

Economic Impact Study
2009 USA Cycling Cyclocross National Championships
Bend, Oregon

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Prepared for Visit Bend

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Introduction

Visit Bend is an economic development organization that contracts with the City of Bend, Oregon, to enhance the local economy through the promotion of tourism. One of the strategies employed by Visit Bend to enhance the tourism industry is to attract major events to the city. One of these events was the 2009 USA Cycling Cyclocross National Championships (hereinafter referred to as “Cross Nationals”).

To measure the economic impact that this event generated in Bend’s economy, Visit Bend commissioned Kreg Lindberg, Oregon State University-Cascades professor and proprietor of Central Oregon Research Services, to conduct an economic impact study.

The following report reflects the results of that study.

Research Methodology

The data for this report was gathered from Cross Nationals participants, spectators, vendors and officials. Two separate surveys were used, both designed by Professor Lindberg. The first survey was a written survey conducted in-person with attendees during the event, with a focus on contestants. The second survey was a post-event online survey that was emailed to contestants following their visit to Bend.

A total of 713 written surveys were completed in person during the event, and the post-event online survey was completed by 761 event participants. The latter provides a research sample representing an impressive 54% of the contestant email addresses, after removal of local contestants and duplicate / incorrect addresses.

Sampling error varies across questions. For the expenditure estimate, the 95% confidence interval is +/- 5%. Reported expenditure typically is highly variable; this interval is sufficiently narrow to have confidence in the estimates.

Executive Summary & Research Highlights

The primary purpose of this study was to measure the economic impact generated by the Cross Nationals and to identify the various segments of Bend’s economy that were impacted. The secondary purpose of this study was to compare the tourist behavior generated by this event with the tourist behavior generated by Bend’s standard non-event tourist traffic (“non-event” or “RRC” visitors), as measured through Visit Bend’s ongoing research partnership with Boulder-based research firm RRC.

As an additional point of comparison, the report also compares the tourist behavior of Cross Nationals with the 2009 USA Cycling Junior/U23/Elite National Road Championships (“Road Nationals”), which Visit Bend hosted in July of 2009.

This report begins with a general overview of the highlights from the study, then moves to more detailed data. At the end of the report, the appendix includes data tables and other granular level data.

All Cross Nationals results are for contestants and other members of their travel parties, unless specified as being for “non-contestant Cross Nationals visitors.”

Research Highlights

- The economic impact generated by Cross Nationals equaled \$1.08 million¹ in direct tourist spending. By comparison, the economic impact generated by Road Nationals equaled \$1.44 million in direct tourist spending.
- Through the multiplier effect, the benefit of this direct tourist spending went well beyond the tourism industry. Almost all (92%) of the economic sectors in Deschutes County experienced sales as a result of the Cross Nationals event, with 35% of sectors experiencing at least \$1,000 in sales. These effects stem from tourism businesses and their employees buying products and services from other sectors.
- For Cross Nationals, a total of 2,460 tourists visited Bend for an average length of stay of 3.6 nights. By comparison, for Road Nationals hosted by Bend in July 2009, a total of 2,840 tourists visited Bend for an average length of stay of 6.9 nights.
- The 3.6 night average length-of-stay generated by Cross Nationals visitors was slightly longer than Bend’s non-event length-of-stay of 3.3 nights. By comparison, the 6.9 night average length-of-stay generated by the Road Nationals was more than twice as long as Bend’s non-event length-of-stay.
- The Cross Nationals generated a total of 2,090 paid lodging nights at 56 different lodging companies (see Figure 1.4). By comparison, the Road Nationals generated a total of 3,500 paid lodging nights.
- For Cross Nationals, 91% of visitors stayed within the city limits of Bend and 6% stayed in Sunriver. By comparison, for the Road Nationals, 83% of visitors stayed within the city limits of Bend and 13% stayed in Sunriver.
- 42% of visitors from Cross Nationals stayed in hotels and motels, and 32% in rented townhomes and houses. The percentage for rented townhomes and houses is nearly double the percentage for this lodging type generated by Bend’s standard non-event tourism.
- In terms of geographic origin, Cross Nationals visitors came from 43 states, with only 14% coming from within Oregon. By comparison, the Road Nationals were attended by visitors from all 50 U.S. states, with only 5% of the attendees coming from within Oregon. By contrast, the geographic origin of Bend’s standard non-event tourism includes 40% of all visitors coming from within Oregon.
- On a percentage basis, people who visited Bend for both the Cross Nationals and the Road Nationals were more than twice as likely as Americans as a whole to have household incomes in the \$100,000 to \$199,000 range and in the over \$200,000 range.

¹ Figures are rounded to three significant digits.

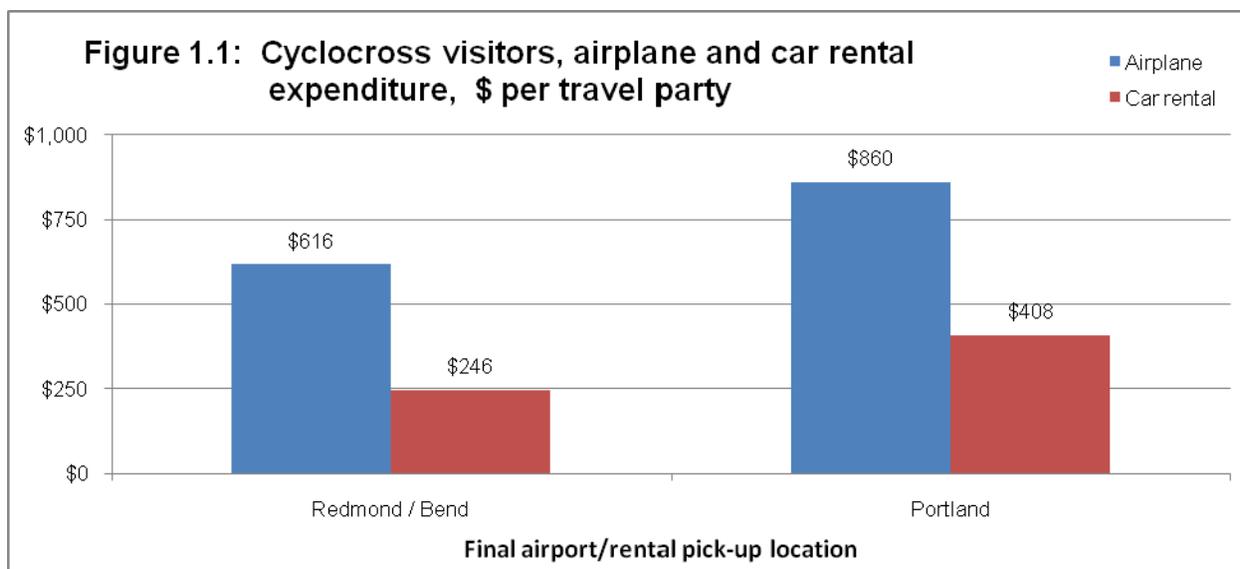
These socio-economic profiles are substantially more affluent than that of Bend's non-event visitors.

- 35% of Cross Nationals visitors and 44% of Road Nationals visitors traveled by airplane at some point during their travels to Bend. Of those who travelled by air, 65% of Cross Nationals visitors and 70% of Road Nationals visitors used Portland (PDX) as their final airport.
- Perhaps the most surprising result of the study is the event attendees' interest in purchasing real estate in Bend as a result of their visit. 10% of Cross Nationals visitors and 9% of Road Nationals visitors answered "definitely yes" to the question of whether they would consider moving or buying real estate in Bend as a result of their visit for the Championships. 39% of Cross Nationals visitors and 45% of Road Nationals visitors answered "possibly yes" to the same question. By attracting new visitors, from origins untapped by non-event tourism, these Championships may have a disproportionately large impact on new in-migration and real estate purchases (impact of "new product trial" from first time visitors).
- 52% of Cross Nationals visitors and 44% of Road Nationals visitors used the Visit Bend website as a source of information to plan their visit for the Championships. Of the other websites used, USA Cycling's site was by far the most common. The Cross Nationals event guide was used by 78% of Cross Nationals visitors, and the Official Bend Visitor Guide was the most common brochure mentioned by event attendees as a travel planning source (both the event guide and the Official Bend Visitor Guide were mailed to all participants prior to their arrival in Bend).
- Relative to Bend's standard non-event related tourism, the Road Nationals attracted a much higher percentage of first-time visitors to Bend. More than half (59%) of Road Nationals attendees had never been to Bend before the event. Perhaps more noteworthy is that, when West Coast residents were excluded from this question, 70% of the Road Nationals attendees were first-time visitors to Bend. Cross Nationals attendees were less likely to be first-time visitors, with only 42% falling into that category. However, when West Coast residents were excluded from this question, 60% of the Cross Nationals attendees were first-time visitors to Bend.

Section 1. Expenditure and Economic Impact

This section presents expenditure and economic impact results within the Deschutes County study area. All figures presented here are for non-local contestants, spectators, or other visitors.

Respondents reported how much they spent on airplane tickets and car rentals. Figure 1.1 shows expenditure on airplane tickets for the 35% of Cross Nationals visitors who flew and the 29% who rented a car. These transport expenditures were lower for Cross Nationals visitors than for Road Nationals visitors. This may be due to lower ticket and rental rates in the slow tourism season, fewer persons in Cross Nationals travel parties, or other factors.



Turning to expenditure for all items, average expenditure per person per day was \$72.60 for Cross Nationals visitors and \$63.20 for Road Nationals visitors. Both of these average expenditures are lower than the expenditure of non-event summer visitors (\$96) as reported in the RRC research. However, Road Nationals and Cross Nationals visitors stayed in Bend longer, so their total spending was higher. For example, non-event visitors spent an average of \$1,021 per travel party. Road Nationals visitors spent almost twice that amount (\$1,934 per travel party). Cross Nationals visitors spent \$1,188 per travel party.

