

Sisters Outdoor Quilt Show: Attendee Evaluation and Economic Effects



Prepared by Central Oregon Research Services

November 21, 2009



OREGON ARTS
COMMISSION

This project is supported in part by a grant
from the Oregon Arts Commission, National
Endowment for the Arts, a federal agency

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Executive Summary

A survey of Sisters Outdoor Quilt Show attendees was conducted to better understand their experience and the economic effects of their visit. The 2009 Quilt Show week included Quilters Affair classes, the Quilters musical, and the Saturday Quilt Show itself. Many attendees (65%) participate in two or all three of these events. Satisfaction with the Saturday Quilt Show was high, with 84% of attendees being very satisfied with the show. The internet was the preferred means of receiving information about the Quilt Show, with 71% of respondents indicating the Quilt Show website as the best way to provide information and 55% indicating information sent to an email distribution list. The Quilters Affair mailer also was a popular source of information.

More than half the attendees were out-of-state visitors, and almost all (96%) have their permanent residence outside the Sisters area. Expenditure by these visitors generates substantial economic benefits in the Sisters area. Average expenditure in the Sisters area depends on the model. In the economic impact approach, visitors who only attended the Saturday event spent \$56 per person per day; visitors who also (or only) attended the classes or musical spent \$91 per person per day.

The expenditure estimate for **economic significance** is \$2.4 million. This is spending by all attendees. The expenditure estimate for **economic impact** is \$1.7 million. This is spending by attendees who would not visit the Sisters area if the Sisters Outdoor Quilt Show did not exist – it is the “new money” created by the show.

Multiplier analysis indicates that the significance expenditure generated \$2.3 million of sales in the region, a figure that includes only the retail markup portion of retail expenditure. Labor income, accruing to employees and sole proprietors, totaled \$826,000. In turn, this income generated the equivalent of 35 jobs. The figures for economic impact are \$1.7 million in sales, \$617,000 in labor income, and 26 jobs. These amounts represent a substantial contribution to small communities such as Sisters, and they are especially impressive in the context of an event whose main attendance occurs on one day.

Conservative assumptions were used in this analysis. As a result, these estimates likely understate the Quilt Show’s full contribution to the local economy. The Quilt Show also generates significant additional benefits in surrounding communities. Though not a focus of this project, analysis suggests that Sisters Outdoor Quilt Show visitors spent approximately 4,800 nights in commercial lodging in Bend, Redmond, and Sunriver.

1. Introduction

The 34th annual Sisters Outdoor Quilt Show (SOQS) was held in July 2009 and included Quilters Affair classes, the Quilters musical, and the Saturday Quilt Show itself. This report presents results from a survey of attendees at these events.¹

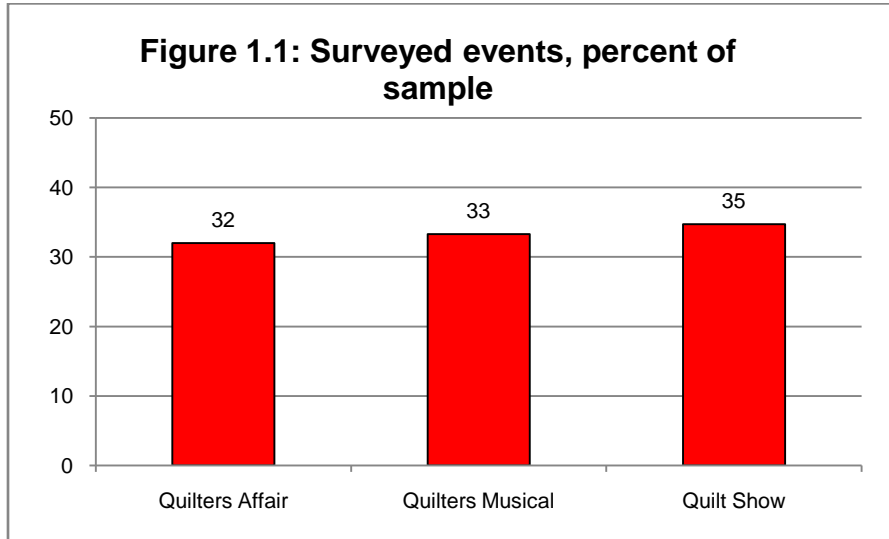
Unless otherwise noted, all percentages are “valid percentages” and are adjusted for missing values. For example, assume 10 surveys were completed, with 4 completed by males, 4 by females, and 2 without a recorded gender. The percentage shown for males would be 50%, which reflects the percentage of all valid responses (4 of the 8 valid responses). Many numbers

¹ The Quilt Show is held Saturday, the musical Tuesday and Friday, and the classes Monday through Friday.

are rounded, and rounding errors may occur in summation (percentages may not always total 100).

The abbreviation SOQS is used here to refer to the week of events. “Quilt Show” refers specifically to the Saturday Quilt Show. A total of 553 respondents completed the survey. Surveys were conducted Tuesday through Saturday and across all three events (see Figure 1.1) to ensure coverage across different types of attendees.

The expenditure results exclude local attendees and (for economic impact) attendees whose visit was not dependent on SOQS. Unless otherwise noted, the remaining results reflect all respondents.



2. Participation and satisfaction

Regardless of survey day, respondents were asked which events they were attending. As shown in Figure 2.1, the Quilt Show was the most popular event, with 93% of respondents attending that event.

