Seattle Center has developed estimates of attendance in each of these venues (see Appendix I, Table I-1). At the beginning of this study we recognized that we needed a way to determine participation in each type of activity at Seattle Center, and designed a system for respondents to identify what they did on their trip to Seattle Center. Responses to this question were critical to evaluating the overall number of Seattle Center visitors in the study year (2005).

Visitors completing the survey were asked to check the activities that they were participating in on the trip in which they were interviewed. Table 11 reports results of this question.

Table 11 Activities participated in on visits to Seattle Center (columns are the fractions of people interviewed in the indicated venues who said that they engaged in the activities listed in the rows).

	Attractions					Seattle Center		
	Dining &			&	Festivals	Public		
	<u>Sports</u>	<u>Shopping</u>	<u>Arts</u>	<u>Museums</u>	<u>(major)</u>	<u>Programs</u>	<u>Other</u>	<u>Total</u>
Sports	0.995	0.000	0.007	0.005	0.002	0.024	0.000	0.140
Dining & Shopping	0.277	0.679	0.332	0.392	0.262	0.327	0.366	0.342
Arts	0.086	0.083	0.988	0.029	0.163	0.082	0.045	0.320

Attractions & Museums	0.301	1.321	0.201	1.924	0.593	0.728	0.351	0.784
Major Festivals	0.003	0.000	0.005	0.048	0.809	0.008	0.015	0.138
Seattle Center Public Programs	0.024	0.037	0.047	0.032	0.241	0.821	0.164	0.181
Other – Campus	0.108	0.606	0.116	0.394	0.279	0.546	0.851	0.316
Other	<u>0.169</u>	<u>0.587</u>	<u>0.179</u>	<u>0.505</u>	<u>0.329</u>	<u>0.401</u>	<u>0.881</u>	<u>0.354</u>
Total Cites	1.962	3.312	1.875	3.329	2.678	2.937	2.672	2.576
Sample Size	372	109	730	620	423	379	134	2767
# of People	1,021	384	2,240	2,262	1,829	1,761	268	9,975

Each column indicates the proportion of those interviewed in the column category indicating they participated in that activity on their trip. For example, of those interviewed in sports venues, 99.5% indicated that were attending a sports event, 27.7% said they were also dining and/or shopping, 30.1% indicated that they would go to an attraction or a museum, etc. In total, the average sports patrons indicated that they would participate in 1.962 activities in relation to their Seattle Center trip. It is evident in Table 11 that there is considerable variation in the number of activities cited by people interviewed in the various categories of activities at Seattle Center. However, it is also clear in Table 11 that patrons in each category of activity at Seattle Center indicate that they are participating in multiple activities at Seattle Center on the trip at which they were interviewed. These data indicate the popularity of dining and shopping as an activity undertaken on a Seattle Center visit; some of the spending for this activity takes place at Seattle Center venues, and some of it occurs in the larger community.

The data in Table 11 were used with patron statistics gathered by organizations located on Seattle Center, and by Seattle Center itself, to estimate the net number of patrons attending Seattle Center. A discussion of the methodology involved with this estimation procedure is presented in Appendix I. It is estimated that there were 4.65 million visitors to Seattle Center in 2005, engaging in 12.11 million activities, of which 9.06 million are subject to attendance estimates by Seattle Center.

Seattle Center patrons were asked to identify how frequently they came to Seattle Center to attend five categories of activity: ticketed sports events, ticketed cultural/arts performances/exhibits, free cultural/arts/performances/exhibits, festivals, and community gatherings. The frequency of answers to these questions is presented in Tables 12A-12E. Each table shows the percentage down a column of those interviewed at a particular type of activity indicating their frequency of participation in the activity on the title of the table. For example, regarding coming to a ticketed sports event, of those interviewed at a sports venue, 22.8% indicated that they came weekly to a sports event at Seattle Center, 36.0% said they came once or more per month, 28.5% said they came three or four times each year, 5.1% came once a year, 6.5% came less than once per year, 0.5% said that they never came to a Seattle Center sports event, and 0.5% did not respond to this question. With regard to this same question, 0.4% of the people interviewed at arts venues indicated they came to a Seattle Center ticketed sports event weekly, while 24.4% reported that they never came to such an event. There is a clear tendency for some non-response to this set of questions by people interviewed at an activity different than the

focus of the question. However, it is evident that most people interviewed indicated that they had some participation in ticketed sports events, ticketed arts events, free arts events, and festivals on an annual basis. The responses were much lower with regard to coming to community meetings at Seattle Center. Arts patrons made more varied visits to Seattle Center campus venues than sports patrons, while those attending free cultural/arts performances had even more diverse participation in Seattle Center activities.

Table 12A. Ticketed Sports Events (% down column)

	<u>Sports</u>	<u>Dining & Shopping</u>	<u>Arts</u>	<u>Attractions & Museums</u>	<u>Festivals (major)</u>	<u>Seattle Center Public Programs</u>	<u>Other</u>	<u>Total</u>
Weekly	22.8	0.0	0.4	0.3	1.2	0.0	0.7	3.5
Once or More per Month	36.0	2.8	5.1	1.4	3.1	2.9	6.7	7.8
3 or 4 Times per year	28.5	9.2	19.4	10.0	14.8	15.0	14.2	16.6
Once a year	5.1	14.7	13.8	11.9	16.0	17.4	16.4	13.2
Less than Once a year	6.5	22.0	17.6	18.2	17.2	17.7	17.9	16.4
Never	0.5	39.4	24.4	47.9	30.1	29.3	28.4	28.8
No response	<u>0.5</u>	<u>11.9</u>	<u>19.3</u>	<u>10.3</u>	<u>17.6</u>	<u>17.7</u>	<u>15.7</u>	<u>13.8</u>
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

N=2772

Table 12B. Ticketed Cultural Arts/Performance/Exhibit (% down column)

	<u>Sports</u>	<u>Dining & Shopping</u>	<u>Arts</u>	<u>Attractions & Museums</u>	<u>Festivals (major)</u>	<u>Seattle Center Public Programs</u>	<u>Other</u>	<u>Total</u>
Weekly	0.5	0.9	1.2	0.3	0.5	0.3	0.7	0.6
Once or More per Month	4.6	2.8	21.1	2.3	5.9	4.0	11.2	8.8
3 or 4 Times per year	23.1	18.3	38.2	12.7	26.4	26.6	23.1	25.5
Once a year	21.0	17.4	15.3	14.5	25.4	23.2	27.6	19.2
Less than Once a year	15.3	21.1	14.1	23.8	17.2	17.4	15.7	17.7
Never	13.4	29.4	3.3	36.5	11.8	13.7	15.7	16.5
No response	<u>22.0</u>	<u>10.1</u>	<u>6.8</u>	<u>10.0</u>	<u>12.9</u>	<u>14.8</u>	<u>6.0</u>	<u>11.7</u>
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

N=2772

Table 12C. Free Cultural Arts Performance / Exhibits (% down column)

	<u>Sports</u>	<u>Dining & Shopping</u>	<u>Arts</u>	<u>Attractions & Museums</u>	<u>Festivals (major)</u>	<u>Seattle Center Public Programs</u>	<u>Other</u>	<u>Total</u>
Weekly	0.3	0.9	0.5	1.0	1.6	1.6	3.7	1.1
Once or More per Month	5.6	2.8	4.0	3.1	8.7	8.2	10.4	5.6
3 or 4 Times per year	21.2	20.2	25.0	15.0	30.4	26.4	29.1	23.3

Once a year	20.4	16.5	21.8	13.7	21.2	23.5	21.6	19.7
Less than Once a year	14.2	21.1	13.0	21.2	13.9	15.0	12.7	15.7
Never	16.7	26.6	14.4	34.9	9.6	11.6	13.4	18.6
No response	<u>21.5</u>	<u>11.9</u>	<u>21.3</u>	<u>11.3</u>	<u>14.6</u>	<u>13.7</u>	<u>9.0</u>	<u>16.1</u>
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

N=2772

(Free performance people are even more diverse in their activities at the Center)

Table 12D. Festivals(% down column)

				Attractions & Museums	Festivals (major)	Seattle Center Public Programs	Other	Total
	<u>Sports</u>	<u>Dining & Shopping</u>	<u>Arts</u>					
Weekly	0.0	0.0	0.0	0.6	1.6	1.1	2.2	0.6
Once or More per Month	3.2	2.8	2.6	3.1	6.8	5.3	10.4	4.2
3 or 4 Times per year	26.3	11.9	22.3	14.0	35.3	28.0	35.8	24.0
Once a year	29.6	24.8	29.1	18.2	32.2	28.8	23.1	26.7
Less than Once a year	11.0	20.2	15.5	17.7	12.5	16.1	9.0	14.9
Never	12.9	31.2	13.1	37.6	3.8	10.6	11.9	17.5
No response	<u>16.9</u>	<u>9.2</u>	<u>17.4</u>	<u>8.8</u>	<u>7.8</u>	<u>10.3</u>	<u>7.5</u>	<u>12.2</u>
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

N=2772

Table 12E. Community Gatherings(% down column)

				Attractions & Museums	Festivals (major)	Seattle Center Public Programs	Other	Total
	<u>Sports</u>	<u>Dining & Shopping</u>	<u>Arts</u>					
Weekly	0.0	0.0	0.1	0.8	1.2	0.8	4.5	0.7
Once or More per Month	1.9	0.9	1.8	2.1	3.8	1.8	14.2	2.7
3 or 4 Times per year	9.7	6.4	7.4	4.3	12.9	11.9	12.7	8.7
Once a year	14.0	5.5	13.3	9.6	11.3	14.5	13.4	12.1
Less than Once a year	15.9	19.3	17.5	19.0	13.6	15.8	10.4	16.5
Never	30.6	50.5	30.4	49.4	31.1	28.8	30.6	35.4
No response	<u>28.0</u>	<u>17.4</u>	<u>29.5</u>	<u>14.8</u>	<u>26.1</u>	<u>26.4</u>	<u>14.2</u>	<u>23.8</u>
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

N=2772

People were asked how long they expected to stay at Seattle Center on their current visit; results of this question are presented in Table 13. This table indicates that most people expected to be at the Center for either two or three hours, or four to eight hours. People interviewed at major festivals show a tendency towards longer visits.