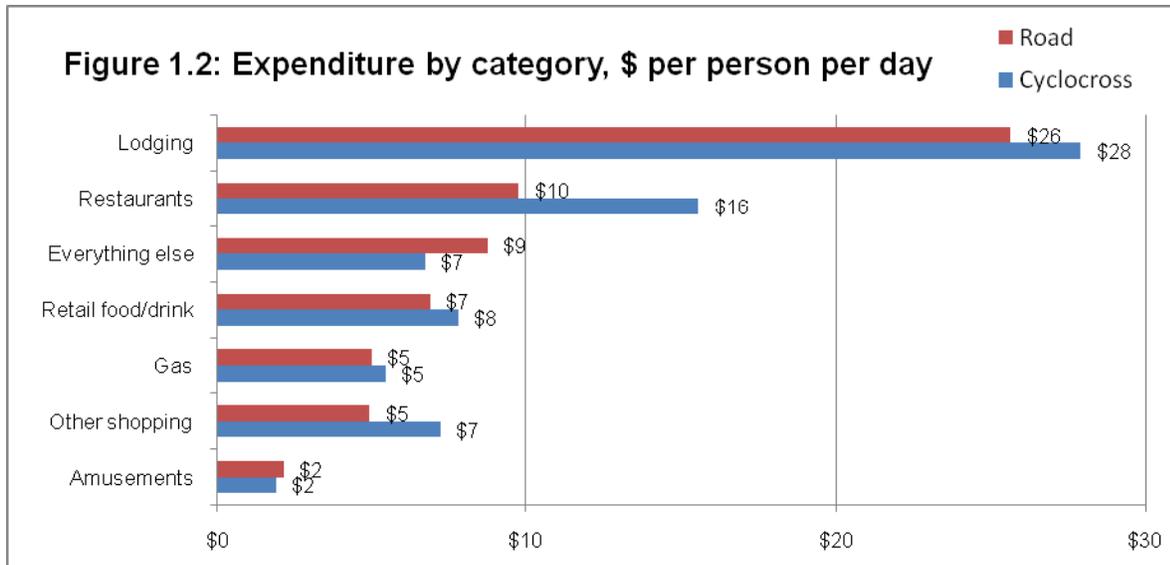
With respect to overall expenditure, several issues should be considered. First, the events occurred during a recession, and the same events held in a normal economy likely would generate more expenditure. The recession likely reduced the number of participants and/or average spending per participant. As an example, some respondents noted that they prepared their own meals rather than dining out as a result of economic conditions.

Second, expenditure per household or travel party is the accepted reporting approach because 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 additional purchases unbeknownst to the respondent. These expenditures brought economic benefit to Central Oregon, but were not captured by the survey.

Third, respondents were asked to report both actual and anticipated expenditures. Unanticipated expenditures made after survey completion were not included.

The above factors may lead to underestimates.

Figure 1.2 shows expenditure by category. Lodging is clearly the largest budget item. Restaurants are separated from retail food and drink, as the expenditures enter the economic impact model in different sectors. Because different sectors are used, these Road Nationals and Cross Nationals results are not directly comparable to the RRC breakdown by category. However, proportions are broadly similar, especially with respect to lodging and food/drink. Across the two events, spending was generally similar, but Cross Nationals visitors spent noticeably more on restaurants.



Total expenditure and associated economic impacts depend on the number of Road Nationals and Cross Nationals travel parties, and estimating this number can be difficult. For both events, local (Deschutes County) contestants and spectators were excluded from the estimates.

For the Cross Nationals analysis, surveys were completed at packet pick-up, and respondents were instructed to complete only one survey per travel party. There were some cases in which more than one survey was completed by a given travel party, but these were balanced by cases in which no one in a travel party completed the survey (misses or refusals). Thus, the 713 completed surveys is considered an appropriate estimate of the number of travel parties. The average travel party included 3.45 people total (contestants and others combined), for a total of 2,460 persons in travel parties that included contestants.

Expenditure was \$72.60 per person per day, and the average travel party represented 16.37 person days or \$1,188 total per travel party during the visit. Total spending for all contestant travel parties is thus \$847,000.

Additional non-local Cross Nationals visitors include the groups shown in Table 1.1. Figures for some categories (e.g., staff and officials) are based on specific data, while figures for spectators are conservative estimates.² The RRC non-event expenditure of \$96 per person per day is used for these visitors, as they are more likely to follow “typical visitor” expenditure patterns (e.g., they do not have access to host housing).

² The audience for Sunday’s elite races was estimated at 5,000, including members of contestant travel parties, local spectators, and non-local spectators (H. Clark, “Bend ‘cross event receives glowing reviews,” *Bend Bulletin*, Dec. 15, 2009, pp. D1, D3).

Table 1.1: Non-contestant Cross Nationals visitors			
Category	Number of people	Average days	Expenditure
USA Cycling staff and officials	27	7	\$18,144
Vendors	96	7	\$64,512
Journalists and photographers	20	6	\$11,520
Spectators	350	4	\$134,400
Total	493		\$228,576

Combining contestant and non-contestant travel parties, Cross Nationals visitors spent an estimated \$1,076,000 (\$1.08 million). This is referred to as “visitor expenditure” or “direct tourist spending.”

Road Nationals and Cross Nationals visitor expenditure was “run” through the IMPLAN input-output model to estimate “multiplier effects” of money flowing through the local economy. For example, assume that a contestant eats lunch at Restaurant X. In order to provide the lunch, Restaurant X hires (and pays) employees and purchases food that is then prepared for customers. 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).

Expenditure by Road Nationals visitors generated the following economic impact within Deschutes County:

- \$1.44 million in direct tourist spending
- \$1.7 million in total sales.³
- \$598,000 in labor income. This includes employee compensation (including wages, salaries, and benefits) and proprietary income (including self-employment income).
- 22 jobs (full-time or part-time).

Expenditure by Cross Nationals visitors generated the following economic impact within Deschutes County:

- \$1.08 million in direct tourist spending
- \$1.3 million in total sales.
- \$462,000 in labor income.
- 17 jobs.

Table A.1 in the appendix details the impact by sector within the county; Figure 1.3 graphically shows income by broad sector, measured to the nearest \$1,000. The appendix also provides details on analysis steps and input-output analysis assumptions.

IMPLAN breaks the economy into 509 sectors, covering everything from cattle ranching to semiconductor manufacturing. Within Deschutes County, there is at least one business in 253

³ This amount only includes the margin portion of retail sales; the wholesale cost of retail products is not included, as that is quickly “lost” by the region to pay for products manufactured elsewhere.

of these sectors. Through the multiplier effect, Cross Nationals visitor expenditure generates sales in 232 (92%) of these sectors. It generates at least \$1,000 in sales from 89 (35%) of the sectors. It is not just hotels and restaurants that benefit from events such as the Road Nationals and Cross Nationals.

Expenditure is also distributed widely within the lodging sector, as illustrated in Figure 1.4. Four properties were “official lodging sponsors” of the Cross Nationals, yet contestants generated 2,091 room nights across 56 different lodging companies.⁴

In short, a single special event can generate benefits for multiple lodging companies and across multiple sectors throughout the city and beyond.

⁴ Figure 1.4 data are based on 1) reports from individual properties and 2) averaged responses in the paper and online surveys. Survey data are subject to non-response bias, such as customers of Property X not completing one or both of the surveys. The Generic category includes visitors reporting that they stayed in a “rental property” or “B&B” but without specifying an identifiable property name.