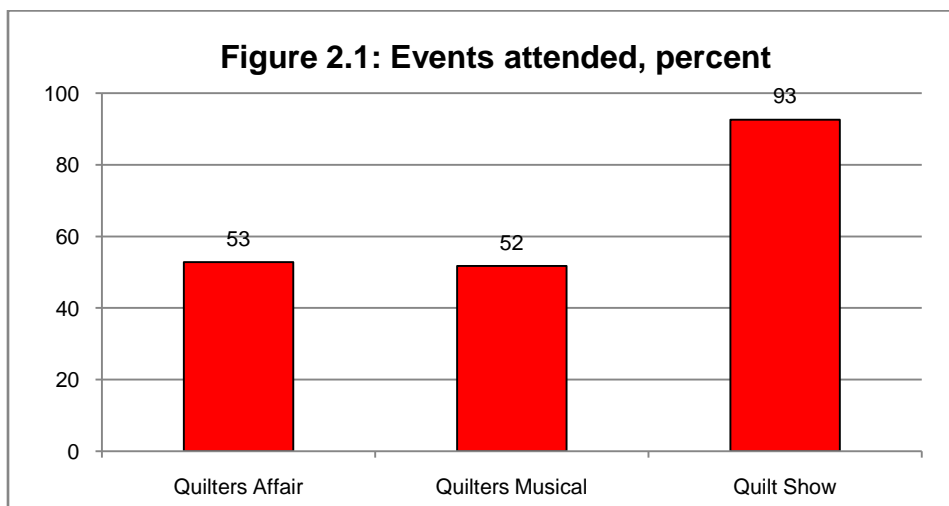
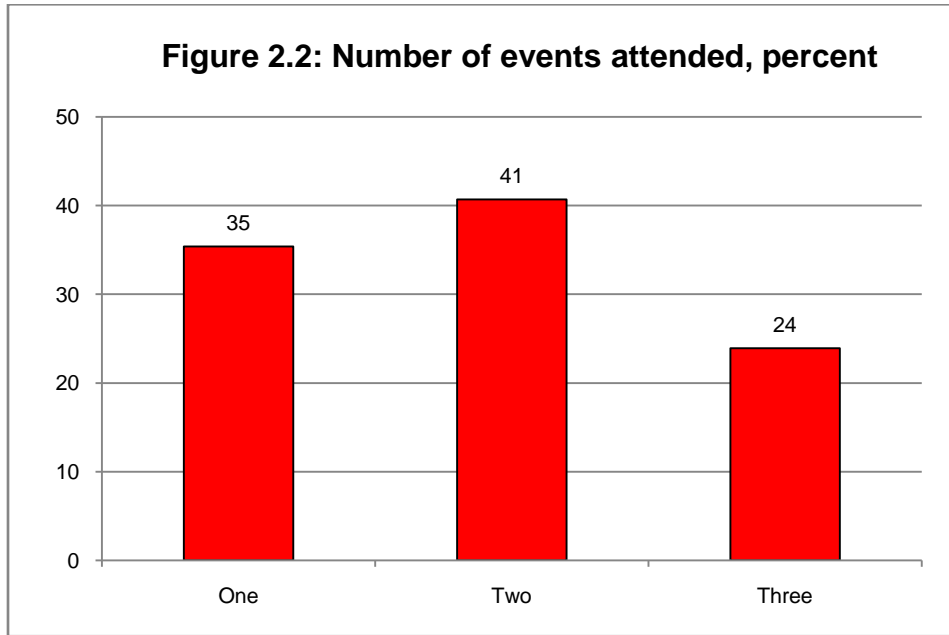
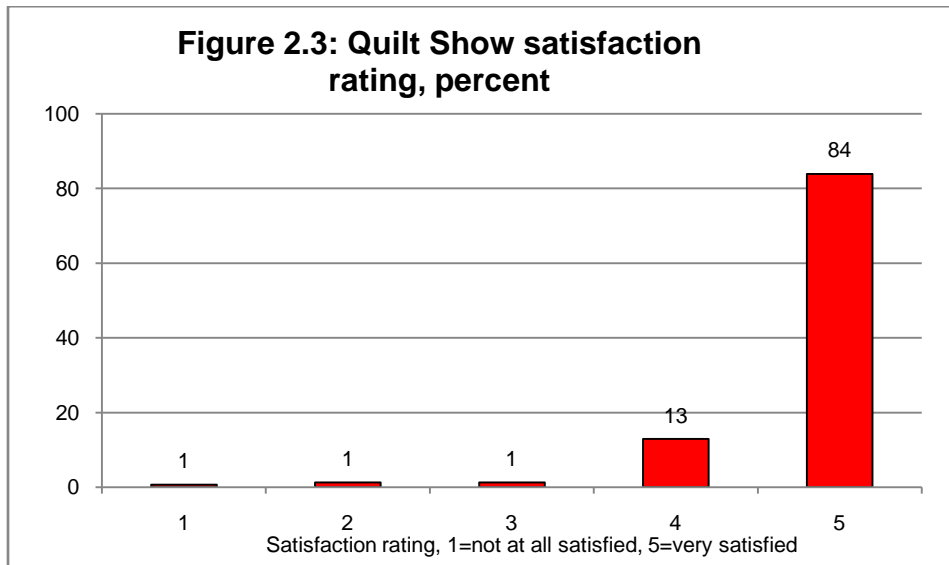


Figure 2.1 indicates that many SOQS attendees participate in multiple events (the percentages total more than 100), and Figure 2.2 shows the percentage of respondents by how many events they attended. The vast majority of Quilters Affairs attendees (94%) also attend the Quilt Show. Likewise, 88% of Quilters Musical attendees also attend the Quilt Show.



Respondents reported their satisfaction with the Quilt Show, and Figure 2.3 indicates that attendees were highly satisfied.

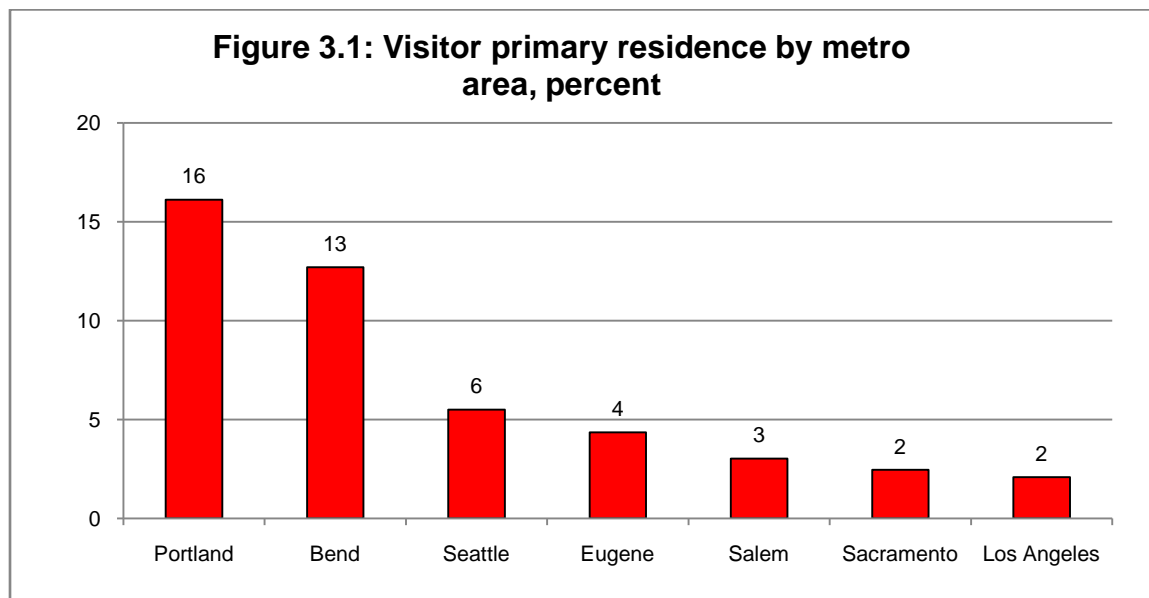


3. Residence and trip characteristics

The vast majority (96%) of respondents have their permanent residence outside the Sisters area, which was defined as including Black Butte Ranch and Camp Sherman. Unless otherwise noted, the results in this section are only for those non-local visitors. Of the non-local visitors:

- 90% were from the West (US Census region), with the remaining coming from other regions or abroad.
- 47% were from Oregon, 15% from California, 15% from Washington, and 5% from Idaho.
- In terms of metro areas,² 16% were from Portland, 13% from Bend, 6% from Seattle, and 4% from Eugene.