Table 13. How long people expected to stay on their visit today (% down column)

	<u>Sports</u>	<u>Dining & Shopping</u>	<u>Arts</u>	<u>Attractions & Museums</u>	<u>Festivals (major)</u>	<u>Seattle Center Public Programs</u>	<u>Other</u>	<u>Total</u>
One Hour	0.3	5.5	0.3	5.1	3.3	5.3	0.0	2.7
2-3 Hours	46.5	45.9	47.2	39.9	25.4	50.4	30.6	41.7
4-8 Hours	47.8	39.4	44.7	44.2	48.7	38.0	54.5	45.0
Over 8 Hours	3.8	7.3	5.7	9.2	21.6	5.8	12.7	9.1
No Response	<u>1.6</u>	<u>1.8</u>	<u>2.1</u>	<u>1.6</u>	<u>0.9</u>	<u>0.5</u>	<u>2.2</u>	<u>1.5</u>
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

N=2772

Seattle Center visitors were also asked how many times each year they came to Seattle Center. Table 14 reports responses to this question, which display an enormous range of reported frequencies of visits. Although all of these people were interviewed at Seattle Center venues, some of them indicated making zero visits per annum.

Table 14. Number of times visitors come to Seattle Center per year (% down column)

	<u>Sports</u>	<u>Dining & Shopping</u>	<u>Arts</u>	<u>Attractions & Museums</u>	<u>Festivals (major)</u>	<u>Seattle Center Public Programs</u>	<u>Other</u>	<u>Total</u>
0	0.9	3.8	2.4	12.3	3.4	2.5	1.7	4.5
1	5.2	41.3	11.7	39.2	20.9	19.2	17.4	20.7
2	4.3	10.6	6.9	9.7	10.2	13.2	6.6	8.7
3	7.8	6.7	8.9	8.4	8.1	9.9	5.8	8.4
4	6.4	9.6	9.5	5.1	8.4	12.7	6.6	8.3
5	6.4	2.9	7.4	3.8	8.9	6.5	4.1	6.2
6	4.6	2.9	8.6	4.2	7.3	5.1	0.8	5.8
7 to 10	12.8	10.6	15.5	7.5	14.9	14.1	13.2	12.8
11 to 15	12.2	2.9	16.2	4.8	5.8	9.0	1.7	9.3
16 to 25	16.8	4.8	8.1	2.2	6.5	4.2	2.5	6.8
26 to 50	19.7	0.0	2.9	2.2	3.7	2.5	3.3	5.0
51 to 100	2.0	2.9	0.8	0.5	1.3	0.3	2.5	1.1
101 to 200	0.6	0.0	0.9	0.0	0.0	0.3	31.4	1.9
201 to 365	<u>0.3</u>	<u>1.0</u>	<u>0.5</u>	<u>0.0</u>	<u>0.5</u>	<u>0.6</u>	<u>2.5</u>	<u>0.5</u>
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
N	345	104	666	546	382	355	121	2,519

An analysis of the relatively high percentage indicating zero visits interviewed at Attractions and Museums shows that these were primarily people interviewed at the Monorail, and to a lesser extent at the Pacific Science Center, EMP, and the Space

Needle, who may have considered these locations to not be on Seattle Center's campus. Considering just those who said that they only came once, they were overwhelmingly people from outside the local area (89%). In contrast, of those who came at least 25 times per annum, they were overwhelmingly local (85%). The average number of visits to Seattle Center is about four per annum, but this value is quite variable across the categories of activities included in Table 14. Those interviewed at a sports event indicate an average of 11 to 15 visits, while those interviewed at attractions and museums averaged only one visit per annum. Arts patrons reported an average of six visits per annum, while those interviewed at major festivals and Seattle Center Public Programs average four visits per annum. Clearly, there is a very wide range of use levels of Seattle Center among Seattle Center visitors.

Section Summary

Seattle Center visitors typically engage in more than one activity on their visits to Seattle Center. The average visitor engages in 2.6 types of activity on their Seattle Center visit, typically an admission to an event such as a sports event, arts event, or an attraction or museum. In addition, they frequently engage in dining or shopping, enjoy Seattle Center grounds, and may visit a festival. Seattle Center patrons' frequency of use of Seattle Center varies significantly by their region of origin. Non-local visitors typically come to Seattle Center once a year, while local residents typically visit half a dozen times. Some people come to Seattle Center everyday. Most Seattle Center visitors come to ticketed sports and arts events, as well as free arts events and festivals annually, but their frequency of attendance is highly variable. Most people stay at Seattle Center for between two and eight hours on their typical visit.

Visitor Spending

Seattle Center visitors were asked to record their estimated expenditures related to their trip to Seattle Center. Patrons were asked to report only those expenditures that they would attribute to attending the activity that was their destination on the day of the interview. Patrons whose primary trip reason was not to visit Seattle Center often recorded costs for airplane travel, hotels, and automobile travel that were very high, given what they were doing at Seattle Center. As discussed earlier in this report, many of those who said that their trip was not primarily to visit Seattle Center put down trip reasons that were, in fact, associated with a Seattle Center visit. All of their reported expenditures were included in this analysis. Those visitors who reported that their trip was not primarily to visit Seattle Center, and who included high travel and lodging related costs had these expenditures reduced prior to calculating average expenditure estimates. The author examined each case, and estimated an adjustment factor to leave out of the expenditure estimates spending that was clearly not justified based on Seattle Center trips. These adjustments reduced overall spending by 13%. Table 15 reports the average spending estimates by type of visit. There are large differences in the overall levels of spending, primarily related to the costs of tickets or admissions. The high average expenditure for arts tickets/admissions was fueled by very high reported costs for tickets to several Key Arena concerts. It should be noted that the data reported in Table 16 are

based on interviews with patrons in the categories of Seattle Center activities listed at the top of each column. Let us consider a patron interviewed at the Space Needle. This patron could have reported expenses for admission to the Space Needle, but could have also been on their way to a Key Arena Concert or a Sonics game. Their reported admissions could be for both activities. While there is a statistically significant difference in the distribution of income by visitors by region of origin, it shows highest spending by those coming to Seattle Center locally(King County) or from out of state³

Table 15. Average Expenditures Per Person In Sample

	<u>Sports</u>	<u>Dining & Shopping</u>	<u>Arts</u>	<u>Attractions & Museums</u>	<u>Major Festivals</u>	<u>Seattle Center Public Programs</u>	<u>Other</u>	<u>Total</u>
Tickets/Admissions	45.40	\$15.44	\$70.72	\$11.45	\$8.24	\$5.62	\$15.50	26.07
Souvenirs and gifts	7.80	4.18	7.00	5.85	4.73	2.60	5.85	5.43
Parking fees	3.90	1.82	2.11	1.46	1.29	1.03	2.04	1.77
Bus/ferry/taxi	0.86	0.78	1.14	2.06	1.65	0.46	2.36	1.34
Auto travel	5.34	3.73	3.98	3.01	3.16	2.23	2.55	3.36
Food / beverages before or after event	11.85	7.54	10.57	8.56	4.72	5.26	15.14	8.14
Food / beverages at the event	9.05	1.97	3.64	2.61	5.11	1.97	2.75	3.81
Entertainment	2.31	0.80	1.24	2.22	2.28	0.62	4.12	1.74
Lodging / Accommodations	2.31	8.21	17.24	11.16	5.44	5.23	16.15	9.43
Air travel	3.29	22.26	18.61	26.06	17.64	8.18	27.45	17.30
Child care	0.63	0.14	0.45	0.06	0.12	0.01	0.24	0.21
Other	<u>3.63</u>	<u>0.91</u>	<u>2.01</u>	<u>2.12</u>	<u>0.82</u>	<u>0.76</u>	<u>3.67</u>	1.75
Total	96.37	\$67.79	\$138.71	\$76.64	\$55.19	\$33.98	\$97.83	80.36
N	357	107	709	594	403	357	119	2,646

Spending by visitors is strongly affected by travel distance. Table 16 groups average spending by the region of origin of Seattle Center visitors. Local patron spending is much lower than that of people traveling from other parts of Washington State or from out of state. Non-local spending is greater for food and beverages before or after the event, as more of these visitors eat out instead of eating at home. Non-local visitors also report higher auto travel, souvenir and gift, lodging and accommodation, and air travel costs. Ticket/admission, parking, and food/beverages at the event expenditures are similar for local and non-local visitors.

³ Household incomes are higher on average in King County than elsewhere in Washington State. We have no resources in this study to estimate the average household income of those coming from outside Washington State

Table 16. Spending per capita by Region of Origin

	<u>Local</u>	<u>Other WA</u>	<u>Out of State</u>
Tickets/Admissions	\$22.73	\$30.33	\$26.90
Souvenirs and gifts	3.27	6.21	8.41
Parking fees	1.82	1.85	1.64
Bus/ferry/taxi	0.30	1.53	2.90
Auto travel	1.77	3.59	5.55
Food / beverages before or after event	5.48	9.48	11.20
Food / beverages at the event	3.51	4.22	3.78
Entertainment	0.78	2.16	2.98
Lodging / Accommodations	0.62	7.41	23.91
Air travel	1.51	6.25	53.66
Child care	0.21	0.22	0.24
Other	<u>1.16</u>	<u>2.04</u>	<u>2.55</u>
Total	\$43.15	\$75.28	\$143.70
% of total Visits in Sample	46.3%	27.0%	26.7%
N	1,310	619	612
Mean Group Size	3.2	3.94	3.94

Total spending of Seattle Center visitors was estimated as follows. Following the analysis of patron travel behavior reported in Table 11 and discussed in Appendix I, the total number of individuals estimated to be associated with sports, arts, attractions and museums, major festivals, and Seattle Center Public Programs were multiplied by the expenditure distributions in Table 15. Table 17 reports the results of this multiplication, and it indicates that Seattle Center visitors were estimated to have spent \$395 million on their Seattle Center visits. The largest single expenditure is on tickets and admissions, followed by air travel, food and beverages, and lodging and accommodations. It should be noted that the spending estimates account for spending on activities in addition to the activity in which Seattle Center patron was interviewed. Table 18 reports the percentage of total activity of this type by category.