Figure 1.3: Championships-generated labor income by broad economic sector

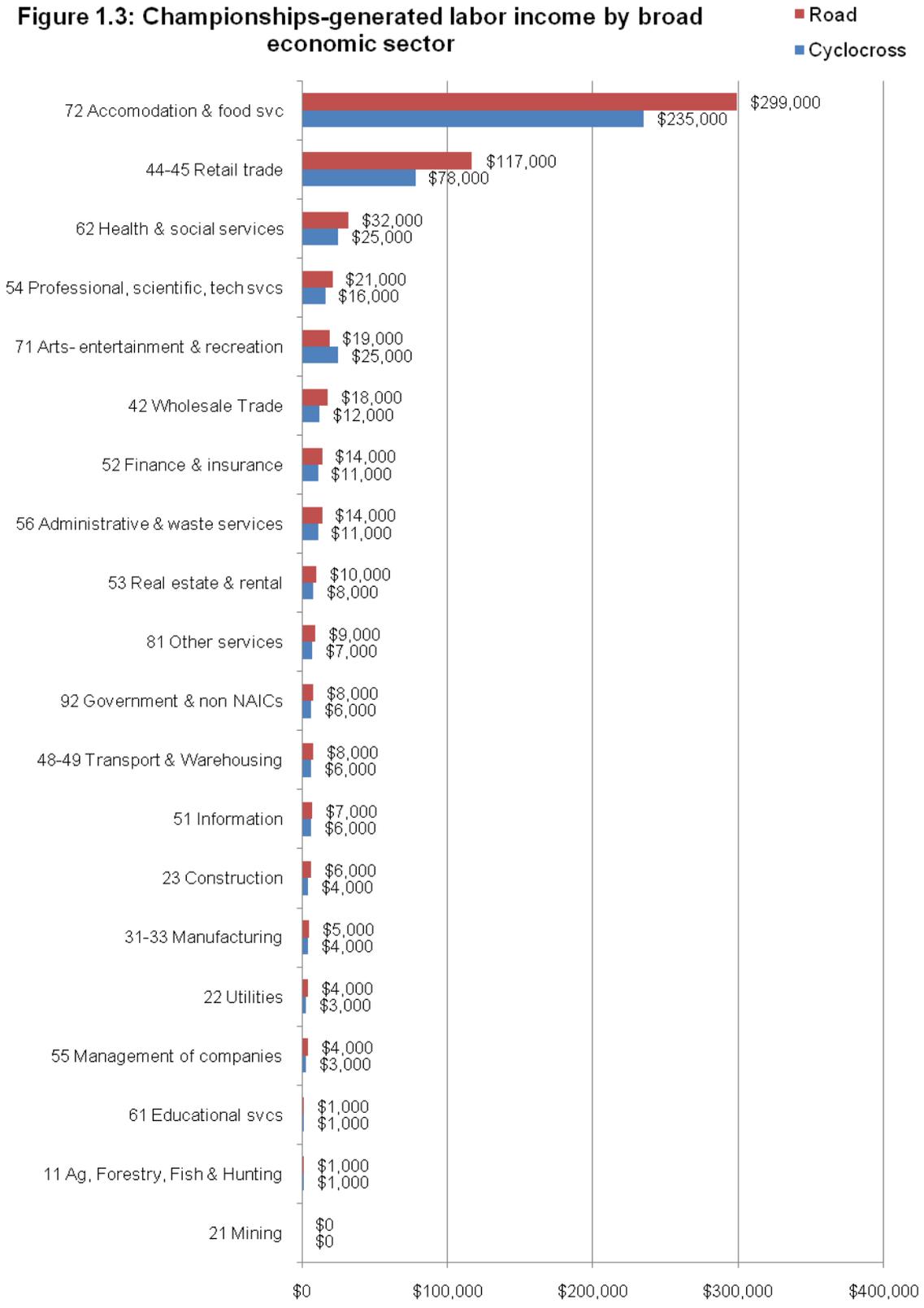
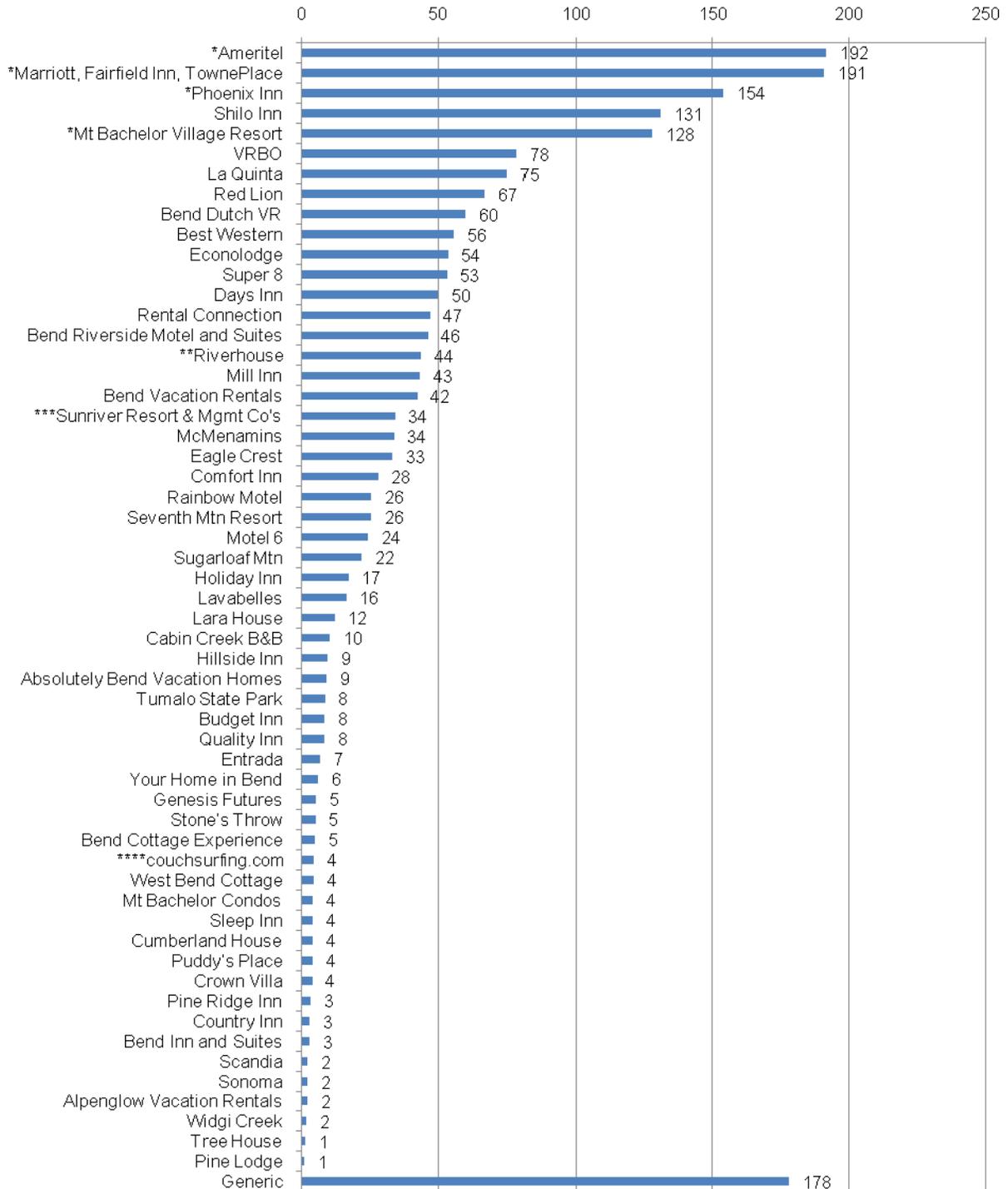


Figure 1.4: Cyclocross, total paid room nights by lodging company (2,091 total paid lodging nights)

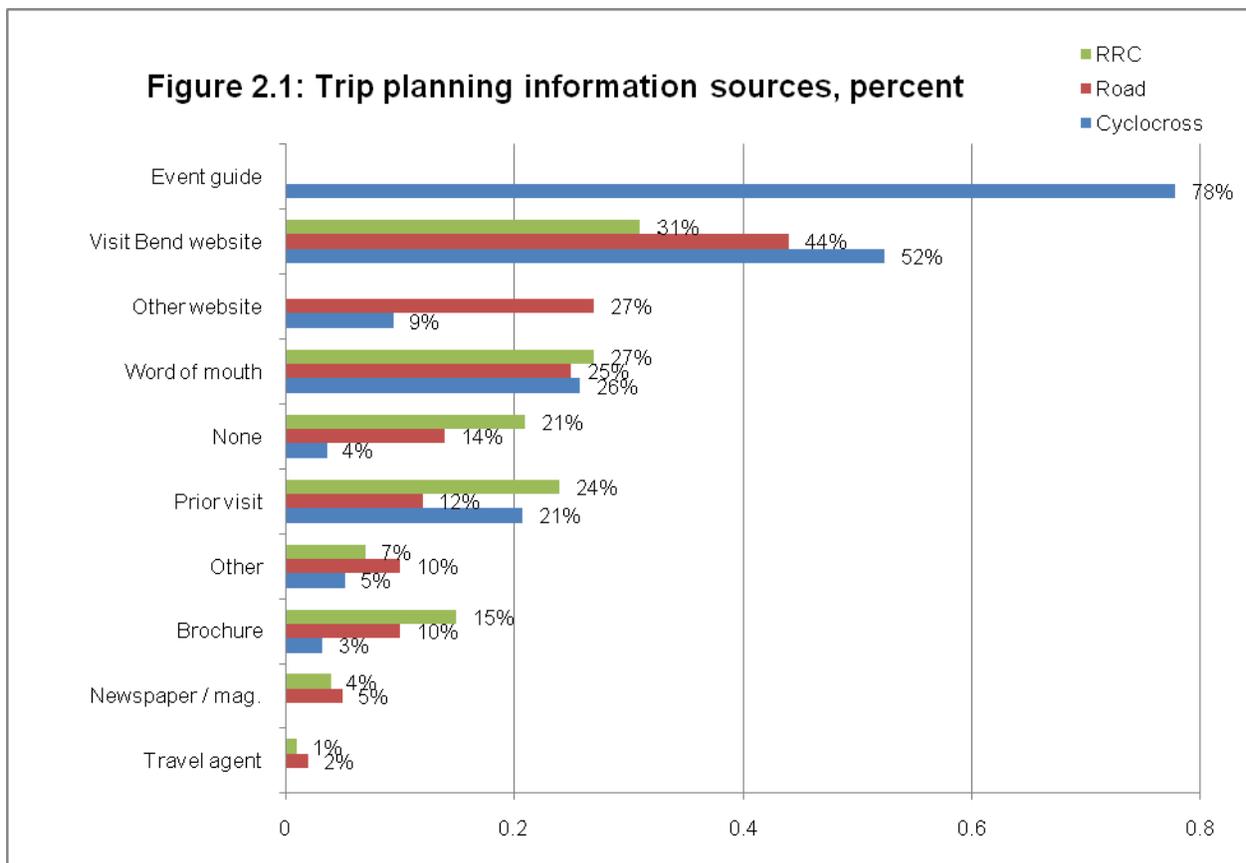


*Indicates official lodging sponsors of the event, selected by USA Cycling
 **Riverhouse was sold out with the Sherriff's Conference during Cyclocross check-in days
 ***Includes Sunriver Resort and property management companies in Sunriver area
 ****No TRT collected through barter room nights booked through couchsurfing.com

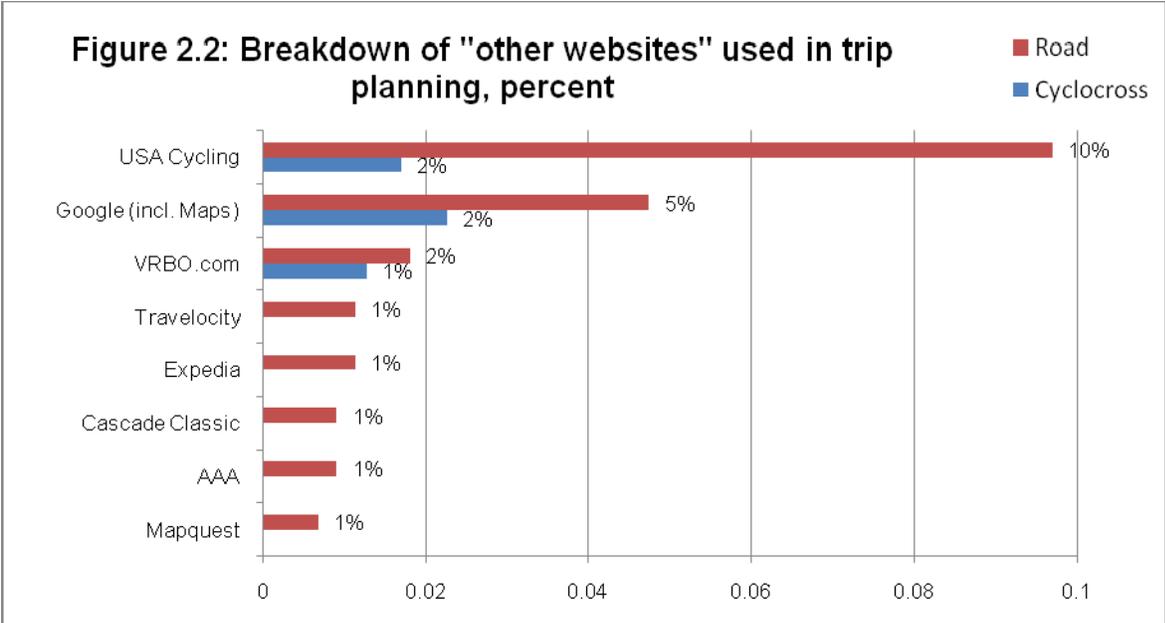
Section 2. Trip and Travel Party Characteristics

With respect to information sources used in trip planning, websites were the most common source (Figure 2.1). The exception was the Cross Nationals event guide (an equivalent was not asked of RRC or Road Nationals respondents).