The by-state distribution of SOQS visitors is similar to that of Bend's summer visitors, as measured by the RRC 2008 survey. The metro-level results are shown graphically in Figure 3.1.



Special event economic impact analyses require assessment of how the event affected travel plans. If the visit would have occurred regardless of the event, the visitor is known as a “casual.” Likewise, if the visit would have occurred during a different period and was temporally adjusted for the event, the visitor is known as a “time-switcher.” Survey question 5 was used to assess the prevalence of casuals and time-switchers, with results utilized in allocating visitor expenditure.

Two formats were used for Question 5, applied on an alternating basis. The Version A wording was:

Q5. How did the Quilt Show affect your travel?

² Based on CBSAs, see http://en.wikipedia.org/wiki/Core_Based_Statistical_Area

1. It caused me to visit Sisters – without the Quilt Show, I wouldn't visit at all or would make one less visit
2. I would visit Sisters during this period even without the Quilt Show
3. I would have visited Sisters during a different period, but I changed the dates to attend the Quilt Show

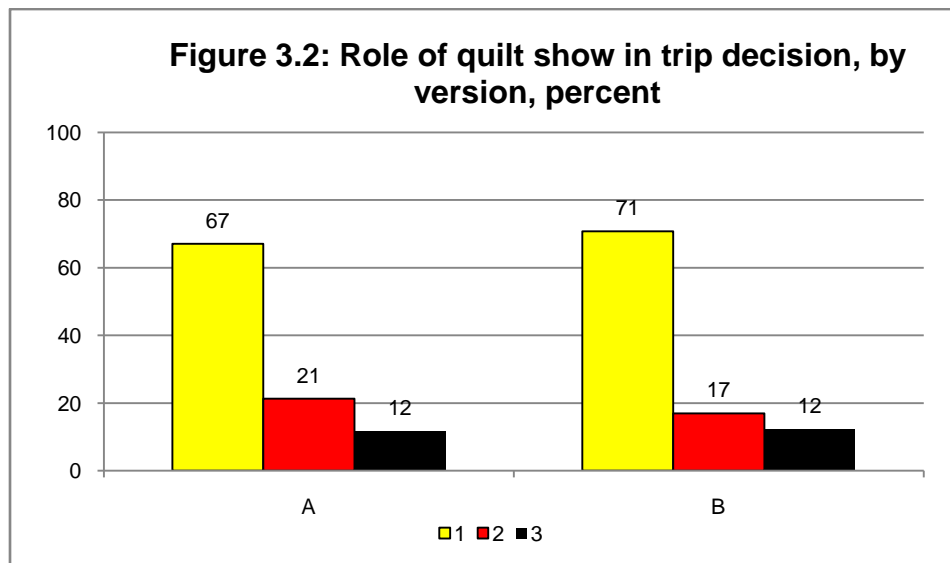
Response 2 indicates a casual, while response 3 indicates a time-switcher. This Version A format most closely matches the intention of measuring casuals and time-switchers, but it can be confusing to respondents. Therefore, Version B wording was:

Q5. How did the Quilt Show affect your travel? Was it...

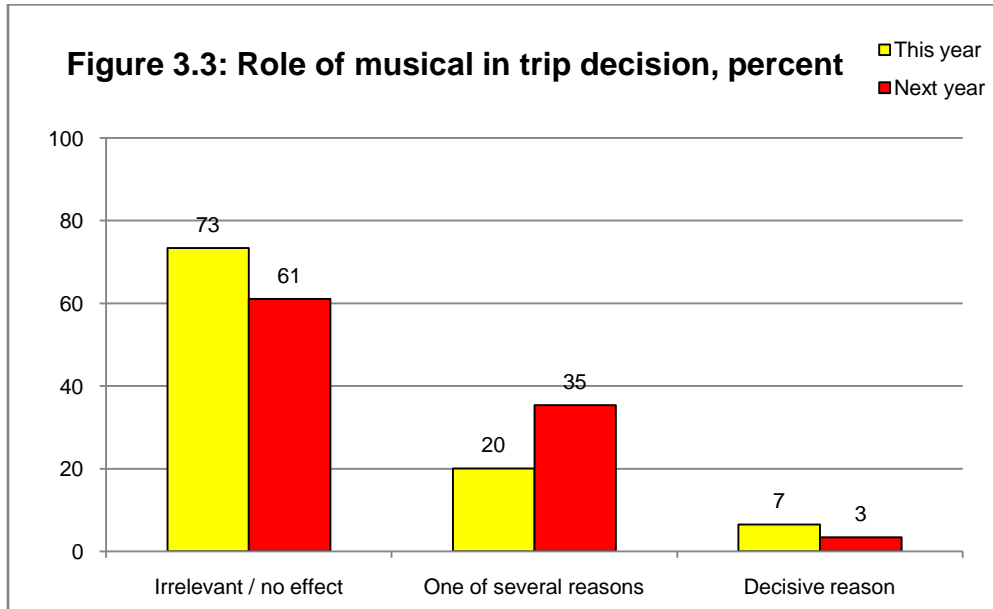
1. The decisive reason to make this visit to Sisters
2. One of several reasons to make this visit to Sisters
3. Irrelevant in deciding to make this visit to Sisters

The expenditure of those giving response 1 clearly should be included in the economic impact calculation, while the expenditure of those giving Response 3 is included in the significance estimates but not the impact estimates. Response 2 is inconclusive in Version B, which is why Version A is preferred if respondents can accurately understand and reply to it.

The distribution of responses is shown in Figure 3.2. In both versions, response 1 was the most common, and it reflects that the visitor was in Sisters specifically for SOQS. In Version A, visitors giving responses 2 or 3 are not included in the impact analysis, as they would have visited Sisters without SOQS. The same is true for response 3 in Version B. Response 2 in Version B also was excluded from the impact estimate. This leads to a conservative estimate of SOQS' economic impact.