Table 17. Total Seattle Center Visitor Expenditures (\$ millions)

	<u>Sports</u>	<u>Arts</u>	<u>Attractions & Museums</u>	<u>Major Festivals</u>	<u>Seattle Center Public Programs</u>	<u>Total</u>
Tickets/Admissions	\$31.51	\$76.94	\$16.08	\$8.32	\$2.53	\$135.38
Souvenirs and gifts	5.42	7.61	8.22	4.77	1.17	27.19
Parking fees	2.71	2.30	2.06	1.30	0.46	8.82
Bus/ferry/taxi	0.59	1.24	2.90	1.67	0.21	6.61
Auto travel	3.71	4.33	4.23	3.18	1.00	16.46
Food / beverages before or after event	8.23	11.50	12.04	4.77	2.37	38.90
Food / beverages at the event	6.28	3.96	3.66	5.15	0.89	19.94
Entertainment	1.60	1.35	3.13	2.30	0.28	8.65
Lodging / Accommodations	1.60	18.75	15.69	5.49	2.36	43.88
Air travel	2.29	20.25	36.62	17.79	3.69	80.64
Child care	0.44	0.49	0.09	0.12	0.01	1.14
Other	<u>2.52</u>	<u>2.19</u>	<u>2.98</u>	<u>0.82</u>	<u>0.34</u>	<u>8.86</u>
Total	66.89	\$150.89	\$107.69	\$55.67	\$15.32	\$396.47

Table 18. Percent of Attendance Estimated by Patrons at Activities Outside the Primary Category in Which They were Interviewed

Sports	4%
Arts	22%
Attractions/Museums	33%
Major Festivals	9%
Seattle Center Public Programs	49%

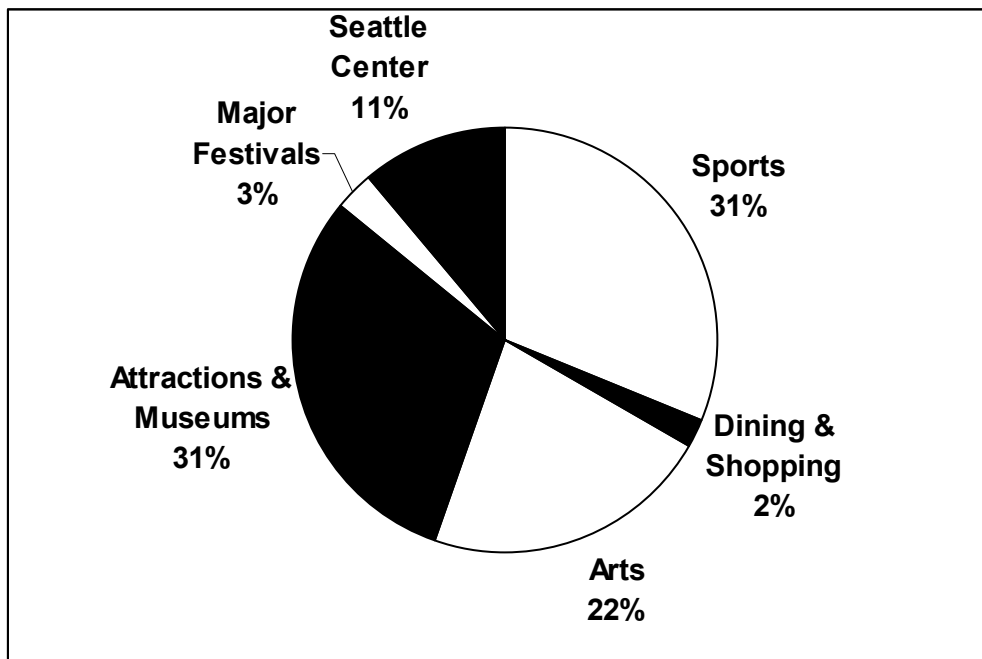
III. Seattle Center Business Survey

A survey was undertaken of businesses located at Seattle Center as a part of this study; a list of these businesses is contained in Appendix I, Table I-1. As reported in section I of this report, businesses in the International Food Court were not surveyed. This survey utilized the questionnaire found in Appendix II. The survey sought information on revenues and expenditures from types of businesses identified in Figure 3, except those in the International Food Court (referred to in Figure 3 as dining and shopping). Secondary data were used to estimate expenditures of businesses in the International Food Court, while their revenues were obtained from data provided by Seattle Center Foundation to the authors. The survey sought information on the geographic locations of revenues and expenditures, so that it would be possible to distinguish between “new money” and gross income sources. Due to confidentiality promises to these businesses, we are not including detailed tables of income and expenditures by category in this section of this report.

Revenue of Seattle Center Businesses

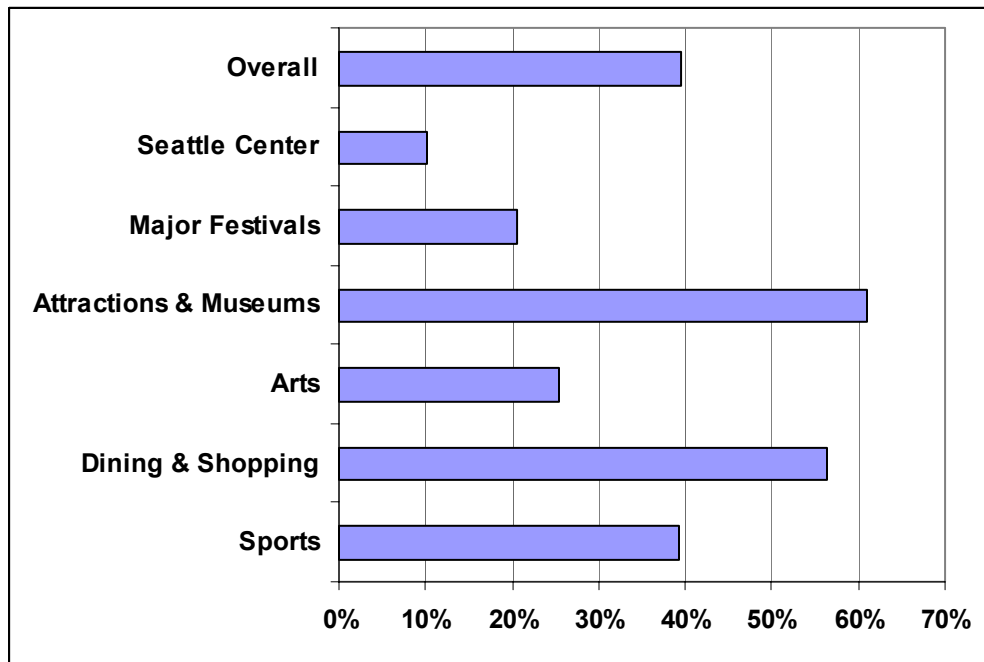
The total revenue of businesses located at Seattle Center in 2005 was estimated to be \$313 million. Figure 3 indicates the composition of these revenues by business category. The definitions of the business categories is as used in section II; except that Seattle Center is defined as the combination of Seattle Center Foundation, operations of Seattle Center itself, and the Center School. The three financial anchors for Seattle Center are sports, attractions and museums, and the arts. Seattle Center provides a support role to these activities, as well as to major festivals and dining and shopping activities.

Figure 3. Revenue Share by Seattle Center business category



As discussed in section II, Seattle Center attracts about half of its patrons from outside the local area. Businesses located at Seattle Center receive revenues from these non-local residents, and they also have other revenue streams that come from outside the local area. These external revenue streams are referred to as “new money,” as they represent funds that would not be coming into the local area if these businesses at Seattle Center were not located in King County. Figure 4 presents estimates of new money as a fraction of total revenues by Seattle Center resident organization categories. In the aggregate, 39% of revenues were estimated to be new money, or over \$123 million. This percentage actually understates the share of new money, as much of the revenue to Seattle Center itself is from resident organizations on Seattle Center campus for services rendered to them. The resident organizations included in Figure 4 have higher proportions of new money than is the case for Seattle Center operations.

Figure 4 New Money Shares



Employment

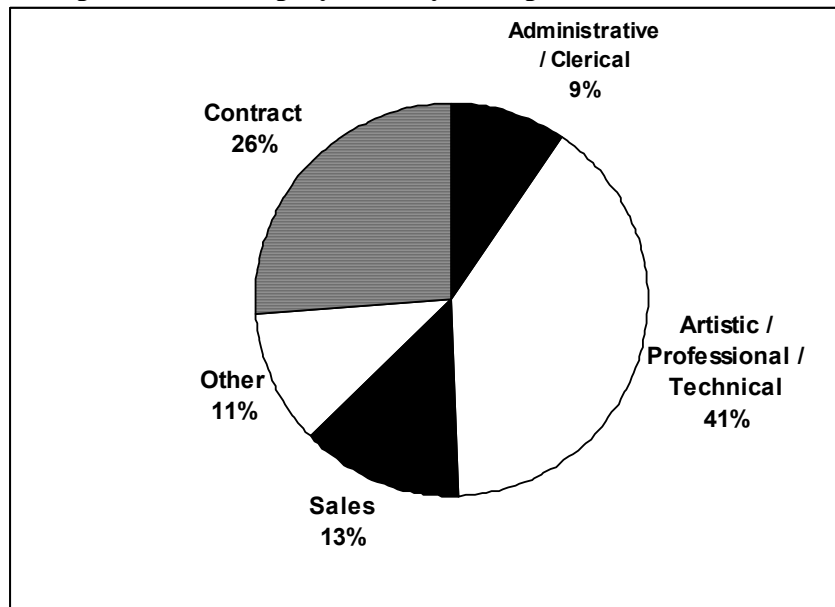
Businesses located at Seattle Center provide substantial employment, as reported in Table 19 and Figure 5. Data for all categories included in this table were derived from the survey of Seattle Center businesses, except for the dining and shopping category, which were estimated from secondary sources. This analysis does not include the 6,000 people reported by one of the festivals as providing in-kind services. Table 19 and Figure 5 indicate that about three-fourths of people working at Seattle Center businesses are paid as employees, while about one quarter are paid on a contract basis. Most of those paid as employees are artistic / professional / technical employees, and the majority of these are employed by arts organizations. It should be noted that these employment estimates

exclude performers and their staff at Key Arena Concerts and other Key Arena events, as there is no tally of how many people are directly employed by these presenting organizations⁴. The employment estimates in Table 19 indicate a differing mix of employment by occupation among the types of activities at Seattle Center. Major festival employment is dominated by contract employees, while attractions & museums and dining & shopping have large shares (or entirely) of sales employees. Administrative employees account for less than 15% of total employment in all of the employment categories in Table 19. This represents about 25% of the total employment related to non-profit arts and cultural organizations located in King County.