Many Road Nationals and Cross Nationals visitors used the Visit Bend website, including 44% of Road Nationals respondents and 52% of Cross Nationals respondents. Another 27% of Road Nationals respondents used other websites, as did 9% of Cross Nationals respondents. Amongst RRC non-event visitors, 31% used any website, with Visit Bend's site being the most common (those results do not separate Visit Bend and other websites). Aside from website usage, the other primary difference is that non-event visitors rely more heavily on prior visits, especially relative to Road Nationals visitors. This is consistent with the higher proportion of first-time visits by Road Nationals visitors.



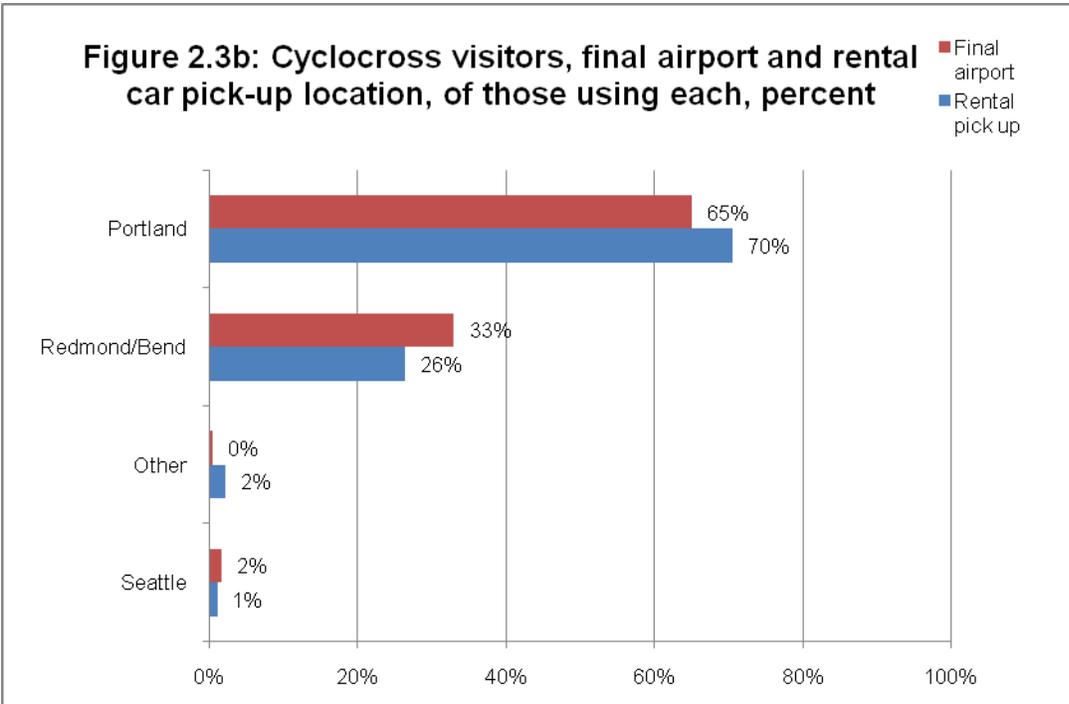
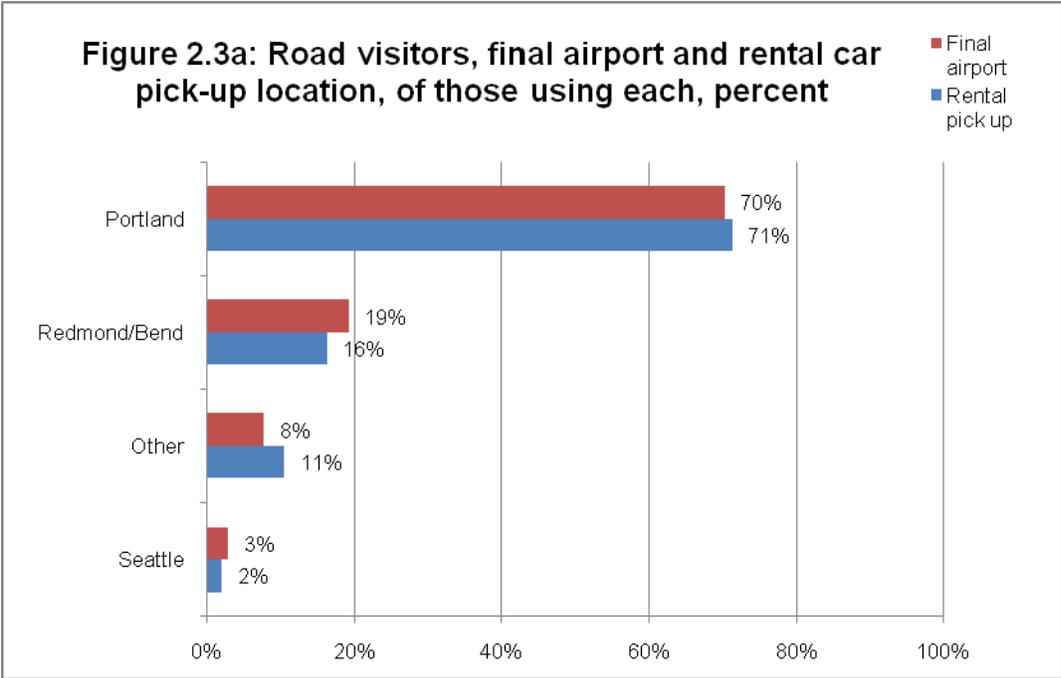
Of the specific websites reported (other than Visit Bend's), USA Cycling's was by far the most common. Figure 2.2 shows websites mentioned by at least three respondents. Use of other websites was more common for Road Nationals visitors than for Cross Nationals visitors.



Visit Bend’s visitor guide was by far the most common brochure mentioned. Amongst “other” responses, the most common were friends/family and team (including team mates, team director, and coach).

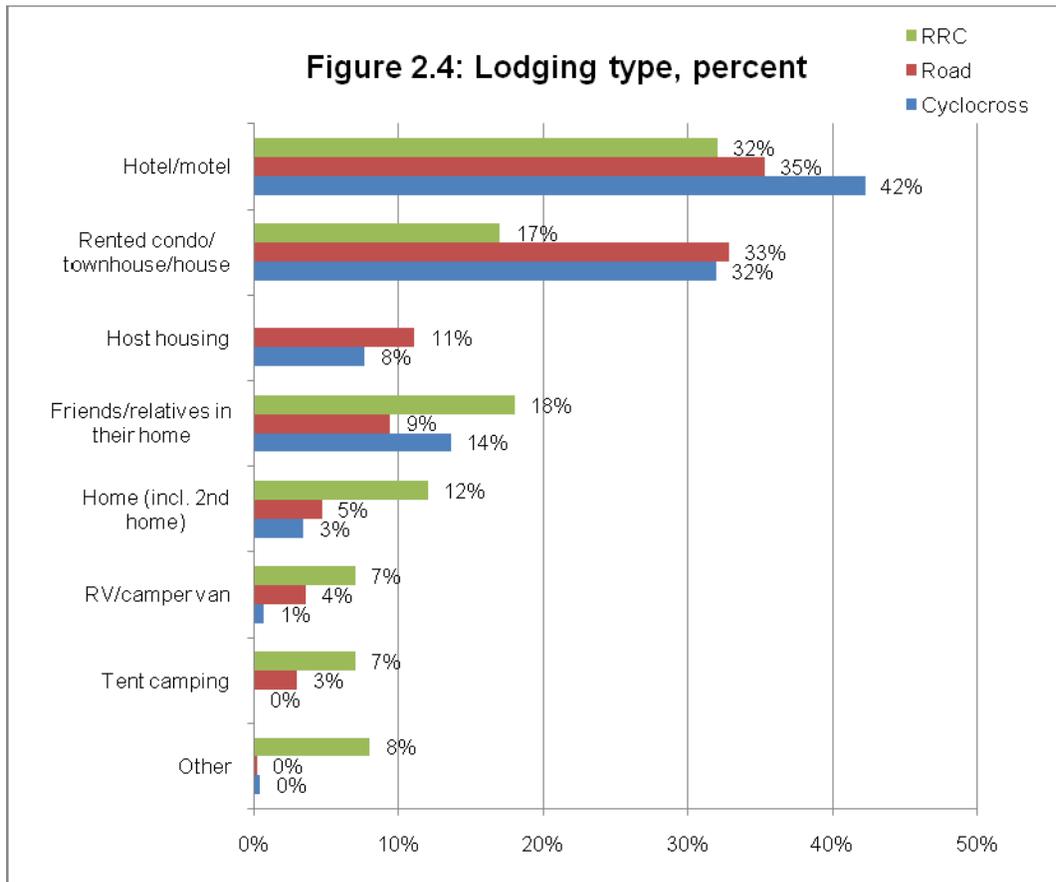
Almost half (44%) of the Road Nationals visitors flew by plane during their travel to Bend, and 39% rented a car. Figure 2.3a shows the location of each.

Figure 2.3b shows the distribution for Cross Nationals visitors, amongst whom 35% flew and 29% rented a car. Fewer Cross Nationals visitors flew, but those who did were more likely to fly into Redmond/Bend airport.