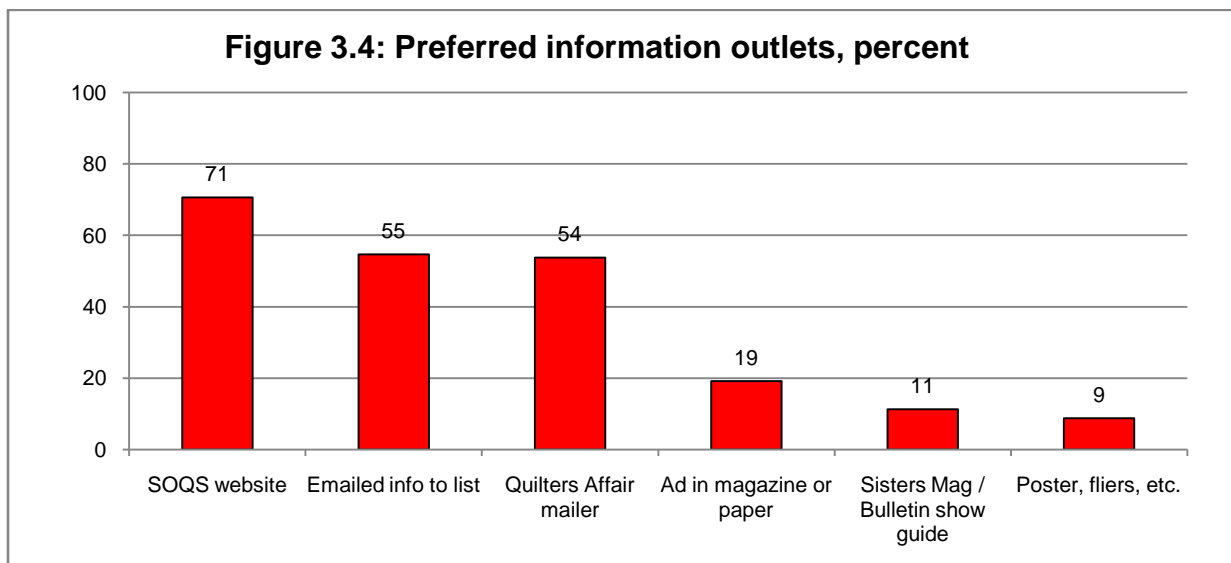


Respondents were asked about the musical in particular – how it affected their current visit and whether a stage performance, such as the musical, would affect plans to visit next year. In general, the musical (or stage performance) is not a major factor in decision-making. It was decisive this year for 7% of respondents, but it is expected to be decisive in next year's plans for only 3% (Figure 3.3). More broadly, it may simply reflect that the Saturday Quilt Show is the main reason for attendees to make this visit to Sisters.



Both local and non-local visitors reported how many years they have been to the Quilt Show. The question included attendance this year, but it referred only to the Saturday event – so first-time visitors surveyed before Saturday reported zero. Average number of years was 5.5, with a maximum of 34. This mean is skewed up by larger numbers. The median of 4.0 years better reflects the typical number of years. Half (50%) reported zero, one, two, or three years of attendance, which indicates that the Quilt Show continues to attract new visitors.

Respondents reported the best ways to provide information about the show. They could select up to three outlets from a list of seven. Figure 3.4 shows percentages, by outlet, of the 521 respondents who reported at least one outlet. The seventh outlet was “other” and is not shown in the figure (selected by 7% of respondents).



4. Expenditure and economic effects

A central focus of this survey was to assess the economic effects of SOQS. The study area was defined to be Sisters, including Camp Sherman and Black Butte Ranch, and visitors reported their spending within this area.

Special event economic effects studies vary widely in their methods and quality, with many making assumptions that lead to overstatement of effects. A conservative approach was used here. Specific methods include:

- Exclude expenditure by local residents. In many analyses, local residents are included, even if the event did not increase their expenditure (e.g., they would have spent the money locally, regardless of the event).
- Exclude lodging expenditure by respondents reporting that they were staying outside the Sisters study area.
- Use an estimate of 12,500 attendees for the Saturday Quilt Show event. This is a free and open-air event, and there is no direct counting of attendees. Estimates vary from 10,000 to as much as 30,000. Based on stakeholder feedback, a range of 10,000 to 15,000 was considered most realistic. The mid-point was used here.

The above reflect analyst decisions, but the data also may have a tendency to understate actual expenditure. For example:

- Expenditure per household or travel party is the accepted reporting approach given that large items, such as lodging and fuel, are paid at the household or travel party level and are not easily divisible by respondents to a per-person basis. Nonetheless, persons in a travel party may make expenditure without that expenditure (or at least the amounts) being known to the respondent. These expenditures benefit the study area but are not captured by the survey.
- Respondents are asked to report both actual and anticipated expenditure. By their nature, any unexpected purchases made after survey completion will not be included.

Both economic significance and economic impact are reported here. **Economic significance** reflects spending by all SOQS attendees. **Economic impact** reflects spending only by those attendees that would not have visited Sisters if the SOQS did not exist. Attendees who would have visited Sisters even without SOQS (response 2 or 3 in Question 5, described above) are included in the significance estimates and excluded from the impact estimates.

Total SOQS expenditure was estimated as follows. The Quilt Show is estimated to attract 12,500 attendees. The musical attracted 1,450 attendees, and the Quilters Affairs classes attracted 1,325 attendees. These two events yield a combined 2,775 attendees, but some individuals are double-counted (attended the musical and a class, attended two classes, and so on). Adjusting for double-counting, an estimated 2,000 persons participated in either or both of these events. Approximately 10% (200) of these persons did not participate in the Quilt Show, while 90% (1,800) did. As a result, there were an estimated:

- 200 persons who participated in the Quilters Affair and/or Quilters Musical, **but not** the Quilt Show.
- 1,800 persons who participated in the Quilters Affair and/or Quilters Musical, **and also** the Quilt Show.

- 10,700 persons who participated **only** in the Quilt Show.

Length of stay and spending per day are similar across the first two categories but differ between those two and the third category, as shown in Table 4.1. Attendees in the first two categories are referred to as “QA/QM attendees;” those in the third category are “QS-only attendees.”

Economic significance

Economic significance is calculated as indicated in Table 4.1; for example, “non-local attendees” (row C) is equal to “total attendees” (row A) multiplied by “percent non-local” (row B). SOQS attendees spent a total of \$2.4 million in the Sisters area.

Table 4.1: Calculation of total expenditure, economic significance			
	QA/QM	QS-only	Combined
A. Total attendees	2,000	10,700	12,700
B. Percent non-local	96%	96%	
C. Non-local attendees (A*B)	1,912	10,229	12,141
D. Average length of stay (days)	5.30	2.74	
E. Person days (C*D)	10,134	28,028	38,162
F. Expenditure per person per day	\$87.33	\$52.71	
G. Total expenditure (E*F, rounded)	\$885,000	\$1,477,000	\$2,362,000

As a “spot check,” there are 617 commercial lodging spaces in the Sisters area, with a capacity of 4,213 persons (including hotels, rental houses, etc., but excluding RV/camping). The percentage of QA/QM attendees who used commercial lodging in the area was 27%, while the percentage for QS-only attendees was 5%. Thus, an estimated peak of 1,075 attendees used commercial lodging in the area. Given the 617 spaces, this implies 1.74 persons per space (hotel room, cabin, etc.). This closely matches the average number of persons per travel party (1.77) based on survey responses. Of course, not all available spaces were filled with SOQS attendees. On the other hand, stakeholder feedback indicates that many spaces were filled by many more than 1.74 persons on average. This spot check indicates that the figures in Table 4.1 are reasonable.