Table 19. Employment Composition of Seattle Center Activities

	<u>Sports</u>	<u>Dining & Shopping</u>	<u>Arts</u>	<u>Attractions & Museums</u>	<u>Major Festivals</u>	<u>Seattle Center</u>	<u>Total</u>
Administrative /Clerical	55	0	351	140	14	56	616
Artistic/ Professional/ Technical	27	0	1,464	500	449	150	2,589
Sales	100	179	49	480	51	6	865
Other	271	0	61	187	0	197	716
Contract Employees	<u>55</u>	<u>0</u>	<u>525</u>	<u>104</u>	<u>982</u>	<u>36</u>	<u>1,702</u>
Total	508	179	2,450	1,411	1,496	444	6,489

Figure 5. Composition of Employment by Occupation



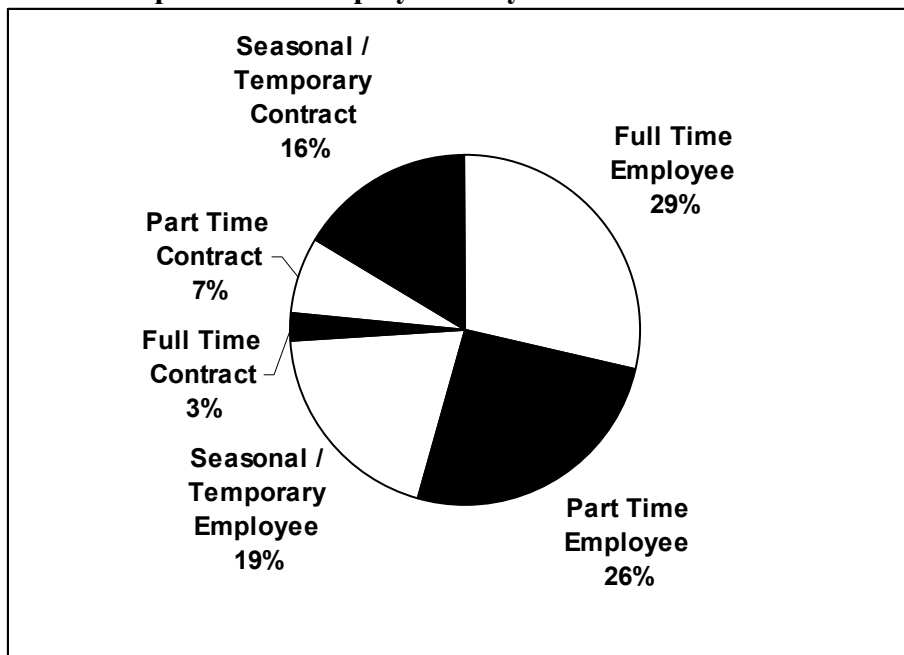
⁴ Estimates of the expenses associated with these activities are included with the expenditures analysis in this study.

The labor force employed in the various activities located at Seattle Center is split into full-time, part-time, and seasonal or temporary workers, as reported in Table 20 and Figure 6. About one-third of Seattle Center workers are full-time, mostly as employees as opposed to contract employees. The largest share of the labor force is seasonal or temporary, accounting for slightly more than one-third of total employment. Part-time employment also accounts for about one-third of the total labor force, with most part time workers being employees rather than contract workers. There are also major differences between the different categories of activity in terms of the tenure of the labor force. Seattle Center and attractions & museums categories report primarily full time employees. In contrast, most of those employed in the arts, by major festivals, and by sports organizations are part-time or seasonal / temporary employees.

Table 20. Full-Time, Part-Time, and Seasonal/Temporary Employment

	<u>Sports</u>	<u>Dining & Shopping</u>	<u>Arts</u>	<u>Attractions & Museums</u>	<u>Major Festivals</u>	<u>Seattle Center</u>	<u>Total</u>
<i>Employees</i>							
Full Time	118	(179)	422	845	24	272	1,860
Part Time	6	0	1378	207	36	35	1,662
Seasonal/Temporary	329	0	125	256	454	101	1,265
<i>Contract Employees</i>							0
Full Time	55	0	105	3	0	0	163
Part Time	0	0	298	91	50	30	469
Seasonal/Temporary	<u>0</u>	<u>0</u>	<u>123</u>	<u>10</u>	<u>932</u>	<u>6</u>	<u>1,071</u>
Total	508	179	2,450	1,411	1,496	444	6,489

Figure 6. Composition of Employment by Work Tenure



Expenses

Businesses at Seattle Center provided detailed information on their expenses, as indicated in the questionnaire in Appendix II. Table 21 summarizes these reported expenses categories, while Figure 7 gives an overview of the composition of these expenses. This table does not include data for the dining and shopping activity category, as data for this activity was derived from secondary sources. Table 21 reports total expenses of \$298 million, and total revenues just slightly above this figure (\$306 million). Wage and salary payments and contract employee payments account for most of the expenditures of Seattle Center businesses, some 60% of total expenses. Services of various kinds account for the bulk of the non-employee related costs of Seattle Center businesses. Table 21 also indicates that most of these expenses were incurred in King County. All wage and salary payments were reported as made locally, while a relatively large proportion of contract employee earnings were estimated to be paid to persons residing outside King County. Non-local contract employee payments are primarily made to sports employees.

Table 21. Major Expense Categories

	<u>Total</u>	<u>King County</u>	<u>% in King County</u>
Wages & Salaries	\$107.67	\$107.67	100.0%
Contract Employees	72.30	20.38	28.2%
Services	73.79	45.54	61.7%
Utilities & Telephone	8.93	6.69	74.9%
Other Goods & Services	29.63	16.14	54.5%
Taxes	<u>6.09</u>	<u>5.47</u>	89.8%
Total Expenses	\$298.42	\$201.90	67.7%
Total Revenues	\$306.10		

Figure 7. Composition of Expenses

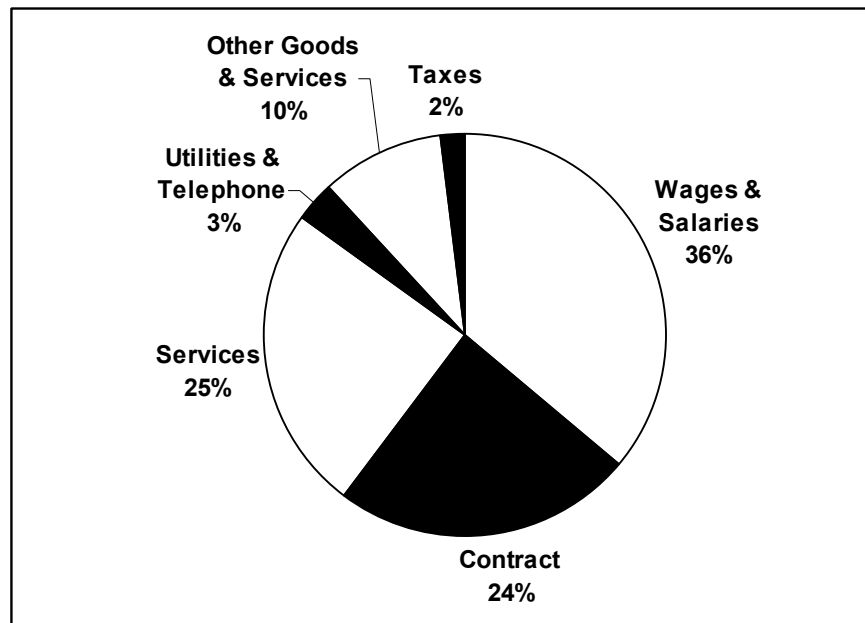


Table 22 provides a detailed portrait of earnings by occupation for Seattle Center businesses. Of the \$180 million in earnings, about 40% is accounted by sports, and about 20% each by arts and attractions & museums. The largest payments within arts and attractions & museums are for artistic / professional / technical employees. Most of the labor earnings payments are made in King County, with relatively high non-local contract employee earnings in the sports category.

Table 22. Earnings by Occupation (\$ Millions)

	<u>Sports</u>	<u>Dining & Shopping</u>	<u>Arts</u>	<u>Attractions & Museums</u>	<u>Major Festivals</u>	<u>Seattle Center</u>	<u>Total</u>
<i>Employees:</i>							
Administrative / Clerical	\$3.40	\$0.00	\$7.97	\$7.77	\$0.40	\$4.36	\$23.89
Artistic / Professional /							
Technical	1.16	0.00	22.98	14.66	1.20	8.56	48.56
Sales	3.68	2.53	1.05	13.74	0.27	0.44	21.71
Other Employees	0.68	0.00	0.31	3.42	0.05	9.05	13.52
<i>Contract Employees:</i>							
Administrative / Clerical	0.00	0.00	0.81	0.04	0.00	0.00	0.85
Artistic / Professional /							
Technical	64.24	0.00	2.76	0.46	1.74	0.78	69.98
Sales	0.00	0.00	0.01	0.00	0.00	0.00	0.01
Other Employees	<u>0.01</u>	<u>0.00</u>	<u>0.36</u>	<u>0.11</u>	<u>0.52</u>	<u>0.45</u>	<u>1.46</u>
Total	\$73.16	\$2.53	\$36.26	\$40.20	\$4.18	\$23.64	\$179.97
Contract Employee							
Earnings Outside King County	\$32.71	\$0.00	\$1.88	\$0.00	\$1.32	\$0.00	\$35.92

The non-employee expenses categories reported in Table 21 and Figure 7 are reported in more detail in Tables 23 through 26. Table 23 presents detailed information on service expenditures. In addition to reporting the dollar amount of spending for these services, this table reports the share of total services outlays by expenditure category, and the share of the spending that accrues to King County businesses. The largest expenditure categories are for marketing, professional services, and for “other” services. The “other services” category includes payments made to promoters and performing groups at the Key Arena; these payments were about \$10 million and predominantly non-local. Most of the service purchases reported in Table 24 were made locally, while several categories associated with travel by Seattle Center businesses had lower local spending (transportation, lodging, purchased food & beverage services).