While in Central Oregon, Road Nationals and Cross Nationals visitors used a variety of accommodation, mainly in Bend and Sunriver (Figures 2.4 and 2.5). Roughly one third of both Road Nationals and non-event visitors used hotels/motels, while 42% of Cross Nationals visitors used this lodging type. Road Nationals and Cross Nationals visitors were much more likely than

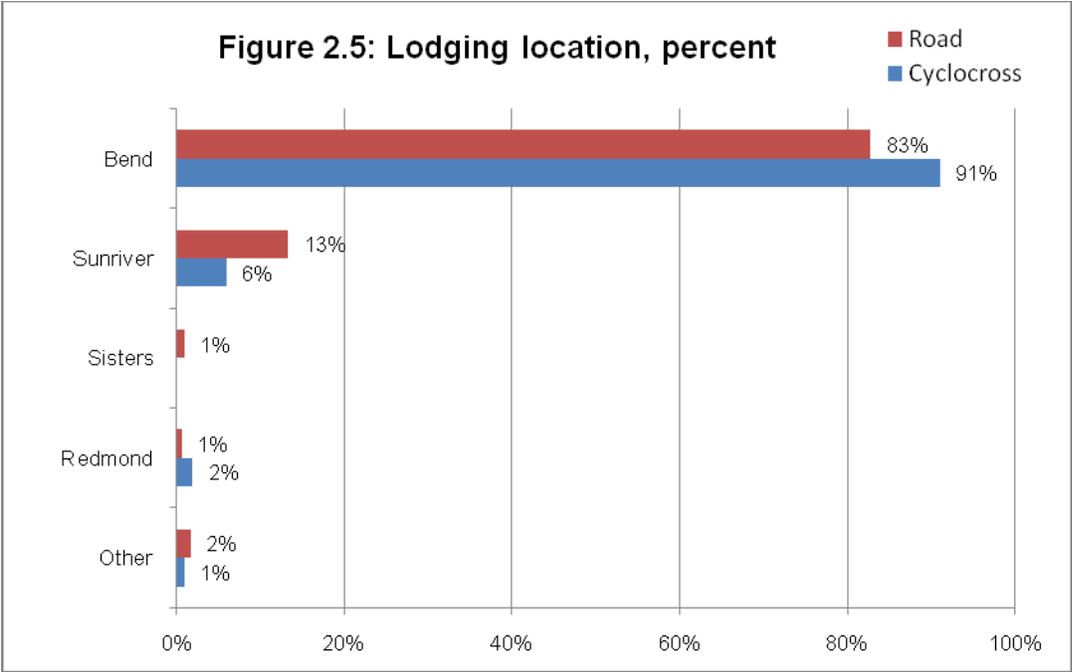
non-event visitors to use rented condos/houses or, predictably, host housing. They were less likely to use the remaining forms of lodging.⁵



Though some Road Nationals and Cross Nationals visitors stayed at Sunriver, the vast majority stayed in Bend (Figure 2.5).⁶ This was especially true for Cross Nationals visitors.

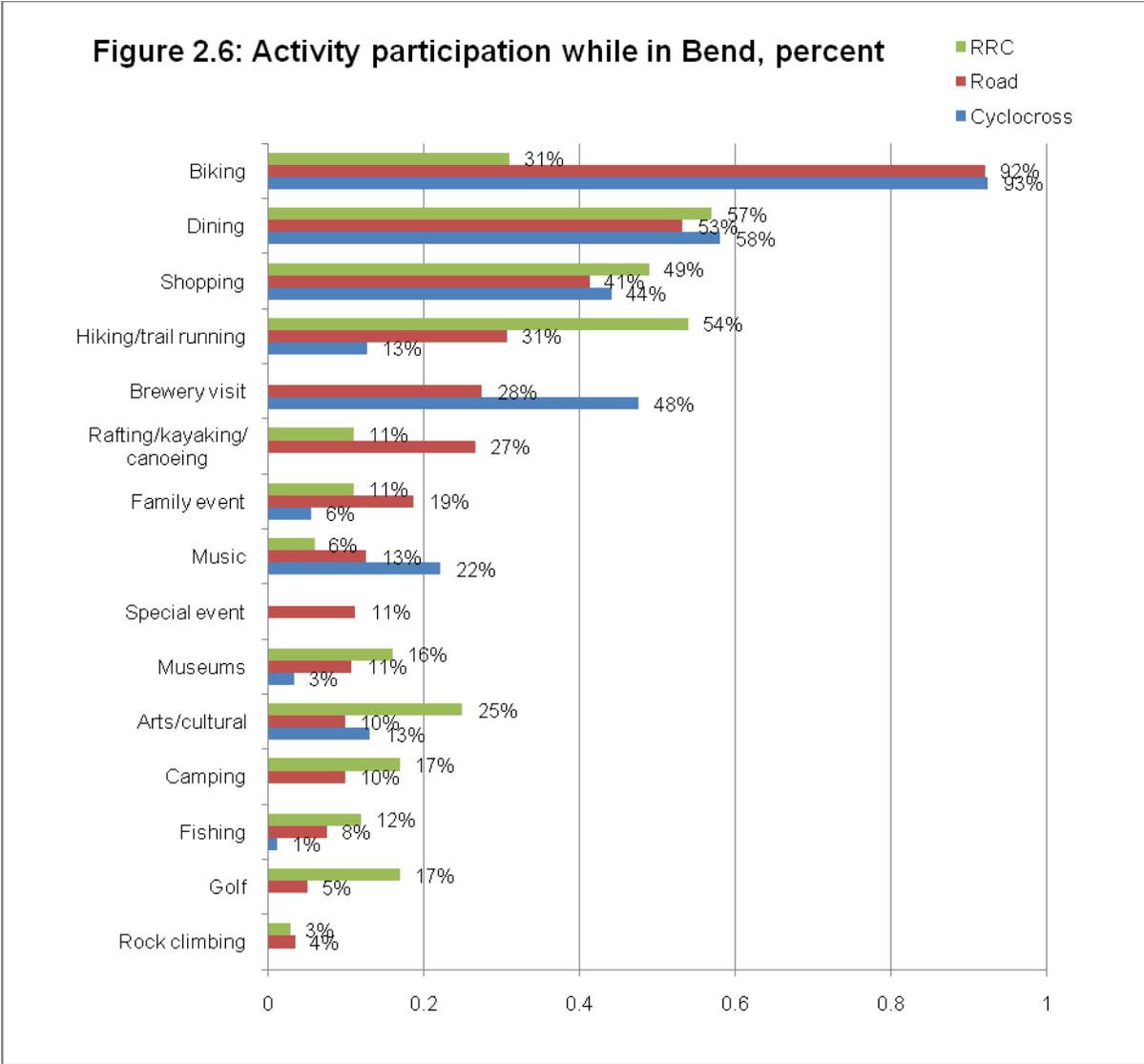
⁵ In the Cross Nationals survey, tent camping was included in the RV/camper van category.

⁶ Sisters was not included in the response categories in the Cross Nationals survey. Any Cross Nationals respondent staying in Sisters would be included in the “other” category.



Road Nationals and Cross Nationals visitors engaged in a number of activities while they were in Bend (Figure 2.6). Guided tours, motor sports, and bird watching are not shown, as they are not in the RRC results and were reported by fewer than 5% of Road Nationals and Cross Nationals respondents. Activities lacking RRC (green) bars were not included in the RRC analysis; activities lacking Cross Nationals (blue) bars were not included in the Cross Nationals survey.

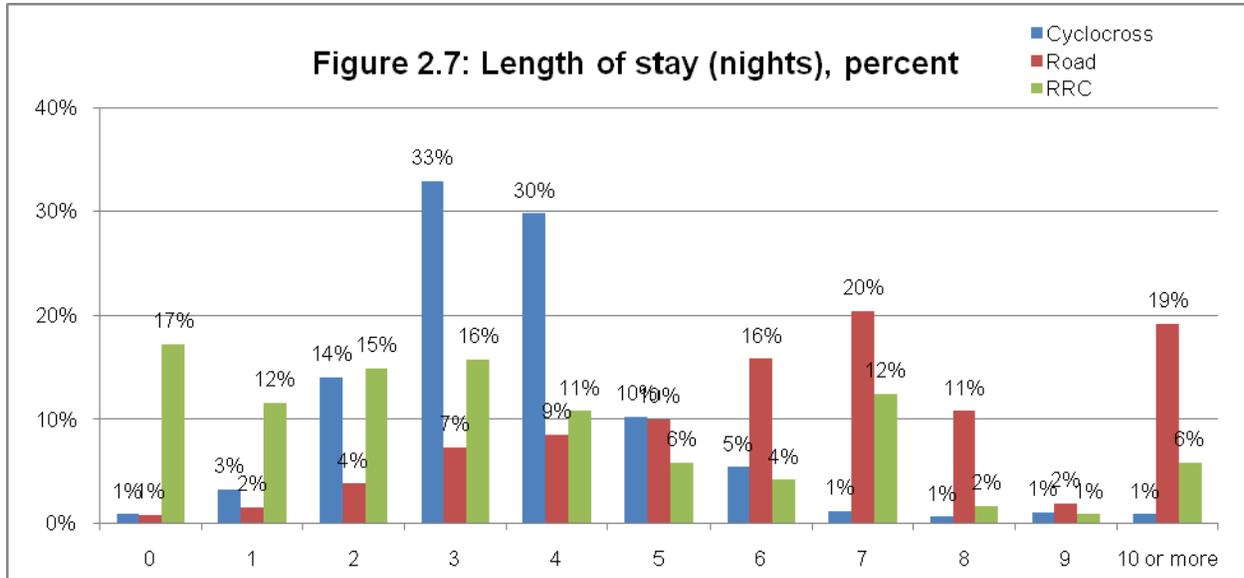
Various activities were reported in the “other” category. For Road Nationals visitors, the most common “other” activities were floating/tubing and visiting parks (including Crater Lake). For Cross Nationals visitors, the most common were snow activities (skiing, snowboarding, snowshoeing, and snow play).



As expected, the vast majority of Road Nationals and Cross Nationals respondents engaged in biking, keeping in mind that some surveys were completed by parents or other non-contestant members of contestant travel parties. Relative to non-event visitors, Road Nationals visitors were more likely to participate in family events and to engage in rafting/kayaking/canoeing. They were less likely to golf or go hiking/trail running. Consistent with the activities associated with the Cross Nationals event, Cross Nationals visitors were more likely than others to engage in a brewery visit or a musical performance.

Note that Road Nationals and Cross Nationals surveys were conducted during packet pick-up, and thus were more likely than the RRC surveys to be completed at the beginning of a visit. As a result, reported activities for Road Nationals and Cross Nationals visitors may reflect intentions rather than completed behavior. It is possible that participation was higher than indicated in Figure 2.6, as visitors heard about activities during their stay in Bend.

Length of stay, in nights, is shown in Figure 2.7. Road Nationals visitors stay more than twice as long as non-event visitors, with a mean of 6.9 compared to 3.3 nights.⁷ Cross Nationals visitors fall in between, with an average of 3.6 nights. The large percentage of Road Nationals visitors staying 10 or more nights presumably reflects the back-to-back events of the Cascade Cycling Classic and the Road Nationals.