Economic impact

Economic impact (Table 4.2) is calculated in a similar manner, but it only includes attendees for whom SOQS was the decisive reason to visit the Sisters area (i.e., they are “SOQS-dependent”).

Table 4.2: Calculation of total expenditure, economic impact			
	QA/QM	QS-only	Combined
A. Total attendees	2,000	10,700	12,700
B. Percent non-local	96%	96%	
C. Non-local attendees (A*B)	1,912	10,229	12,141
D. Percent "SOQS dependent"	68%	72%	
E. SOQS-dependent attendees (C*D)	1,300	7,365	8,665
F. Average length of stay (days)	5.63	2.59	
G. Person days (E*F)	7,320	19,075	26,395
H. Expenditure per person per day	\$91.11	\$55.74	
I. Total expenditure (G*H, rounded)	\$667,000	\$1,063,000	\$1,730,000

The economic impact approach reflects the same number of overall attendees, so it has the same spot check results as for the significance analysis.

Expenditure patterns

Figures 4.1 through 4.3 provide additional expenditure detail. Figure 4.1 shows expenditure by category, separately for the QA/QM and QS-only visitors included in the economic impact analysis (total per person per day of \$91.11 and \$55.74, respectively). Figures 4.2 and 4.3 use the average expenditure by all respondents: \$86.76.³

As shown in Figure 4.1, respondents only attending the Quilt Show spent noticeably less on lodging – because they were less likely to be staying overnight in commercial lodging in the Sisters area. The two groups spent similar amounts on restaurants and “other shopping.” Those attending the Quilters Affair classes or Quilters Musical spent more on “everything else,” in part because fees paid for the classes and musical were in this category.

Shopping represented a larger portion of total expenditure than is typical for tourists. This is understandable in the SOQS context because “other shopping” includes quilts and quilting supplies. Also note that lodging expenditures outside the study area are excluded, which brings down the lodging average. For example, a SOQS attendee staying in a hotel in Bend would not include hotel expenditure, but would include purchases made in Sisters. This reduces the lodging percentage relative to analyses with study areas that encompass all lodging locations.

³ Note that this figure is not weighted by number of participants; it is the average for all respondents, not for all SOQS attendees adjusted for the large numbers of Quilt Show-only attendees.

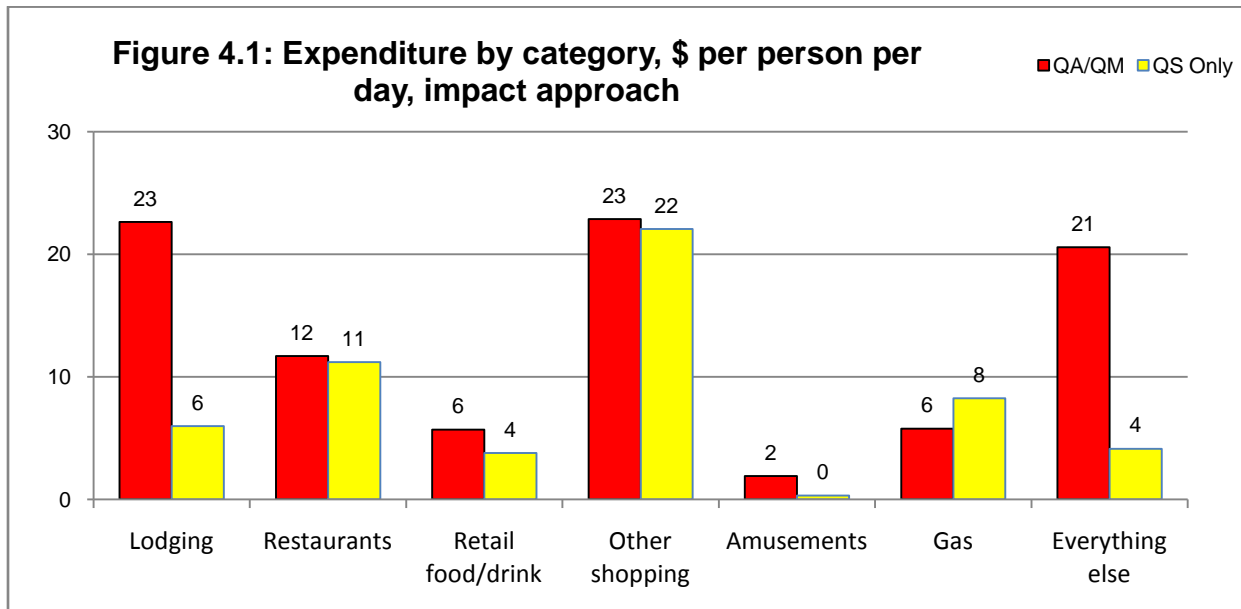


Figure 4.2 illustrates that visitors staying in commercial accommodation (hotel, motel, vacation rental) spend more than others, as one would expect.