Table 23. Service Expenditures (\$ Millions)

		% of Total <u>Services</u>	% in King <u>County</u>
Marketing	\$16.40	22.2%	70.8%
Press & public relations	2.27	3.1%	98.0%
Photographic/art services	0.27	0.4%	79.9%
Banking	1.79	2.4%	96.9%
Insurance	2.84	3.9%	84.8%
Professional services	10.51	14.2%	58.2%
Janitorial / protective	0.42	0.6%	95.5%
Transportation	4.66	6.3%	60.4%
Lodging	1.16	1.6%	46.8%
Purchased food/beverage services	3.37	4.6%	51.7%
Set/costume/exhibit rental	0.56	0.8%	87.1%
Equipment rental	1.39	1.9%	83.0%
Hall Rental (Including payments to Seattle Center)	5.31	7.2%	100.0%
Seattle Center Event Services	2.17	2.9%	100.0%
Seattle Center Labor Reimbursement	0.89	1.2%	100.0%
Office and work space rental	5.08	6.9%	63.5%
Royalties	0.85	1.1%	78.8%
Other Services	<u>13.84</u>	<u>18.8%</u>	13.1%
Total	\$73.79	100.0%	61.7%

Table 24 reports spending for telephone and utilities. This table reports that about half of these outlays were for utilities, while the balance was split roughly evenly between postage and telephone & cable services. Most of these outlays were also made in King County.

Table 24. Telephone and Utility Expenditures (\$ Millions)

		% of total	% in King <u>County</u>
Telephone & cable services	\$2.18	24.4%	61.1%
Postage	2.16	24.2%	75.1%
Other Utilities	<u>4.59</u>	<u>51.4%</u>	81.4%
Total	\$8.93	100.0%	74.9%

Seattle Center businesses incurred about 10% of their total costs on other goods and services, whose composition is reported in Table 25. This table indicates a somewhat higher level of purchase outside the local area than for other expenditure categories, largely in relation to mounting productions/exhibitions at Seattle Center. The “other goods and services” category included a wide array of commodities and services. Respondents to the questionnaire were asked to indicate what they were including in this category. In a number of cases, it included merchandise being sold by Seattle Center business, or specialized services associated with a particular resident organization that did not fit the categories included in the questionnaire.

Table 25. Other Goods and Service Expenditures (\$ Millions)

		<u>% of Total</u>	<u>% in King County</u>
Printing	\$2.88	9.7%	73.9%
Exhibit/set materials	2.83	9.5%	24.1%
Production Materials	3.27	11.0%	58.4%
Supplies	4.51	15.2%	53.8%
Maintenance	3.10	10.5%	79.6%
Other goods and services	<u>13.05</u>	<u>44.0%</u>	50.0%
Total	\$29.63	100.0%	54.5%

Seattle Center resident organizations reported payments of about \$7.7 million in taxes, as reported in Table 26. The largest of these reported taxes was the city admissions tax, followed by the business and occupation tax, and then sales taxes.

Table 26 Tax Payments – Seattle Center Resident Organizations (\$ Millions)

		<u>% of Total</u>	<u>% in King County</u>
Sales Tax	\$1.50	19.5%	82.7%
B&O Tax	2.60	33.9%	82.6%
Property Tax	0.29	3.8%	99.6%
City Admissions Tax	3.02	39.4%	100.0%
Other Taxes	<u>0.26</u>	<u>3.5%</u>	58.3%
Total	\$7.67	100.0%	89.8%

IV. Economic Impact Analysis

The results of the surveys of Seattle Center visitors and Seattle Center businesses were brought together to calculate economic impacts through use of an input-output model. The model used in this analysis is described in Appendix III. It is a model of the King County economy, and it is driven by two sets of data. First, the direct values of sales, employment, labor income, and other value added for Seattle Center businesses as described in Section III of this report were entered as final demands. The direct purchases in the regional economy constitute the second set of data entering this model, and these data are included in Table 27.

Two estimates of economic impact are presented in this section of the report. The first is an overall estimate of economic impacts, based on the gross spending of Seattle Center visitors and businesses. The second estimate is referred to as a “new money” estimate, and it is based on the dollars spent by visitors coming from outside King County, and on the revenue generated by Seattle Center businesses from income sources located outside King County. The gross impact estimate documents the current overall economic impact of Seattle Center, but it includes discretionary spending by local residents that could be shifted to other activities. While if such a shift were to occur, it is likely that the economic impacts of a different spending pattern by local residents would be different than current impacts, it is also likely that the total economic impacts would not be markedly different. The second estimate provides an estimate of the contribution of Seattle Center to the economic base of King County. This estimate can be interpreted as the magnitude of the loss to the King County economy if business activity now taking place at Seattle Center were not located here.

Overall Economic Impacts

The data in Table 27 represent conversion of the consumer expenditure categories used in Seattle Center visitor survey into input-output model sectors, with appropriate adjustments for non-King County production being eliminated from these purchase estimates. The data in Table 27 also contain estimates of purchases by input-output sector of Seattle Center businesses, as reported in Tables 21, 23, 24, and 25. The sum of these purchases is less than the sum of purchases reported for Seattle Center businesses and Seattle Center visitors because in many cases purchases were made of goods or services not produced in King County. Thus, Table 27 represents net estimates of direct purchases made in King County, plus purchases of labor that are included elsewhere in the input-output model⁵. It should be noted that these estimates have been made to avoid

⁵ In this analysis, 50% of the sports contract employee earnings reported as paid in King County have been entered in the input-output model, making overall sports contract employee earnings entering the economic impact model to be about 25% of total payments to sports contract employees. Most of the sports contract employees are professional basketball players. Data provided in the survey of Seattle Center businesses indicated that 50% of these salaries are paid in King County. However, it is unlikely that these contract employees spent all of this income in King County in the year 2005. The actual level of their spending in King County is beyond the scope of this study, and would require a separate study interviewing these individuals with regard to the spending of their income. The overall effect of this assumption on this study is not large, altering employment economic impacts by about 1%.

Table 27. King County First-Round Purchases (\$ millions)

<u>I/O Model Sector</u>	
1 Crop production	\$0.001
2 Animal production	0.000
3 Forestry and fishing	0.013
4 Logging	0.000
5 Mining	0.000
6 Electric utilities	2.370
7 Gas utilities	1.007
8 Other utilities	0.441
9 Construction	2.492
10 Food manufacturing	0.469
11 Textiles and apparel	0.001
12 Wood product manufacturing	0.000
13 Paper manufacturing	0.004
14 Printing	2.130
15 Petroleum and products	0.000
16 Chemical manufacturing	0.002
17 Nonmetallic mineral products manufacturing	0.003
18 Primary metals	0.000
19 Fabricated metals	0.002
20 Machinery manufacturing	0.002
21 Computer and electronic product	0.003
22 Electrical equipment	0.001
23 Aircraft and parts	0.000
24 Ship and boat building	0.000
25 Other transportation equipment	0.001
26 Furniture	0.000
27 Other manufacturing	0.015
28 Wholesale trade	0.163
29 Retail trade	21.778
30 Transportation and warehousing	52.586
31 Information	1.373
32 Finance and insurance	4.246
33 Real estate	0.228
34 Professional services and management	24.717
35 Educational services	0.009
36 Health services	0.027
37 Arts, recreation, and accommodation	54.391
38 Food services and drinking places	60.913
39 Other services	12.205
40 Labor Income	3.668
41 State & Local Government	<u>1.685</u>
Total	\$246.948

“double counting” of expenditures. For example, ticket / admissions paid to Seattle Center businesses are excluded from the economic impact estimates, while the expenditures that the organizations included in the study made as a result of visits by Seattle Center patrons are included. Payments to Seattle Center for services rendered by various resident organizations have been excluded as purchases, while the expenditures of Seattle Center in relation to these services are included in this analysis.

The input-output model yields estimates of economic impact by sector, and Tables 28 and 29 present three measures of economic impact. The value of sales resulting from Seattle Center businesses and visitor spending are referred to as output in these tables. The number of jobs and the level of labor income by sector are also reported. It is instructive to recall that direct sales of Seattle Center businesses were \$313 million, direct employment was 6,489 persons, and direct labor income in the region was estimated to be \$128 million. Most Seattle Center direct business activity is included in sector 37, arts, recreation, and accommodation. Impacts in other industries are driven by the structure of the input-output model, which tracks where each industry directly impacted by spending of Seattle Center visitors and businesses creates indirect and induced impacts in the King County economy. The model is built around a system of “multipliers,” which relate total output to direct impacts. Tables 28 and 29 indicate that every industry in the regional economy has some impacts due to Seattle Center visitor and business spending. Some industries have small impacts (such as aerospace where less than 1 job is created), while other sectors have large impacts. Given the pattern of Seattle Center visitor and business spending documented in Table 27, direct impacts are strongest in service industries. Indirect impacts due to linkages that industries have with each other, and induced impacts related to the spending of labor income by people directly and indirectly impacted by Seattle Center visitor and business spending, also favor service industry impacts. Labor income reported in Table 28 is related to payments made to people for child care regionally, not labor income earned in Seattle Center businesses.