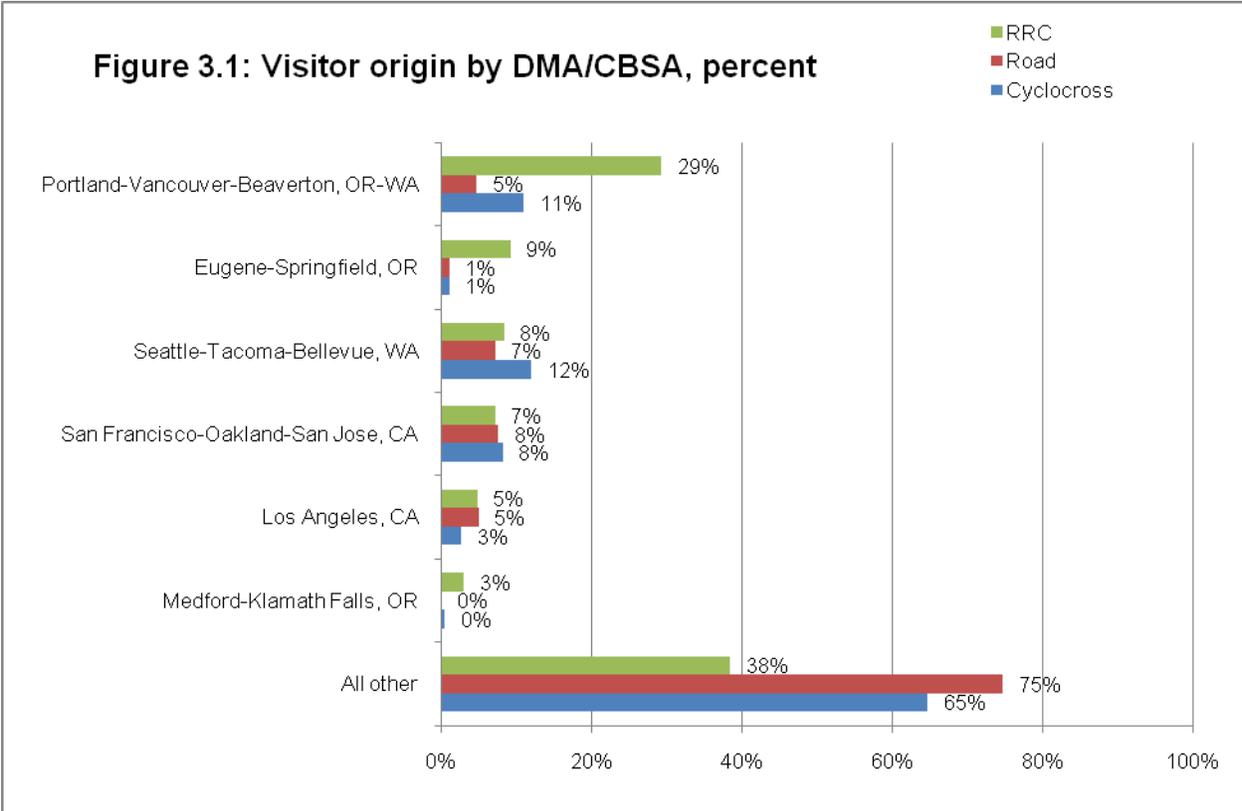
With respect to party size, Road Nationals travel parties include an average of 3.8 persons, Cross Nationals parties an average of 3.5 persons, and non-event travel parties an average of 3.7 persons.

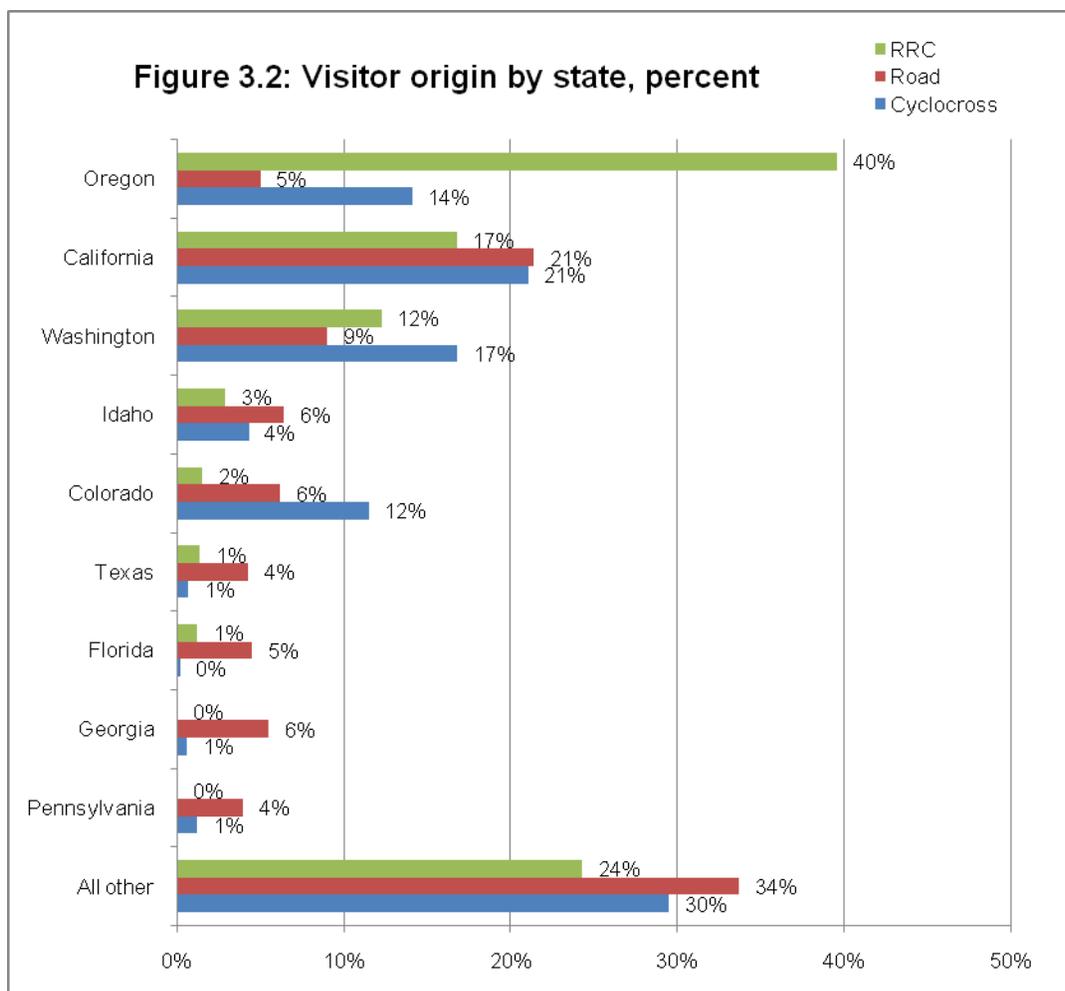
Section 3. Geographic Origin and Demographic Characteristics

Although Bend has received some coverage in national media, its marketing as a tourist destination is focused on the West Coast and, especially, the Pacific Northwest. The RRC analysis of Bend summer visitors indicates that 40% come from Oregon, 17% from California, and 12% from Washington. Individually, other states represent 3% or less of Bend's standard non-event visitors as reported in the RRC research. On the other hand, Road Nationals visitors came from all 50 states and Cross Nationals visitors from 43 states. Figures 3.1 and 3.2 show how visitor origins differ between Bend's non-event traffic and the Road Nationals and Cross Nationals events.⁸ Origin for RRC and Road Nationals visitors is based on zip codes reported in the surveys. Origin for Cross Nationals visitors is based on zip codes for all registered contestants.

⁷ This differs from the 4.0 nights in the RRC report. That is the average amongst those staying overnight and does not account for day visitors. The following accounts for day visitors, which represent 17% of the non-seasonal-resident trips: 17%*0 nights + 83%*4.0 nights = 3.3 nights.

⁸ For Figure 3.1, note that RRC visitors are classified using the designated market area (DMA) approach while Championships visitors are classified using the core based statistical area (CBSA) approach. DMAs and CBSAs do not match perfectly, so Figure 3.1 should be viewed as a broad comparison. For Figure 3.2, Georgia and Pennsylvania are not presented in the RRC results and are assumed to represent less than 1% of non-event visitors.





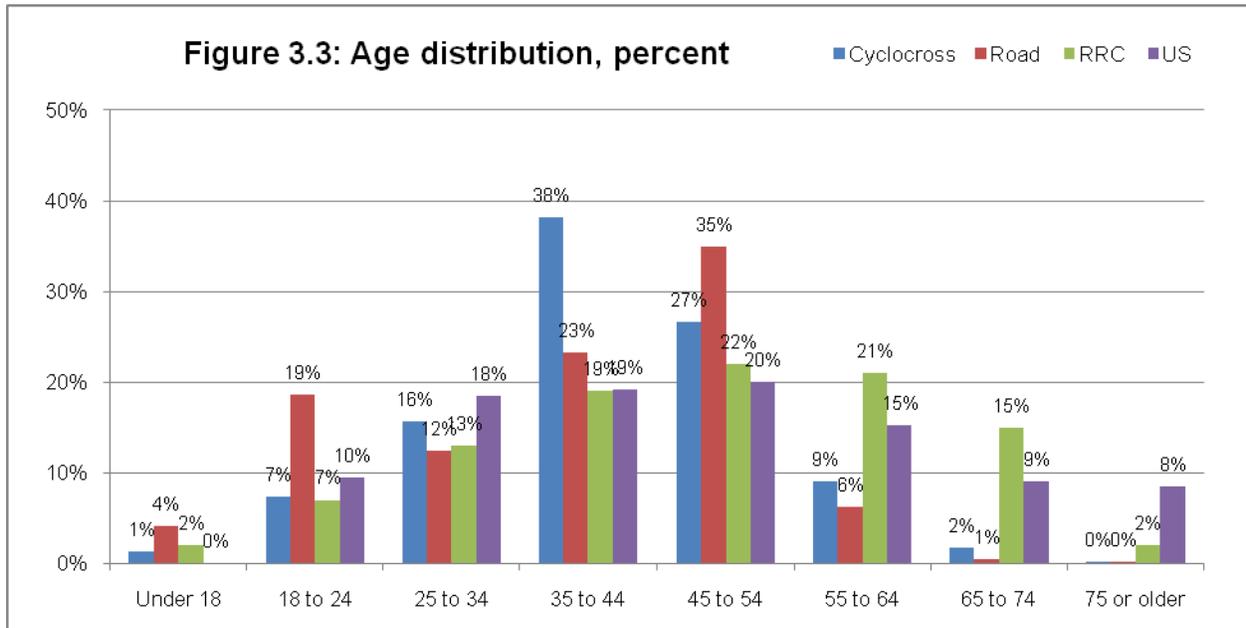
Bend is clearly dependent on Oregon visitors in its normal non-event market, while Road Nationals and Cross Nationals visitor origins are spread much more widely across the country. As a result, the events exposed Bend to visitors who otherwise may not have visited. This is especially true of Road Nationals visitors. Cyclocross racing is especially popular in Oregon, Washington, and Colorado; representation from those states is stronger for Cross Nationals visitors than for Road Nationals visitors.