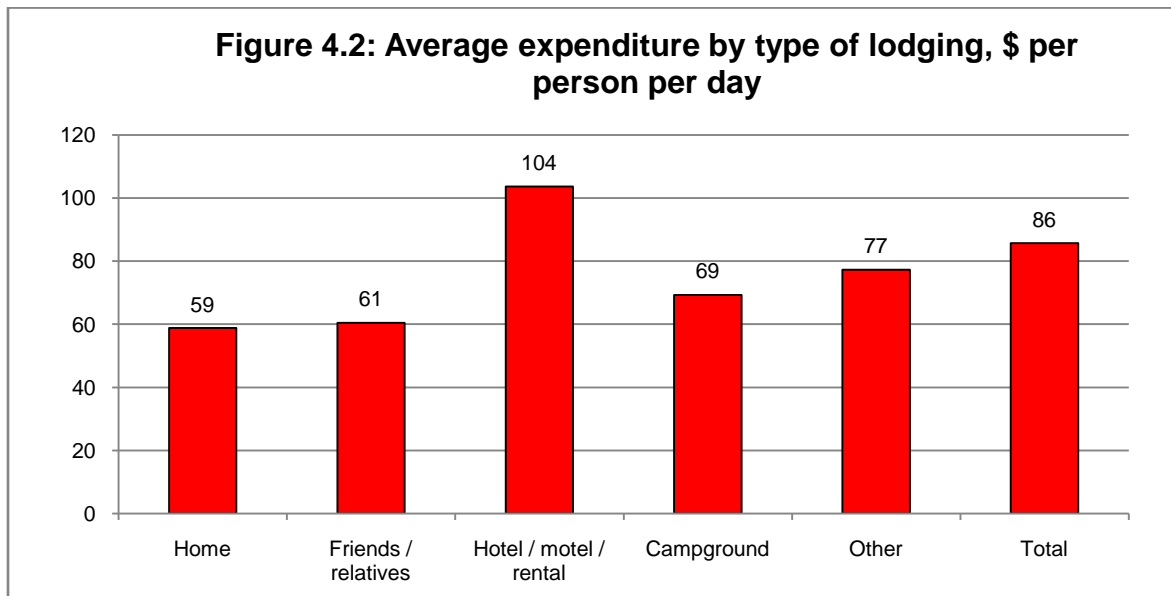
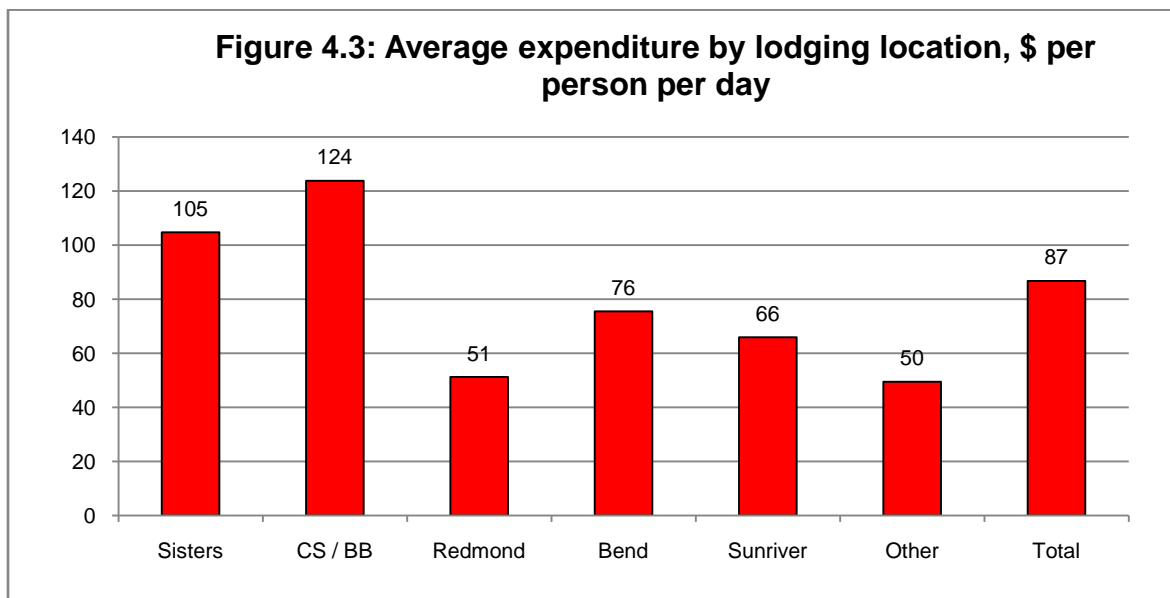


Figure 4.3 presents equivalent figures by lodging location, with “CS / BB” being Camp Sherman and Black Butte.⁴ Part of the difference between Sisters and CS / BB on the one hand and all the other locations on the other is explained by inclusion of lodging expenditure in the former but not the latter.

⁴ There is a small discrepancy across the two graphs with respect to the Total figure, due to different patterns of missing values.



For comparison, RRC Associates estimates that summer visitors to Bend spend an average of \$96 per person per day, including lodging.⁵ For the locations where lodging is included (Sisters and CS / BB), SOQS visitor expenditure is noticeably higher. This difference is due in part to the large expenditure on shopping amongst SOQS visitors.

Multiplier effects

Visitor expenditure was “run” through the IMPLAN input-output model to estimate “multiplier effects.” The initial expenditure represents the “direct effect” on sales. In order to provide the goods and services purchased by visitors, local businesses buy inputs from other businesses, and they pay wages and profits to individuals/households. Input purchases generate “indirect effects,” while spending of wages and profits generates “induced effects.” Input purchases and individual spending that occur outside the project area represent “leakages” that limit multiplier effects.

For example, assume that a SOQS attendee eats lunch at Restaurant X in Sisters. In order to provide the lunch, Restaurant X hires (and pays) employees and purchases food – some of which is produced locally. Food is an input purchased from another business, and this process generates indirect effects. Wages paid to employees generate induced effects, because those employees spend a portion of their income in the local economy (perhaps by eating at Restaurant Y or shopping at Supermarket Z).

Table 4.3 shows SOQS’ economic significance and impact within Deschutes County. Only expenditure made in Sisters is used to “drive the model,” but resulting effects occur throughout the county economy.⁶ The appendix provides details on analysis steps and on input-output analysis assumptions.

Results are presented for the following economic variables:

⁵ RRC Associates 2008 Bend Summer Visitor Research, report to Visit Bend, page 26.

⁶ IMPLAN is not able to estimate multiplier impacts solely within Sisters or other “sub-county” regions. In practice, most of the benefit will accrue to Sisters, as that is where the initial expenditure is.

- **Sales** or output.
- **Labor income**, which includes employee compensation (including wages, salaries, and benefits) and proprietary income (including self-employment income).
- **Employment**, which includes both full-time and part-time jobs (it is not full-time equivalents).

	Significance	Impact
Sales	\$2,314,000	\$1,730,000
Labor Income	\$826,000	\$617,000
Employment (jobs)	35	26

