

The Economic Impact of Richmond 2015 in Richmond MSA and Virginia

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Prepared for:

Richmond 2015



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1. Executive Summary

In September 2015, Richmond successfully hosted the Union Cycliste Internationale (UCI)¹ Road World Cycling Championships. This international sporting event attracted an estimated 645,000 spectators from around the world. The money spent to organize the UCI Championships, as well as visitor spending, contributed positively to the economies of both the Richmond metropolitan statistical area (MSA) and Virginia.² The economic impact of Richmond 2015 is summarized below.³

The spending activity of organizing Richmond 2015 generated an estimated \$23.0 million in economic impact (direct, indirect, and induced) in the Richmond MSA and \$24.0 million in Virginia from 2012 to 2015.

- The estimated total expenditure for organizing Richmond 2015 was \$23.2 million, consisting of spending in administration (including rights fees)⁴, business development, technical and competition, event operation, marketing and communications, and collegiate championships as the official test event. This figure also includes the value of in-kind services provided by businesses and local government agencies.⁵
- The total economic impact of organizing the event was estimated to be \$23.0 million (direct, indirect, and induced) in the Richmond MSA from 2012 to 2015.
- Event organization injected an estimated \$24.0 million (direct, indirect, and induced) into the state economy from 2012 to 2015.

Richmond 2015 attracted an estimated 645,000 spectators⁶ from across the globe to the Richmond region during the UCI Championships.

- In addition to the spectators, there were 5,284 credentialed participants at Richmond 2015, including athletes and their supporting staff, UCI and Richmond 2015 organizers, race officials and staff, and media representatives and journalists.
- Based on an intercept survey of 407 individuals during the UCI Championships, spectators were from 34 U.S. states and 29 countries. For international spectators (including those from North America), there were visitors from Europe, Oceania, Africa, Asia, and South America.

¹ UCI stands for Union Cycliste Internationale in French, which is translated as International Cycling Union in English. UCI Road World Cycling Championships is abbreviated as UCI Championships in this report.

² The study region is defined as the Richmond MSA and the state of Virginia. Richmond MSA is made up of the following: the counties of Amelia, Caroline, Charles City, Chesterfield, Dinwiddie, Goochland, Hanover, Henrico, King William, New Kent, Powhatan, Prince George, and Sussex; and the cities of Colonial Heights, Hopewell, Petersburg, and Richmond.

³ Richmond 2015 has become synonymous with the 2015 UCI Championships. In this study, Richmond 2015 refers to both the organization as well as the UCI Championships event that was held in Richmond in September 2015.

⁴ Rights fees are the payment to UCI for the right to host the 2015 Road World Cycling Championships.

⁵ This figure does not include expenditures by local governments for the event.

⁶ Spectators are defined as individuals watching the race during the UCI Championships; they do not represent unique visitors to the region.

- Of surveyed spectators, 44% live in the Richmond MSA, and 13% came from other Virginia locations. Moreover, 31% of surveyed spectators were from other states, and 12% came from other countries.
- Chmura’s survey indicated that a vast majority of spectators (92%) were in Richmond primarily to attend Richmond 2015.
- Excluding day-trippers, the average trip length for overnight spectators to Richmond 2015 was 5.9 days, with most of this time spent in the Richmond region.
- For day-trippers, Chmura’s survey found that they spent an average of \$59.10 per person per day in Virginia. For overnight visitors, the per-person per-day spending in Virginia was \$139.90 for visitors whose primary trip purpose was to attend Richmond 2015. This amount was \$123.80 for individuals whose primary trip motivation was other than Richmond 2015.

Spending by visitors to Richmond 2015 generated an estimated \$138.4 million in economic impact (direct, indirect, and induced) in the Richmond MSA, and \$145.9 million in Virginia during the UCI Championships.⁷

- Total direct visitor spending attributable to Richmond 2015 was estimated at \$74.6 million in the Richmond MSA and \$75.7 million in Virginia. This figure excludes visitor spending that was paid to Richmond 2015 organizers—such as ticket and merchandise sales.
- The total estimated economic impact of visitor spending was \$138.4 million (direct, indirect, and induced) in the Richmond MSA in 2015.
- The estimated economic impact of visitor spending in Virginia reached \$145.9 million (direct, indirect, and induced) in 2015.

Combining event organization and visitor spending, the total economic impact of Richmond 2015 was an estimated \$161.5 million (direct, indirect, and induced) in the Richmond MSA and \$169.8 million in Virginia.

- From 2012 to 2015, Richmond 2015 generated an estimated \$161.5 million (direct, indirect, and induced) in economic impact in the Richmond MSA.
- The total economic impact of Richmond 2015 in Virginia was estimated at \$169.8 million from 2012 to 2015.
- The state received an estimated \$4.9 million in cumulative tax revenue from Richmond 2015, while tax revenue for local governments in the Richmond MSA amounted to an estimated \$3.0 million. The source of state and local tax revenue includes both visitor spending and spending to organize the event.