Likewise, the Road Nationals and Cross Nationals are more likely to attract visitors who had not previously been to Bend – though this effect was not as great as expected. Fewer than half (44%) of Bend’s non-event respondents were first-time summer visitors. More than half (59%) of Road Nationals respondents were first-time visitors. These percentages varied by residence, with 39% of West Coast (Oregon, Washington, and California) and 70% of all other Road Nationals respondents being first-time visitors.

Fewer than half (42%) of Cross Nationals respondents were first-time visitors. As with Road Nationals respondents, the percentage of first-time visitors was lower for West Coast residents (27%) than for other residents (60%).

Road Nationals and Cross Nationals visitors also may differ from non-event visitors with respect to demographic characteristics. Figure 3.3 shows differences in respondent age distribution

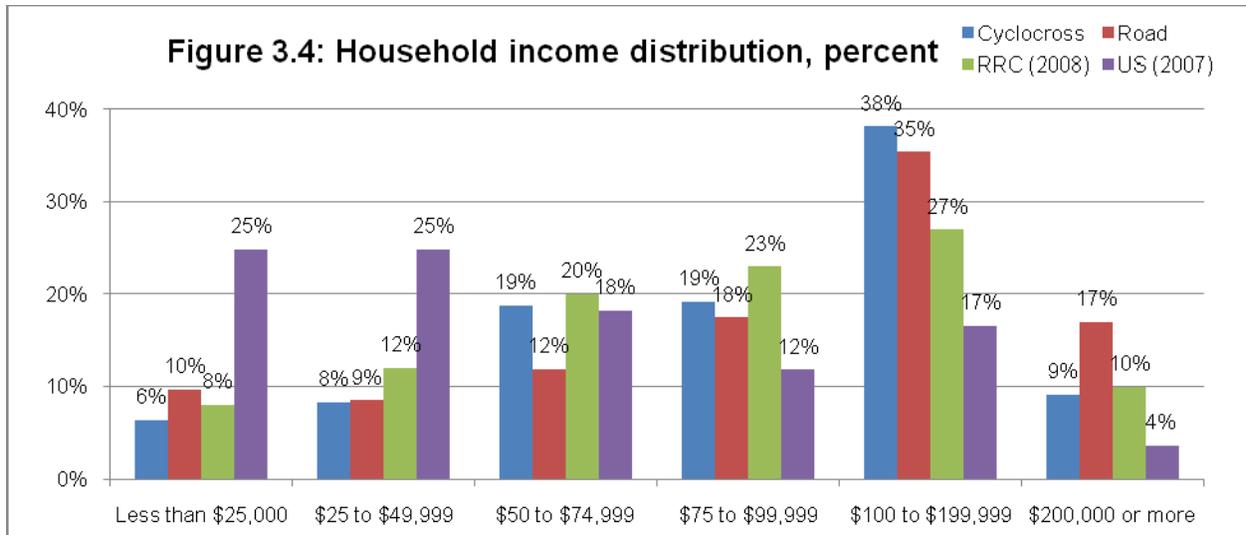
across the two groups. The purple columns are percentages of the US population 20 and older.⁹ Looking first at the RRC visitors and the US as a whole, there is a reasonably close match, allowing for lower travel rates amongst the elderly.



The Road Nationals and Cross Nationals visitors are noticeably younger. The Road Nationals races were for Junior, Under 23, and Elite classes, so the high percentage in 18 to 24 is not surprising. Because of the presence of juniors, the high Road Nationals percentages in the mid 30s to mid 50s also is not surprising; these respondents presumably are parents of the junior competitors. Amongst Cross Nationals visitors, the 35 to 44 category is largest.

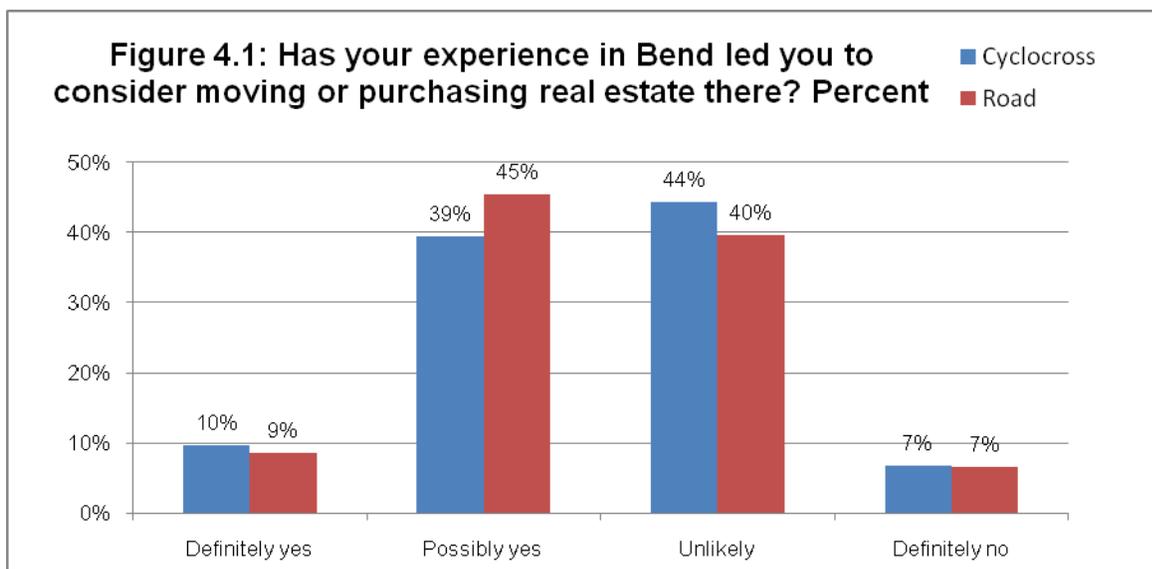
Figure 3.4 shows the equivalent distributions for household income. Bend's non-event visitors are clearly above national averages, but this is even more true for Road Nationals and Cross Nationals visitors. On a percentage basis, Road Nationals and Cross Nationals visitors are twice as likely as Americans as a whole to have income in the \$100,000 to \$199,999 range. Road Nationals visitors are more than four times as likely to have income in the \$200,000 or more range, while Cross Nationals visitors are more than twice as likely.

⁹ The US Census uses 5-year categories, so the break is at 20 rather than 18.



Section 4. Real Estate

Road Nationals and Cross Nationals respondents also reported the effect of their visit on potential in-migration or real estate purchase. The question wording was: “Sometimes people visit a place and like it so much they decide to move or purchase real estate there. Has your experience in Bend led you to consider moving or purchasing real estate there?” As shown in Figure 4.1, approximately half indicated they definitely or possibly would consider moving to or purchasing real estate in Bend (49% for Cross Nationals visitors, 54% for Road Nationals visitors).



Tourist visits are known to catalyze in-migration to destination regions, in general and specifically amongst entrepreneurs.¹⁰ By attracting *new* visitors to the region, from origins untapped by non-event tourism, the Road Nationals and Cross Nationals may have a disproportionately large impact on new in-migration and real estate purchases.

There is inevitable uncertainty in survey reporting of behavioral intentions, especially for behavior of such magnitude. The income distribution of Road Nationals and Cross Nationals visitors (Figure 3.4) suggests that relocation or purchase of second homes is realistic for many in this group. However, Central Oregon has high unemployment and narrow job opportunities relative to large urban areas, and the nation is in the middle of a housing crisis. The specific numbers in Figure 4.1 should be treated with some caution, but they reflect the strongly positive experience that many Road Nationals and Cross Nationals visitors had in Bend. Even if only a portion of this 49% to 54% follows through on their stated intention, it will have a noticeable economic impact in Central Oregon.

Section 5. Promoters v. Detractors/Likelihood of Returning

All tourism may generate return visits and recommendations to others. Are special events different in the magnitude of these benefits? The RRC survey provides a reference point for recommendations to others. That survey asked how likely it was that each respondent would recommend Bend to a friend, family member, or colleague.

Two-thirds (66%) of Bend's non-event visitors gave rating scores of 9 or 10. As the RRC report notes, these people tend to be "promoters" of the destination. About one quarter (26%) gave scores of 7 or 8, with these respondents tending to be more impartial or passively satisfied. Lastly, 8% gave ratings of 6 or below. These are "detractors." RRC calculates Bend's "net promoter score" (percentage of promoters minus percentage of detractors) as 58% for non-event visitors.

Figure 5.1 shows results for RRC, Road Nationals, and Cross Nationals visitors. For Cross Nationals visitors, 69% were promoters and 10% detractors, for a net promoter score (NPS) of 59%. For Road Nationals visitors, 63% were promoters and 16% detractors, for an NPS of 46%. The NPS for Cross Nationals visitors is similar to that of non-event visitors, while the NPS for Road Nationals visitors is somewhat lower. It appears that Cross Nationals visitors enjoyed their Bend experience somewhat more than Road Nationals visitors, perhaps in part because more of the Cross Nationals visitors came from the Pacific Northwest.

¹⁰ Lindberg, K., R.L. Johnson, and B. Rettig. 1994. Attitudes, concerns and priorities of Oregon Coast residents regarding tourism and economic development. Oregon Sea Grant, Corvallis, OR.
Snepenger, D., J. Johnson, and R. Rasker. 1995. Travel stimulated entrepreneurial migration. *Journal of Travel Research* 34(1):40-44.