Table 28. King County Output, Employment and Labor Income Impacts

I/O Model Sector	Output (\$ millions)	Employment (# of Jobs)	Labor Income (\$ millions)
1 Crop production	\$0.165	3	\$0.048
2 Animal production	0.102	1	0.031
3 Forestry and fishing	0.529	6	0.200
4 Logging	0.117	1	0.027
5 Mining	0.267	2	0.101
6 Electric utilities	15.397	30	2.476
7 Gas utilities	8.114	5	0.475
8 Other utilities	2.729	13	0.900
9 Construction	19.477	196	7.757
10 Food manufacturing	13.387	56	2.003
11 Textiles and apparel	0.651	9	0.224
12 Wood product manufacturing	0.219	1	0.050
13 Paper manufacturing	0.514	2	0.105
14 Printing	5.124	46	1.629
15 Petroleum and products	1.373	0	0.026
16 Chemical manufacturing	0.411	1	0.095
17 Nonmetallic mineral products manufacturing	1.053	7	0.283
18 Primary metals	0.105	0	0.019
19 Fabricated metals	0.763	6	0.231
20 Machinery manufacturing	0.333	2	0.120
21 Computer and electronic product	0.534	4	0.215
22 Electrical equipment	0.077	1	0.024
23 Aircraft and parts	0.092	0	0.020
24 Ship and boat building	0.234	2	0.104
25 Other transportation equipment	0.217	1	0.048
26 Furniture	0.601	6	0.191
27 Other manufacturing	1.293	12	0.420
28 Wholesale trade	13.387	121	5.304
29 Retail trade	70.021	1,097	25.971
30 Transportation and warehousing	71.439	482	20.075
31 Information	20.085	105	10.126
32 Finance and insurance	33.276	250	10.294
33 Real estate	39.866	256	5.757
34 Professional services and management	86.178	1,028	35.561
35 Educational services	4.342	90	1.741
36 Health services	44.784	621	21.938
37 Arts, recreation, and accommodation	369.133	7,500	152.384
38 Food services and drinking places	84.143	2,040	29.759
39 Other services	29.993	554	11.313
40 Labor Income	6.942	0	0.000
41 State & Local Government	<u>202.907</u>	<u>977</u>	<u>38.636</u>
Total	\$1,150.374	15,534	\$386.684

Table 29. Summary Impacts

Output (\$ millions)	
Natural Resources & Utilities	\$27.421
Manufacturing & Construction	46.459
Wholesale and Retail Trade	83.407
Services	993.087
Total	\$1,150.374
Employment	
Natural Resources & Utilities	60
Manufacturing & Construction	352
Wholesale and Retail Trade	1,218
Services	13,904
Total	15,534
Labor Income \$ millions	
Natural Resources & Utilities	\$4.258
Manufacturing & Construction	13.565
Wholesale and Retail Trade	31.275
Services	337.584
Total	\$386.684

There are a number of categories of public sector revenue impacts associated with Seattle Center. Table 30 brings together an estimate of these impacts, but it should be noted that this table understates these impacts because data do not exist to estimate some categories of impact. Sales taxes result from sales made to Seattle Center visitors on a number of categories of visitor expenditures reported in Table 15. However, they also occur indirectly due to labor income earned by people in King County due to Seattle Center activity, and the spending of this labor income on goods and services subject to the sales tax. Business and occupation taxes occur due to direct business activity at Seattle Center, but also due to the indirect business activity across the economy reported in Table 28. Lodging expenditures by Seattle Center visitors yield income for the City Lodging Tax. Visits to Seattle Center produce City Admissions Tax revenues. This analysis estimates that roughly 62% of these payments accrue to the State of Washington, while the balance accrues locally. Most of the local receipts probably come to the City of Seattle. Property tax and auto rental impacts are excluded from this analysis due to a lack of data.

Table 30. Tax Impacts (\$ millions)

	<u>State</u>	<u>Local</u>	<u>Total</u>
Sales -- Indirect	\$13.394	\$4.945	\$18.340
B&O	6.201	1.976	8.177
Sales - Direct	5.781	2.135	7.916
City Admissions Tax		3.019	3.019
City Lodging Tax		<u>3.620</u>	<u>3.620</u>
Total	\$25.377	\$15.695	\$41.072

New Money Impacts

The calculation of new money impacts was based on several key questions asked in both the visitor and business surveys. Visitors were asked where they came from, and those who said that they came from outside King County were regarded as patrons spending “new money.” This may be a “tight” definition of local patrons, as it is recognized that many Seattle Center visitors come from Pierce, Kitsap and Snohomish counties. The definition is consistent with other research undertaken by the authors. As Table 7 indicates, about half of Seattle Center visitors come from outside King County. Figure 4 reports that almost 40% of the revenue of Seattle Center businesses came from non-local sources. About one-third of the jobs in a regional economy of the size of King County are supported by new money.

Table 31 reports estimated new money economic impacts, in summary form like Table 30 for overall economic impacts. Almost \$600 million in economic activity, some 7,349 jobs, and nearly \$200 million in labor income are earned in King County each year due to new money related to Seattle Center visits and business activity. New money supports directly 2,135 jobs at Seattle Center, \$123.5 million in business activity at Seattle Center, and \$45.9 million in labor income at Seattle Center (paid to King County residents). The relatively large increase in indirect and induced new money economic impacts is due to the strong impacts of spending of non-local visitors to Seattle Center. New money economic impacts are approximately half of total economic impacts.

Table 31. New Money Economic Impacts

Output (\$ millions)	
Natural Resources & Utilities	\$13.442
Manufacturing & Construction	24.333
Wholesale and Retail Trade	44.615
Services	515.440
Total	\$597.830
Employment	
Natural Resources & Utilities	30
Manufacturing & Construction	183
Wholesale and Retail Trade	652
Services	<u>6,485</u>
Total	7,349
Labor Income \$ millions	
Natural Resources & Utilities	\$2.089
Manufacturing & Construction	7.053
Wholesale and Retail Trade	16.698
Services	<u>167.444</u>
Total	\$193.284

New money tax impacts are reported in Table 32. These impacts are proportionately larger than output, employment, and labor income impacts, because most of the lodging tax payments are a result of non-local resident spending. New money brings \$13.4 million annually to the State of Washington, and \$9.4 million to local governments in King County.

Table 32. New Money Tax Impacts (\$ millions)

	<u>State</u>	<u>Local</u>	<u>Total</u>
Sales -- Indirect	\$6.695	\$2.472	\$9.167
B&O	3.164	1.064	4.228
Sales - Direct	3.503	1.294	4.797
City Admissions Tax		1.512	1.512
City Lodging Tax		<u>3.101</u>	<u>3.101</u>
Total	\$13.362	\$9.443	\$22.805

V. Concluding Comments

This study provides a comprehensive estimate of the economic impacts of Seattle Center on the King County economy. It was based on a large-scale survey of Seattle Center visitors, and an extensive survey of Seattle Center businesses. Like any research project of this kind, there are likely sources of error, such as sampling error or mistakes in the classification of response by survey respondents. However, the results of the study appear reasonable to the authors, based on their experience in the conduct of similar studies in other contexts.

The questionnaires developed for surveying Seattle Center visitors and Seattle Center businesses generally produced responses that were of high quality. A small fraction of the visitor questionnaires had responses that were not of good quality, and all of the business questionnaires provided good quality data. If this study were to be repeated, it would be useful to have somewhat better layout for two questions included in the study. These questions were regarding activities that visitors were engaged in on their current trip, and with regard to their educational attainment. As discussed earlier in this report, there were some tendencies for people to report more activities than possible on their current trip, and adjustments were made to reduce the likelihood of miscounts of visitor numbers. However, the results obtained for these two questions appear to be very reasonable.

It is very clear from the data presented in this report that Seattle Center is not only a vibrant location for cultural activities in the City of Seattle, but it is also an important contributor to the economic base of the regional economy. It generates jobs and income for thousands of people locally, and is a major tourist destination in its own right. This legacy of the 1962 Worlds Fair is a treasure that continues to provide many kinds of benefits for citizens of the City of Seattle.

Appendix I Patron Questionnaire and Sampling Plan



Dear Seattle Center Visitor:

We are conducting a survey to learn more about Seattle Center Patrons. Please take a few minutes to help us with this very brief survey. *The information you provide will be used for research purposes only and will be kept strictly confidential.*

One person should answer for their entire group.

1. Including yourself, how many people are in your party? _____

2. Was the primary reason for your trip today/tonight to attend this performance/exhibition/event?

☐ Yes ☐ No

If no, what was the primary reason for your trip?

3. Please check ALL activities you have or will participate in today/tonight in your visit to Seattle Center.

- ☐ Arts Event or Key Arena Performance(Not EMP) ☐ Museum or EMP
☐ Pacific Science Center ☐ Fun Forest ☐ Space Needle
☐ Sports Event ☐ Bite of Seattle, Bumbershoot or Northwest Folklife Festival
☐ Other Festivals or Festal ☐ Rode Monorail ☐ Shopping
☐ Meeting at Key Arena, McCall Hall, or Northwest Rooms
☐ Dining (Including Space Needle) ☐ Just visiting Seattle Center grounds
☐ Other (Please describe)_____

4. Please estimate the total expenditures made by your party for each of the following. Include only those expenditures you would attribute to attending today's/tonight's performance/activity. (One person should estimate expenditure for the entire party.)