⁷ This estimate only captures the economic impact directly associated with Richmond 2015 participants and spectators. It does not take into consideration other events occurring during the same time. For example, Virginia Commonwealth University cancelled its classes for a week, and many downtown workers chose to work from home during the event. Those events are beyond the control of Richmond 2015.

- Richmond 2015 gathered significant national and international media attention, increasing the exposure and visibility of both the Richmond region and Virginia. This positive exposure is likely to benefit the region and the state well after the successful completion of the UCI Championships.

Table 1.1 summarizes the economic and fiscal impact of Richmond 2015 in both the Richmond MSA and Virginia.

Table 1.1: Economic Impact Summary of Richmond 2015 (\$Millions, 2012-2015)			
	Direct Impact	Total Impact	Tax Revenue
Richmond MSA	\$87.7	\$161.5	\$3.0
Virginia	\$88.9	\$169.8	\$4.9
Note: Numbers may not sum due to rounding			
Source: IMPLAN Pro 2013 and Chmura			

2. Background

In September 2015, Richmond successfully hosted the UCI Road World Cycling Championships—a 10-day event held from September 18 to 27.⁸ Richmond was the first U.S. city to host the championships since Colorado Springs in 1986.

This major sporting event was more than four years in the making. In September 2011, Richmond won the bid to host the UCI Championships in 2015. After winning the bid, Richmond 2015 was formed to organize the event. Over the years, Richmond 2015 has become synonymous with the 2015 UCI Championships in media, advertising, and public discourse. As a result, in this study, Richmond 2015 refers to both the organization, as well as the UCI Championships event held in Richmond in 2015.

As Richmond was competing for the bid in 2011, Chmura Economics & Analytics (Chmura) completed a study on the potential economic impact of such an event in the Commonwealth of Virginia as well as the City of Richmond.⁹ After Richmond won the bid, Chmura prepared an updated analysis of the potential economic impact of such an event in Virginia, as well as its impact in the localities around the City of Richmond; this included the counties of Henrico, Chesterfield, and Hanover.¹⁰ With the UCI Championships complete, this study aims to estimate the realized economic impact of Richmond 2015 in both the Richmond MSA and the state of Virginia.

The remainder of the report is organized as follows:

- Section 3 describes the approach and methodology used in the study, including data collection and impact-estimating methodologies
- Section 4 analyzes the economic impact of spending from event organization and visitor spending
- Section 5 presents tax revenue from Richmond 2015
- Section 6 identifies other non-quantified benefits of Richmond 2015
- Section 7 provides a summary
- Appendix 1 provides detailed results of the intercept survey

⁸ The opening ceremony was on September 18. Some media stated this was 9-day event, not counting September 18.

⁹ Please see "The Economic Impact of Holding the International Cycling Union World Road Cycling Championships in Richmond, Virginia," prepared by Chmura Economics & Analytics, April and July 2011.

¹⁰ Please see "The Economic Impact of Richmond 2015 in the Greater Richmond Region, Virginia," prepared by Chmura Economics & Analytics, August 2012.

3. Methodology

The economic impact of Richmond 2015 in both the Richmond MSA and Virginia came from the following two sources:

- Organizing the event. As of November 19, 2015, Richmond 2015 spent \$19.5 million to organize the UCI Championships. In addition, the value of in-kind services (VIK) was \$3.7 million, provided by various businesses and local government agencies.¹¹ As a result, the total cost of staging the event was an estimated \$23.2 million. This cost includes marketing, event logistics, and security.¹² Organizers were committed to hiring as many businesses in both the Richmond region and throughout Virginia for the event.
- Visitor spending. The UCI Championships attracted over 5,000 credentialed participants—this included athletes, supporting staff, event officials, and media from around the world. The event also attracted an estimated 645,000 spectators to the region.¹³ Those visitors spent a significant amount of money in the region and throughout the state during the ten-day event.

3.1. Estimating the Direct Impact of Richmond 2015

Organizing the UCI Championships is a complicated undertaking that requires coordination between the organizers, various state and local agencies, and many contractors. Spending on event staging refers to the cost associated with planning, organizing, and carrying out the event. These activities include, but are not limited to: setting up event sites, such as courses and fan zones for Richmond 2015; transporting equipment; setting up food vendors and other retailers; security; and event logistics. Additional spending such as administration, staff payroll, marketing, and advertising are also part of the expenditure on event staging.

The main source of economic impact in both the Richmond MSA and Virginia is from visitor spending in those regions. Accurately estimating the economic impact of visitor spending is complicated by several factors. The first step is to determine what type of visitor spending is attributed to Richmond 2015. Richmond 2015 visitors include athletes, support staff, accredited officials, journalists, and onsite spectators. For those visitors, spending includes food, lodging, shopping, transportation to and from events, and purchases of tickets and merchandise.