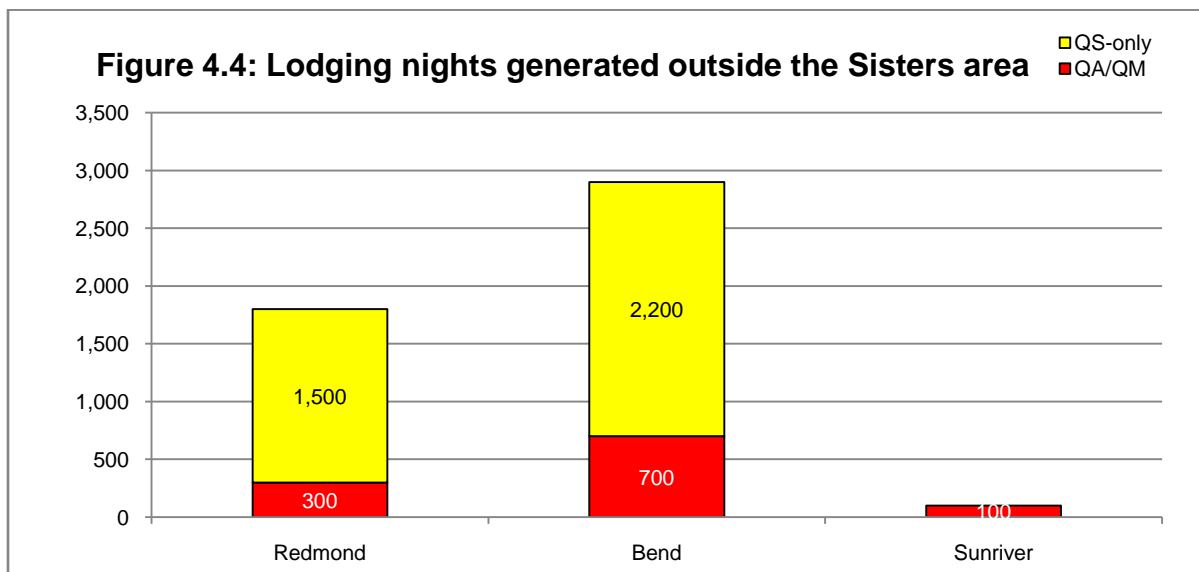
SOQS visitor spending generates a total (direct, indirect, and induced) \$2.3 million in sales and \$826,000 in labor income. This income is associated with 35 jobs. The figures for economic impact are \$1.7 million in sales, \$617,000 in labor income, and 26 jobs.

The effect on income always will be lower than the effect on sales, but it is income and jobs that are most important. Sales reflects money that passes through the economy, whereas income is the money that is retained by workers and small businesses. The figures for sales and income should not be added together. The change in sales due to visitor spending creates the income, but they are distinct impacts.

Room nights spent outside the Sisters area

Reported expenditure was limited to the Sisters area, but the data in Table 4.1 and further analysis of the survey data provide a *rough indication* of the number of nights spent in commercial lodging (hotel, motel, and vacation rental) in communities other than Sisters. For each of QA/QM and QS-only, the number of non-local attendees was multiplied by the number of days minus one to estimate number of nights. For example, there were $1,912 * (5.30 - 1 = 4.30) = 8,222$ nights for QA/QM attendees. These were then divided by the average persons per travel party (1.77) and allocated to commercial lodging by community. For example, 2.1% of the QA/QM attendees stayed in commercial lodging in Sunriver. When rounded, there were 100 lodging nights spent in Sunriver by QA/QM visitors.

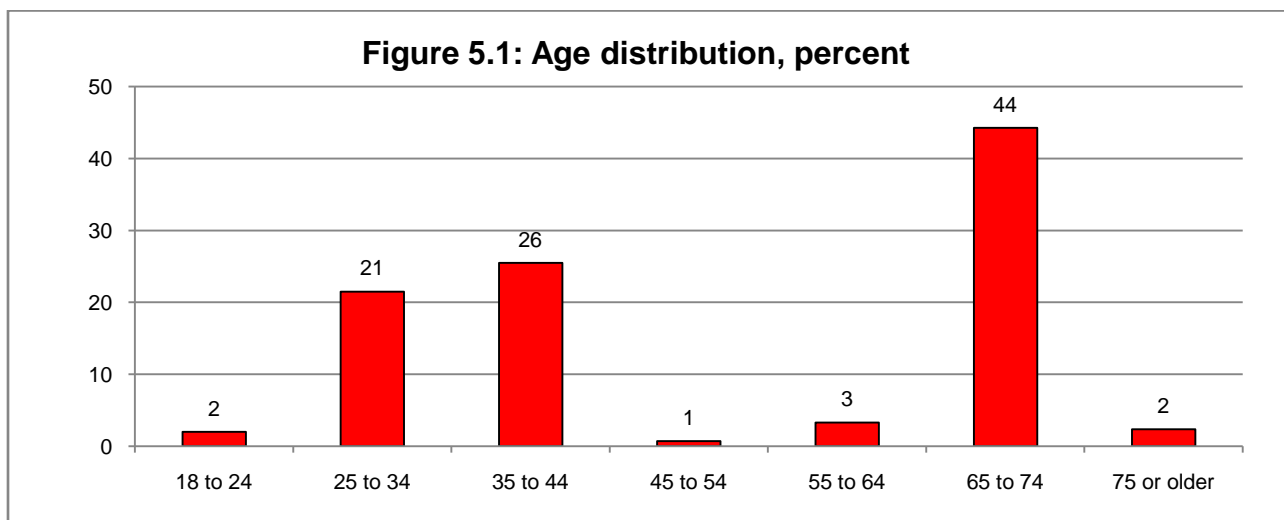
Figure 4.4 shows commercial lodging nights, by location, for QA/QM and QS-only visitors, using the significance measure (all visitors, not just SOQS-dependent visitors). In total, 4,800 commercial lodging nights were spent outside the Sisters area. These are total lodging nights, and thus differ from the peak number used in the spot check described above.



Relative to QS-only visitors, there are fewer QA/QM visitors, but they stay longer and thus generate significant numbers of lodging nights – in Sisters and in other areas. QS-only visitors are less likely to stay overnight, but the large number of these visitors generates significant numbers of lodging nights. Moreover, QS-only visitors are more likely to stay in Redmond or Bend than in the Sisters area; only 5% of QS-only visitors stayed in commercial lodging in the Sisters area, whereas 37% stayed in such lodging in Redmond or Bend (none stayed in Sunriver).

5. Demographics

Almost all (97%) respondents were female, and visitor demographics skewed toward the higher ages and income brackets. Figure 5.1 indicates an interesting bi-modal age distribution. Almost half fall into the 65 to 74 age range, but another half fall into the 25 to 44 age. This suggests that quilting, or at least interest in SOQS, may have skipped a generation.



Respondents reported total household annual income from all sources, including salary, pensions, and interest/ dividends. Results for SOQS visitors are shown in red in Figure 5.2. The distribution for Bend’s summer visitors, as measured by the 2008 RRC survey, is shown in yellow. The distribution for the US as a whole, as measured by 2007 Census data, is shown in black. SOQS visitors have an income distribution that is higher than the US as a whole, but lower than for Bend’s summer visitors.