Tickets/admissions	\$ _____
Souvenirs and gifts	\$ _____
Parking fees	\$ _____
Bus/ferry/taxi costs	\$ _____
Auto travel costs (gas, rentals)	\$ _____
Food/beverages before or after the event	\$ _____
Food/beverages at the event	\$ _____
Entertainment before or after the event	\$ _____
Lodging/accommodation costs	\$ _____
Air travel costs	\$ _____
Child care/baby-sitting	\$ _____
Other costs (SPECIFY) _____	\$ _____

- 4.5 How do you find out about local events, entertainment, and things to do? (Check all the apply)

<input type="checkbox"/> The Seattle Times	<input type="checkbox"/> Seattle Post-Intelligencer	<input type="checkbox"/> Stranger
<input type="checkbox"/> Seattle Weekly	<input type="checkbox"/> TV (List Station(s) _____)	
<input type="checkbox"/> Radio (List Station(s) _____)		
<input type="checkbox"/> Internet (List Sites) _____		
<input type="checkbox"/> Other (Please list) _____		

5. Please describe the importance of Seattle Center to you personally.

6. Please describe the importance of Seattle Center to the community.

7. How often do you attend the following activities at Seattle Center?

	Weekly	Once or more per month	About 3 or 4 times per year	Once per year	Less than once per year	Never
Ticketed sports events	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Ticketed cultural/arts performances/exhibits	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Free cultural/arts performances/exhibits	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Festivals	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Community gatherings	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

8. How long do you expect your stay today/tonight to last at Seattle Center?

☐ 1hour ☐ 2-3hours ☐ 4-8 hours ☐ More than 8 hours

9. How many times do you come to Seattle Center per year? _____

10. What are the ages and gender of everyone traveling in your party?

	Male	Female	Age		Male	Female	Age
Yourself	<input type="checkbox"/>	<input type="checkbox"/>	_____	Guest #4	<input type="checkbox"/>	<input type="checkbox"/>	_____
Guest #1	<input type="checkbox"/>	<input type="checkbox"/>	_____	Guest #5	<input type="checkbox"/>	<input type="checkbox"/>	_____
Guest #2	<input type="checkbox"/>	<input type="checkbox"/>	_____	Guest #6	<input type="checkbox"/>	<input type="checkbox"/>	_____
Guest #3	<input type="checkbox"/>	<input type="checkbox"/>	_____	Guest #7	<input type="checkbox"/>	<input type="checkbox"/>	_____

11. Please indicate years of school completed:

- ☐ Some high school ☐ High school graduate ☐ Some college/vocational/technical
☐ Four-year college/university degree ☐ Postgraduate degree

12. What is your occupation:

- ☐ Working full- time ☐ Working Part-time ☐ Self Employed
☐ Homemaker ☐ Military ☐ Student
☐ Retired ☐ Not Employed ☐ Other _____

13. What is your zip code? _____

14. Residence ☐ USA
☐ Other _____

15. How many people are currently living in your household, including yourself? _____

16. Please indicate your ethnic origin:

- ☐ Caucasian ☐ Native American ☐ African American
☐ Asian, Pacific Islander ☐ Hispanic, Latin ☐ Other

17. Please indicate your household income:

- ☐ Under \$20,000 ☐ \$60,000-\$74,999 ☐ \$125,000-\$249,999
☐ \$20,000-\$39,999 ☐ \$75,000-\$99,999 ☐ Over \$250,000
☐ \$40,000-\$59,999 ☐ \$100,000-\$124,999

Date of Survey _____ Location _____

Respondents first name _____ Phone number _____

Time of Interview _____ Interviewer name: _____

Appendix I continued.

Table Appendix I-1 Location and Number of Seattle Center Visitor Interviews

Location	# of Interviews	Seattle Center Estimated Attendance
Sonics	210	471,209
Storm	77	137,677
Thunderbirds	87	108,882
Subtotal Sports	374	717,768
International Food Court	109	Not Estimated
Subtotal Dining & Shopping	109	Not Estimated
Key Arena Concerts	117	386,703
Intiman Theatre	87	90,102
Pacific Northwest Ballet	110	194,428
Seattle Opera	108	135,860
Seattle Repertory Theatre	109	180,000
Seattle Childrens Theatre	96	240,000
Paul McCartney - Key Arena Concerts	46	included above
Disney on Ice - Key Arena Concerts	64	included above
Other Arts		57,560
Subtotal Arts	737	1,284,653
Childrens Museum	103	300,000
EMP/Science Fiction Hall of Fame	113	484,636
Fun Forest	107	250,000
Pacific Science Center	106	750,000
Space Needle	118	1,210,000
Monorail	99	1,050,000
Other Attractions & Museums		14,200
Subtotal Attractions & Museums	646	4,058,836
Bumbershoot	120	200,000
Bite of Seattle	117	450,000
Northwest Folklife Festival	115	200,000
Seattle International Childrens Festival	81	45,000
Subtotal Major Festivals	433	895,000
Festals	105	200,000
Winterfest	214	506,000
Other Major Festivals		306,583
Subtotal Seattle Center Public Programs	319	1,012,583
International Fountain	79	500,000
McCaw Hall	36	
Fisher Pavilion	51	
Seattle Center School	53	63,000
Other Seattle Center Locations		311,600
Subtotal Other	219	874,600
Total	2,837	8,843,440

Estimating Net Seattle Center Patron Statistics

One of the most important parts of the questionnaire administered to Seattle Center patrons was the question that asked them to identify what they were doing on their trip to Seattle Center. Some patrons did not interpret this question carefully, and marked more categories than possible for their particular trip. Some interpreted the question with regard to their overall experiences at the Center, not just what they were doing on the particular trip in which they were interviewed. An examination of each of the 2,837 questionnaires was undertaken, and responses that did not appear appropriate were eliminated from the database. It is recognized there is some degree of judgment involved in this exercise, and an attempt was made to exclude only cases that were clearly not likely. This led to the number of citations of activities engaged in at the Center to be reduced by 10.7% (from 8,094 activities to 7,229 activities).

At the same time, an assessment was made as to whether the data contained in the spending question appeared valid, given the size of the party being interviewed. A small percentage (2.3%) of the questionnaires were determined to be problematic, as either the number of people in the group was not identified, no spending pattern was reported, or the size of the group was very large, but the spending level could not be associated with this group (Some people came in large groups, especially to Winterfest, and did not report spending). Thus, 97.7% of the questionnaires were considered valid (2772 of 2837).

Given the valid cases, an analysis was undertaken of the citations of activities by people interviewed in different venues over the course of the study, and this distribution is reported in Table 11. Each column of this table indicates the proportion of those interviewed that cited engaging in a particular activity. For example, of those interviewed in a sports venue, 99.5% said they were attending a sports event, 27.7% said they were engaging in dining and shopping on this visit, and 8.6% said they were going to an arts event. Sports patrons checked an average of 1.962 types of activities that they engaged in on their Seattle Center trip. As is evident in Table 11, there were varying numbers of citations by people interviewed in different venues; an average of 2.58 citations were made across all groups. Table 11 also indicates the number of people included in the valid sample; almost 10,000 people were included in the groups considered to be in the valid sample for this study.

The next task was estimating from known attendance data the net number of visitors to Seattle Center. Table I-2 shows the number of citations in the valid survey cases for the venues in which Center visitors were surveyed, and indicates in the column labeled category the bases for aggregating these responses into the categories reported in Table I-. Towards the right of Table I-2 are estimates of visitation either provided by Seattle Center to the author, or developed as a part of this study. Note no solid estimate was available for three categories of activity: dining, grounds, and shopping. Center staff did provide an estimate of 500,000 people for the International Fountain and 311,600 people at the general grounds and other meetings, but it was evident these numbers were not based on solid evidence. The estimate of 63,000 associated with the Seattle Center School is based on the number of students and staff, and their average daily attendance per year. Data that were considered “solid” yielded a count of 8,134,363 visits⁶, or if the alternative estimates presented in Table I-2 are included, a higher figure of 8,920,946 visits was estimated by Center staff. However, it was recognized that many of these were counts of people undertaking multiple activities on their Seattle Center trip.

The data in Table I-1 were used with visitor counts thought to be reliable to estimate a net count of Seattle Center patrons. The results of this exercise are included in Table I-3. A spreadsheet was set up with the coefficients in Table I-1 multiplied against initial estimates of attendance for sports, arts, attractions & museums, major festivals, and Seattle Center public programs. In this model the estimates of dining & shopping, and “other” activities were derived in relation to the activities included, for which visitation data were considered to be relatively accurate. An initial estimate of attendance for

⁶ The 311,600 people in estimated to be attending meetings are included with the 8,143,363 visit estimate.

Table I-3 Detailed Citations by Survey Groups

	Category	Sports	Dining & Shopping	Arts	Attractions/ Museums	Festivals (major)	Seattle Center Public Programs	Other	Total	Seattle Center Count	Alternate Estimate
Arts/Key Arena	3	32	9	721	18	69	31	6	886	1376359	
Pacific Science Center	4	26	28	24	207	53	59	5	402	750000	
Sports	1	370	0	5	3	1	9	0	388	717768	
Public Festivals	6	9	4	34	20	102	311	22	502	726000	1012583
Meetings	7	7	25	3	12	9	37	93	186	311600	
Dining	2	103	74	242	243	111	124	49	946	no estimate	
Fun Forest	4	16	15	16	142	43	28	3	263	250000	
Major Festivals	5	1	0	4	30	342	3	2	382	895000	
Monorail	4	19	33	39	251	62	65	17	486	1050000	
Grounds	7	33	41	82	232	109	170	21	688	no estimate	500000
Museums/EMP	4	16	22	28	285	48	58	11	468	784636	
Space Needle (not dining)	4	35	46	40	308	45	66	11	551	1210000	
Shopping	8	54	40	97	237	117	80	19	644	no estimate	
Other	8	9	24	34	76	22	72	99	336	63000	
Sample		372	109	731	622	425	379	134	2772	8134363	8920946
# cites (column sum)		730	361	1369	2064	1133	1113	358	7128	2.571429	
valid sample		372	109	730	620	423	379	134	2767		
# people		1021	384	2240	2462	1839	1761	268	9975		
#/party		2.74	3.52	3.07	3.97	4.35	4.65	2.00	3.60		

Table I-4 Estimation of Visitation

Columns approach	Sports	Dining & Shopping	Arts	Attractions/ Museums	Festivals (major)	Seattle Center Public Programs	Other	Total Model	Center Estimates	Diff 2.94E- 07	Off Diagonal	ABS Diff
Sports	690427		7451	6799	2385	10706		717768	717768		27341	0
Dining & Shopping	192200		360624	550747	264716	147507		1515793				
Arts	59713		1074420	40796	164553	36877		1376359	1376359	-4.4E- 08	301939	0
Attractions & Museums	208994		219057	2703871	598592	328323		4058836	4058836	3.15E- 08	1354965	0
Major Festivals	1866		5961	67993	815611	3569		895000	895000	-1.7E- 07	79389	0
Seattle Center Public Programs	16794		50666	45329	243252	369958		726000	726000	-6.4E- 07	356042	0
Other - Campus	74641		126665	553013	281410	246242		1281971	1161183	0.10402		
Other	117559		195214	709398	331491	180815		1534477				
Total	1362194		2040058	4677946	2702009	1323997		12106204				
Base	694159		1087832	1405197	1008782	450849		9055934	8935146			
								4646819				
						Survey Dining & Shopping Model	0.3419 0.3262		mean cites = survey	2.605 2.571		
						Survey Other Campus Model	0.3159 0.2759					
						Other Survey Model Other	0.3542 0.3302					

each activity was inserted into this model, and it was summed in the column labeled “Total model.” Initially, this model overestimated most categories for which good data were available because of citations “off category” of attendance. For example, in Table I-2 note arts patrons indicated they went to some sports events while going on a trip to an arts event. Similar reports are evident for most of the categories covered in Table I-2. In this spreadsheet program, the estimates of the “base” number of patrons in each category included in this model was adjusted iteratively until the model yielded a balanced estimate that corresponded to Seattle Center estimates of attendance at sports, arts, attractions and museum, major festivals, and Seattle Center Public Programs. Estimates of dining and shopping, other activity on Seattle Center campus, and “other” activity reported by Center visitors was derived as a part of this modeling process.