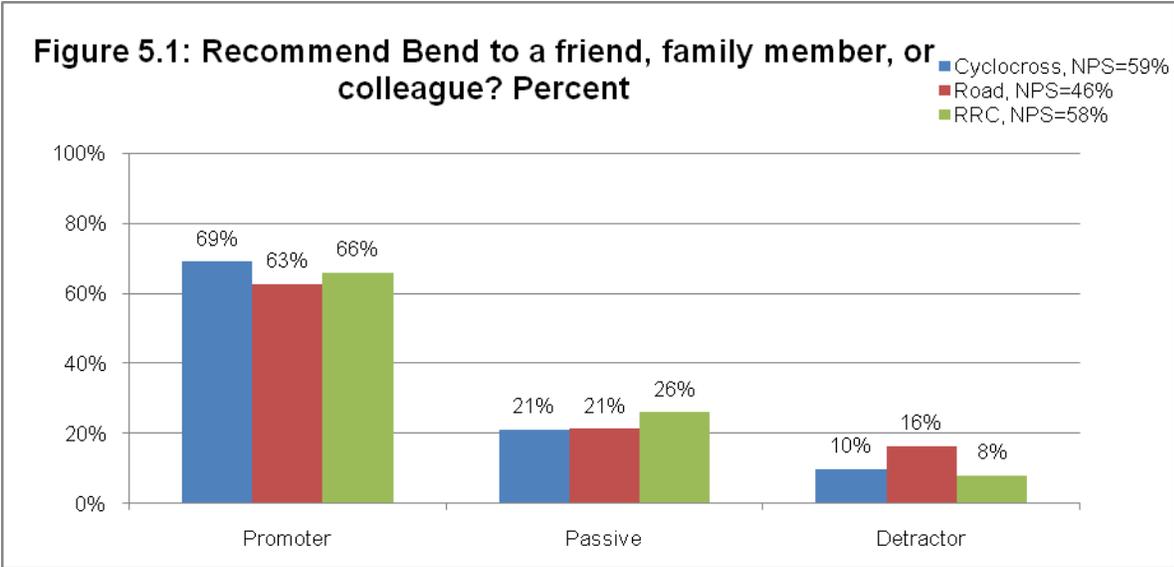


Figure 5.2a shows the full distribution of Road Nationals visitor “recommend to others” responses and responses to the question: “How likely are you to return to Bend for a future visit – other than the 2010 Road Championships?” Respondents are less likely to return themselves than to recommend to others. Figure 5.2b shows the same information for Cross Nationals visitors. As indicated by the NPS percentages, Cross Nationals visitors were somewhat more positive than were Road Nationals visitors.

It is important to keep in mind that respondents had made one visit and would visit again in 2010 if they were to compete in the Road Nationals and Cross Nationals that year. Figures 5.2a and 5.2b show the intention of making *additional* trips to Bend. Though likelihoods were lower for both of these measures than for the non-event visitor measure, they are impressive when one considers the obligatory nature of Road Nationals and Cross Nationals events.

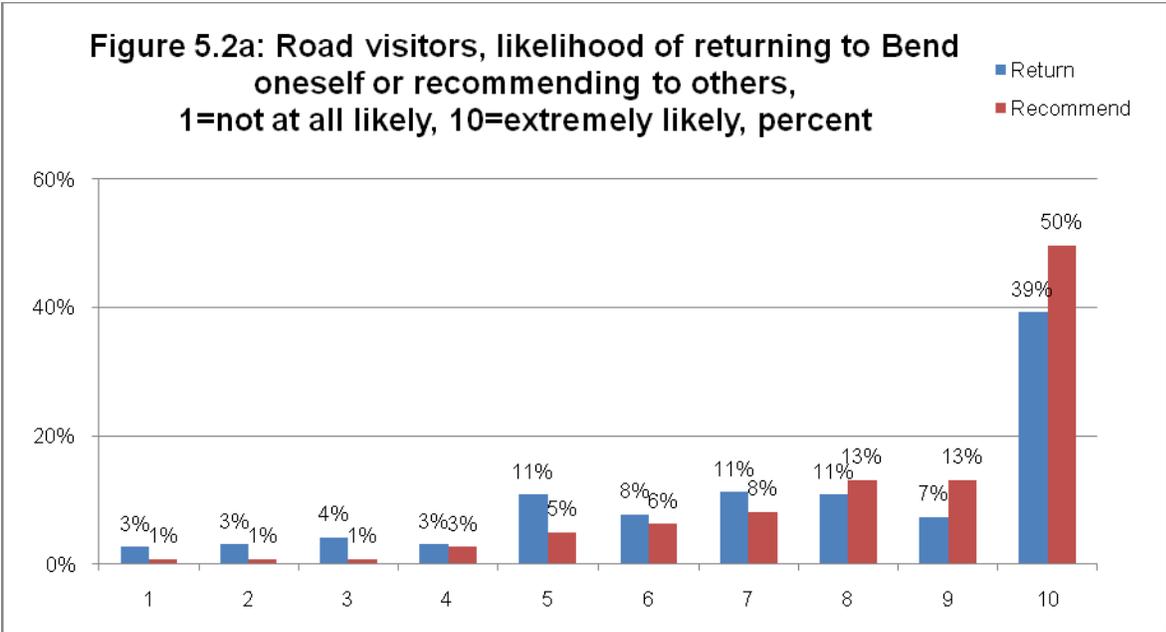
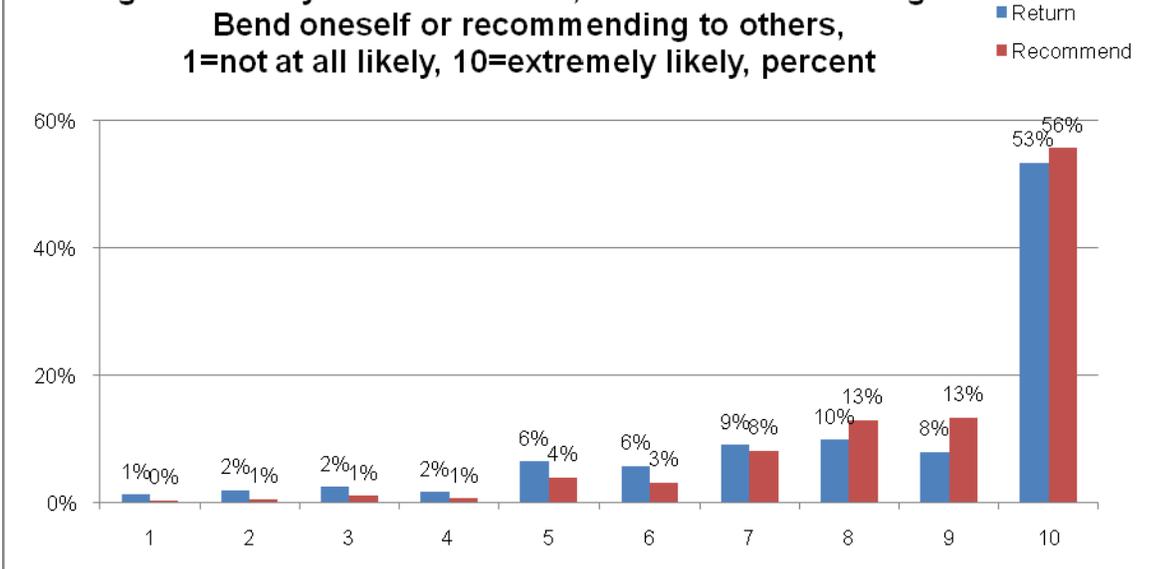


Figure 5.2b: Cyclocross visitors, likelihood of returning to Bend oneself or recommending to others, 1=not at all likely, 10=extremely likely, percent



Appendix

The following steps were used in estimating the multiplier effects of Cross Nationals 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 impact 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. Impact estimates were generated. Cross Nationals expenditure data are in 2009 dollars, which were adjusted in IMPLAN to 2006 dollars to match the model data file. Impact results are shown in 2009 dollars using the IMPLAN deflators to convert back from 2006 to 2009. The IMPLAN model was estimated in disaggregated form with all 509 IMPLAN sectors, but results are grouped into broad sectors based on the 2-digit NAICS classification.¹¹

Table A.1 shows economic impact across broad sectors in Deschutes County.

¹¹ See <http://www.naics.com/naics2-6page.htm> for category descriptions. NAICS is the North American Industry Classification System, a system for classifying economic activity into categories.

Table A.1: Total economic impact of the Cross Nationals in Deschutes County, thousands of 2009 dollars (employment in jobs)			
	Sales	Labor income	Employment
11 Ag, Forestry, Fish & Hunting	3	1	0.1
21 Mining	2	0	0
22 Utilities	15	3	0
23 Construction	11	4	0.1
31-33 Manufacturing	20	4	0.1
42 Wholesale Trade	32	12	0.2
48-49 Transportation & Warehousing	13	6	0.1
44-45 Retail trade	165	78	3.7
51 Information	28	6	0.1
52 Finance & insurance	39	11	0.2
53 Real estate & rental	51	8	0.4
54 Professional, tech services	42	16	0.4
55 Management of companies	7	3	0
56 Administrative & waste services	24	11	0.4
61 Educational services	3	1	0.1
62 Health & social services	47	25	0.5
71 Arts, entertainment & recreation	75	25	1
72 Accommodation & food services	662	235	9.2
81 Other services	18	7	0.3
92 Government & non NAICs	48	6	0.1
Institutions	34	0	0
Total	\$1,339	\$462	17

As one would expect, most of the economic impact accrues to the accommodation and food services sector. However, the multiplier process means that initial spending in a relatively narrow range of sectors (hotel, restaurants, retail, etc.) generates impacts throughout the economy. For example, the Cross Nationals generated 9 jobs in the accommodation and food services sector, but it also generated \$11,000 of sales in the construction sector.

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 impact 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.
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.

About the Author

Professor Kreg Lindberg is the author of this report. Lindberg has 20 years experience in the field of tourism and outdoor recreation, including extensive work in economic valuation and impact. Lindberg has published multiple articles in leading academic/research journals, including *Annals of Tourism Research*, *Journal of Leisure Research*, and *Forest Science*.

Lindberg has a Ph.D. in forestry from Oregon State University (OSU), with a focus on tourism and recreation and a minor in economics. He is an associate professor in the Tourism and Outdoor Leadership program at the OSU Cascades Campus in Bend. He teaches courses in eco and adventure tourism, research methods, data analysis, and park management.