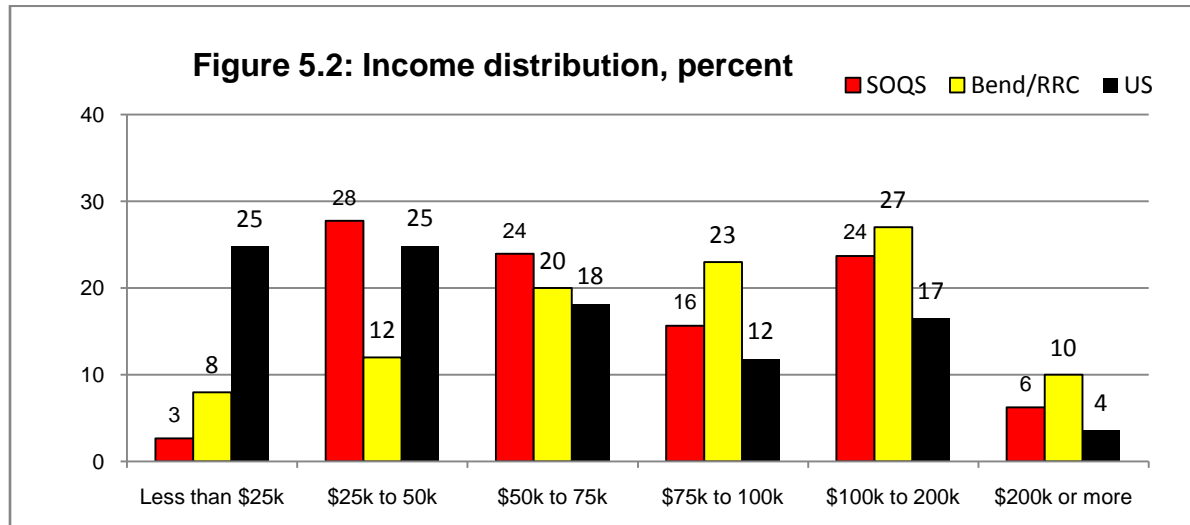
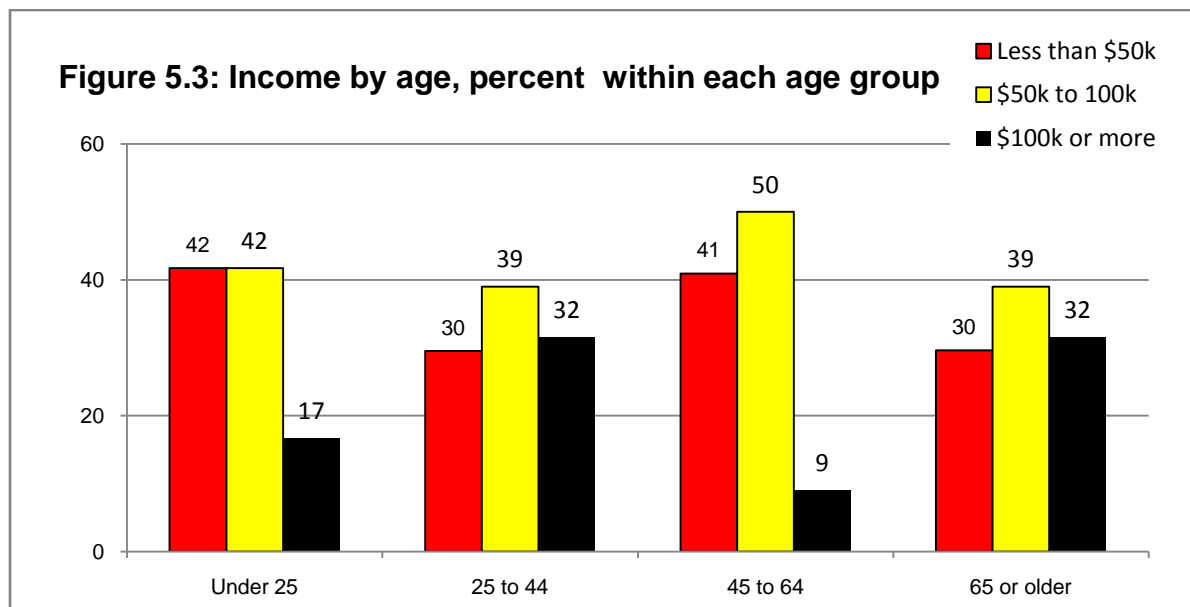


Figure 5.3 shows the income distribution within each age group. Age and income categories were combined to increase the number of observations in each cell (each combination of age and income). Even still, the number of respondents in the 45 to 64 age category is small, so income results for that group should be treated with caution. Figure 5.3 shows some relationship between age and income, with persons in the “under 25” category being less likely to have household income greater than \$100,000 per year. Nonetheless, most respondents are in the “25 to 44” or “65 and older” categories, and these two groups have identical income distributions, allowing for rounding error.



Appendix: Impact model steps and assumptions

The following steps were used in estimating the multiplier effects of SOQS visitor expenditure.

1. An IMPLAN model was created for Deschutes County, with 2006 economic structure data.
2. IMPLAN default values were used and Type SAM multipliers were created. These multipliers treat households as endogenous and thus include induced effects.
3. An effect scenario was created by allocating visitor expenditure into relevant IMPLAN categories (bridging). Spending in the retail food/drink, other shopping, gas, and everything else categories was treated as retail expenditure and margined.
4. Effects estimates were generated. SOQS expenditure data are in 2009 dollars, which were adjusted in IMPLAN to 2006 dollars to match the model data file. Effects results are shown in 2009 dollars using the IMPLAN deflators to convert back from 2006 to 2009.

Input-output analysis assumptions

IMPLAN is based on input-output (IO) analysis and is widely used to estimate the economic significance of tourism, recreation, and other activities. The IO approach involves several assumptions. These assumptions generally are not met in their entirety, but IO (and IMPLAN in particular) provides a good balance between practicality and accuracy. That is particularly true in cases, such as the present, in which the effect being evaluated is a small proportion of the overall study area economy. In such cases, non-linearities can be reasonably approximated with the linear relationships inherent in IO.

IO assumptions include the following.

1. All businesses within each sector produce a single, homogeneous product or service; the input procedures used in the production process are identical. That is, the economy should be disaggregated so that each sector is producing the same good.
2. An increase of production will lead to purchase of inputs in the proportions shown in the technical coefficients matrix. In technical terms, the production function is linear and homogeneous. This assumption restricts economies of scale; IO analysis assumes a business always will use the same proportion of inputs regardless of how much it grows.
3. When households are included in the analysis (as is done for this analysis), their spending patterns (consumption functions) also are assumed to be linear and homogeneous.
4. The structure of the economy will not change. Many input-output models, including the one used here, are static in nature. They are based on data from a single year (in this case 2006) and yet are used to estimate significance in other years. Dramatic structural changes in the economy would invalidate this assumption. The project area, and the nation as a whole, has been in recession, but this is assumed to be a temporary phenomenon that does not involve a substantial structural change to the Deschutes County economy.
5. When IO is used to estimate the effect of changes in final demand (as in the present case), there must be unemployed resources available to be brought into the sector as inputs.