The result of this modeling exercise was an estimate of 4,646,819 visitors, engaging in 12,106,204 activities. The mean number of activities included for visitors in this model was 2.605, very similar to the 2.57 citations in the raw data from the survey. For the three categories of activity not explicitly modeled, but derived as a result of the modeling process, the results are again similar to those in the raw data from the survey. Dining and shopping was estimated to be undertaken by 32.6% of the visitors in the model, while the raw data had an estimate of 34.2%. Other campus activity was estimated to be undertaken by 27.5% of visitors in the model, while the survey indicated 31.6%. “Other” activity was estimated to be undertaken by 33% of visitors in the model, while raw survey data indicated 35.4%. The reason model percentages are slightly below the raw data is because the survey data obtained from those interviewed in the dining and shopping venues (Center House) and in the “other” category (General grounds, Center School, and McCaw Hall meetings) reported relatively high values for participation in these three activities. The estimate of total activity from this model is similar to that developed by Seattle Center, largely because it was constrained by Seattle Center attendance estimates for all categories except “other campus.” The survey data yields a slightly higher estimate of “other campus” activity than estimated by Seattle Center (1.28 million vs. 1.16 million). The solution to this model has been used as the basis for estimating total spending by Seattle Center patrons in this economic impact study.

Appendix II Seattle Center Business Questionnaire

Name of Organization _____

Name of person completing questionnaire _____

Telephone contact for person completing questionnaire _____

E-mail contact for person completing questionnaire _____

Instructions: Please complete this questionnaire for the latest year for which financial information are available. When exact figures are not available, please provide an estimate.

King County includes zip codes beginning with 980 and 981.

Answers to this questionnaire will be regarded as confidential. They will be combined with responses from other Seattle Center businesses in the impact study report, so that information about individual businesses will not be revealed.

		% of Income From <u>Outside</u> <u>King County</u>
1. Income for most recent fiscal year:		
Income from retail sales, box office, admissions, tuition/workshops, and services	\$ _____	_____ %
Income from other sources (contributions, government, other)	\$ _____	_____ %
Total Income	\$ _____	_____ %

		Number of Employees:		
				Seasonal/ Temporary
2. Employee Expenses:		Full-Time	Part-Time	
Administrative/Clerical	\$ _____	_____	_____	_____
Artistic/Professional/Technical	\$ _____	_____	_____	_____
Sales Personnel	\$ _____	_____	_____	_____
Other Personnel (Blue collar, operatives, etc.)	\$ _____	_____	_____	_____
Total	\$ _____	_____	_____	_____

Note: Include salaries, wages, benefits, and employment taxes. Exclude contract personnel in this question; contract personnel are reported in question 3.

3. Contract Personnel Expenses:		Number of Contract Personnel:		
		Full-Time	Part-Time	Seasonal/ Temporary
Administrative/Clerical	\$ _____	_____	_____	_____
Artistic/Professional/Technical	\$ _____	_____	_____	_____
Sales Personnel	\$ _____	_____	_____	_____
Other Personnel (Blue collar, operatives, etc.)	\$ _____	_____	_____	_____
Total	\$ _____	_____	_____	_____
Percent of Total Contract Personnel Payments to Individuals Residing Outside King County _____ %				

		% Outside King County
4. Services		
Marketing expenses	\$ _____	____ %
Press and public relations	\$ _____	____ %
Photographic/art services	\$ _____	____ %
Banking	\$ _____	____ %
Insurance	\$ _____	____ %
Professional services	\$ _____	____ %
Janitorial/protective	\$ _____	____ %
Transportation	\$ _____	____ %
Lodging	\$ _____	____ %
Purchased Food/beverage services	\$ _____	____ %
Set/costume/exhibit rental	\$ _____	____ %
Equipment rental	\$ _____	____ %
Hall rental (including payments to Seattle Center)	\$ _____	____ %
Seattle Center Event Services	\$ _____	0%
Seattle Center Labor Reimbursement	\$ _____	0%
Office and work space rental	\$ _____	____ %
Royalties	\$ _____	____ %
Other services: (Please specify) _____	\$ _____	____ %
Subtotal Services	\$ _____	

		% Outside King County
5. Utilities & Telephone		
Telephone & Cable Services	\$ _____	____%
Postage	\$ _____	____%
Other utilities	\$ _____	____%
Subtotal Utilities & Phone	\$ _____	

		% Outside King County
6. Other Goods & Services		
Printing of programs etc.	\$ _____	____%
Exhibit/set materials	\$ _____	____%
Production materials	\$ _____	____%
Supplies	\$ _____	____%
Maintenance	\$ _____	____%
Other goods & services, including cost of goods/food sold	\$ _____	____%
Please Describe Other Goods And Services	_____	
Subtotal Other Goods & Services	\$ _____	

		% Outside King County
7. Taxes		
Sales tax	\$ _____	____%
B&O tax	\$ _____	____%
Property tax	\$ _____	____%
City admissions tax	\$ _____	____%
Other taxes: (please specify)	\$ _____	____%
Subtotal Taxes	\$ _____	

Total Operating Costs (Sum Questions 2, 3, 4, 5, 6 and 7)	\$ _____	
--	----------	--

Appendix III I/O Model Technical Appendix

The impact estimates developed in this study stem from the utilization of an “input-output model.” Models of this type are based on static, cross-sectional measures of trade relationships in regional or national economies. They document how industries procure their inputs and where they sell their outputs. Pioneered by Wassily Leontief, who won the Nobel Prize in Economic Science for his insights into the development of input-output models at the national level, these models have become “workhorses” in regional economic impact analysis in recent decades.

Washington State is fortunate to have a rich legacy of research developing input-output models. Led by Professor Emeritus Philip J. Bourque of the University of Washington Graduate School of Business, along with the late Charles M. Tiebout, input-output models have been estimated in Washington State for the years 1963, 1967, 1972, 1982, 1987 and 1997. No other state in the United States has this rich historical legacy of survey-based or quasi-survey based regional input-output models.

Input-output models decompose regional economies into “sectors”--groups of industries with a common industrial structure. The heart of these models are “Leontief production functions,” which are distributions of the cost of producing the output of sectors. Leontief augmented the national accounts schema developed by Kuznets (also a Nobel laureate in economics) to take into account the significant levels of intermediate transactions that occur in economic systems in the process of transforming raw materials and services into “finished products,” or “final products.” Sales distributions among intermediate and final sources of demand are used as the accounting bases for the development the core innovation of Leontief: that these relationships can be used to link levels of final demand to total industrial output by way of a system of “multipliers” that are linked through the channels of purchase in every industry to the production of output for final demand.

This system of relationships is based on accounting identities for sales. Mathematically, this system of relationships may be represented as follows. For each industry we have two balance equations:

$$(1) X_i = x_{i,1} + x_{i,2} + \dots + x_{i,n} + Y_i$$

$$(2) X_j = x_{1,j} + x_{2,j} + \dots + x_{n,j} + V_j + M_j$$

where: X_i = total sales in industry i,

X_j = total purchases in industry j

$x_{i,j}$ = intermediate sales from industry i to industry j

Y_i = final sales in industry i

M_j = imports to sector j

V_j = value added in sector j.

For any given sector, there is equality in total sales and total purchases:

(3) $X_i = X_j$ when $i=j$.

This system of transactions is generalized through the articulation of Leontief production functions, which are constructed around the columns of the regional input-output model. They are defined in the following manner.

Let us define a regional purchase coefficient:

$$r_{ij} = x_{ij}/X_j.$$

Rearranging,

$$x_{ij} = r_{ij}X_j$$

Substituting this relationship into equation (1) we have:

$$(4) \quad X_i = r_{i,1}X_1 + r_{i,2}X_2 + \dots + r_{i,n}X_n + Y_i$$

Each sector in the regional model has this equation structure, and since the values of X_i equal X_j when $i=j$, it is possible to set this system of equations into matrix notation as:

$$(5) \quad X = RX + Y$$

This system of equations can then be manipulated to derive a relationship between final demand (Y) and total output (X). The resulting formulation is:

$$(6) \quad X = (I-R)^{-1}Y$$

where the $(I-R)^{-1}$ matrix captures the direct and indirect impacts of linkages in the input-output model system. The input-output model utilized in the modeling for this research project was developed by a committee led by Dr. Richard Conway, and published in 2004 by the Washington State Office of Financial Management (Office of Financial Management 2004). This model was released using both SIC and NAICS definitions. In the present study the NAICS version of the model has been utilized.

A major issue that surrounds the estimation of the $(I-R)^{-1}$ matrix is the level of “closure” with regard to regional final demand components, which are personal consumption expenditures, state and local government outlays, and capital investment. It is common practice to include the impacts of labor income and the disposition of this income in the form of personal consumption expenditures in the multiplier structure of regional input-output models. The additional leveraging impact of these outlays are referred to as “induced” effects in the literature on models of this type. It is less common to include state and local government expenditures in the induced effects impacts, but it can be argued that demands on state and local governments are proportional to the general level of business activity and related demographics. In contrast, investment is

classically argued to be responsive to more exogenous forces, and is not a simple function of local business volume. In the model that we developed for this impact study we have included personal consumption expenditures and state and local government expenditures as a part of the induced-demand linkages system. We have considered Washington personal consumption expenditures to be a function of labor income, and state and local expenditures to be a function of other value added. The resultant Leontief inverse matrix is not included with this report, but if readers are interested in a copy of it they can contact Professor Beyers at beyers@u.washington.edu.