To calculate direct spending attributed to Richmond 2015, this study distinguishes between three types of visitors: (1) day-trippers, (2) overnight visitors, whose primary purpose was to attend Richmond 2015, and (3) overnight visitors, whose primary visiting purpose was other than Richmond 2015. The direct visitor spending attributable to Richmond 2015 includes the following:

- 1) Total daily spending by day-trippers
- 2) All visitor spending within Virginia or the Richmond MSA for overnight visitors whose primary visiting purpose was to attend Richmond 2015

¹¹ While Richmond 2015 does not pay for in-kind services, those services have generated economic impact in the Richmond MSA and in Virginia. For example, some professional services and products were provided to Richmond 2015 as in-kind. To produce those services and products, regional businesses need to purchase supplies and pay for their employees, thus generating an economic impact.

¹² The amount spent by local jurisdictions for the event was not included in this analysis.

¹³ Source: Richmond 2015.

- 3) A proportion of spending in Virginia or the Richmond MSA for visitors whose primary visiting purpose was other than attending Richmond 2015

The proportions for the last group were determined by comparing the time visitors spent at Richmond 2015 with the total time they spent in Virginia or the Richmond MSA.

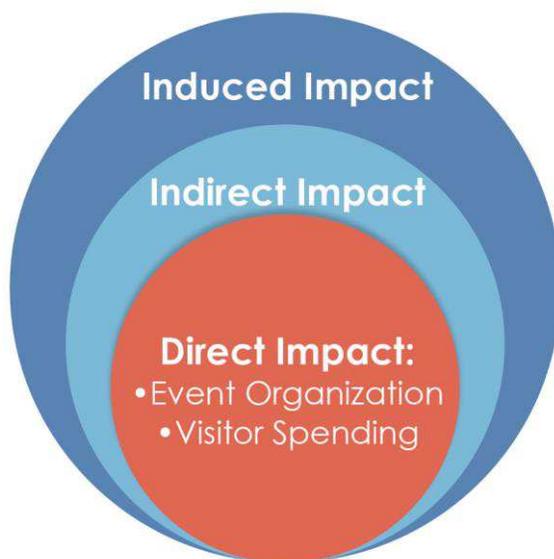
3.2. Estimating Total Economic Impact

The two components identified in Section 3.1 (event organization spending and visitor spending) constitute the direct economic impact of Richmond 2015 in both Virginia and the Richmond MSA. The total economic impact also includes the economic ripple effects from the direct impact.

The ripple impact, categorized as indirect and induced impacts, measures the benefits of Richmond 2015 to businesses outside of those directly involved in event organization and visitor spending. Using visitor spending as an example, indirect effects are benefits to industries that supply regional hotels or restaurants where Richmond 2015 visitors patronize. Induced effects occur when workers are hired by regional visitor-serving businesses. These new workers spend their income in the area, which injects more money into the regional and state economies.

Ripple effects of both event organization and visitor spending were estimated with IMPLAN Pro¹⁴ software, which is a model often used by economists to measure the economic impact of events. Different spending items of event organization and visitor spending were input into IMPLAN model sectors to estimate the indirect and induced impacts for each sector. Those impacts were eventually aggregated to reach the estimates of the overall economic impact of Richmond 2015 in Virginia and the Richmond MSA. Figure 3.1 illustrates the economic impact framework.

Figure 3.1: Economic Impact Analysis Framework



This study also estimates the fiscal benefit of Richmond 2015 to local governments in the Richmond MSA and throughout Virginia, and to the state government. For visitor spending, local taxes include sales; lodging; meals; admissions; and the

¹⁴ *IMPLAN Professional* is an economic impact assessment modeling system developed by Minnesota IMPLAN Group that is often used by economists to build models that estimate the impact of economic changes on local economies.

business, professional, and occupational license (BPOL) tax. For spending on event organization, BPOL tax is collected by local governments in both the Richmond MSA and Virginia. When the spending location is unknown, the average tax rate for all localities in the Richmond MSA or Virginia is used to estimate tax benefits for local governments. The state government benefits from sales, individual, and corporate income taxes from both event organization and visitor spending.

3.3. Data Collection

Both primary and secondary data sources were combined to evaluate the economic impact of Richmond 2015. The total number of visitors (athletes, staff, officials, journalists, and spectators) was provided by Richmond 2015. In addition, Richmond 2015 organizers also supplied its spending data since 2012. This detailed money spent on various aspects of organizing the championships, such as marketing, event logistics, security, and staffing.

The primary data collection focuses on visitor spending patterns as well as their trip purposes and travel arrangements. Chmura conducted a visitor intercept survey during the UCI Championships and collected 407 surveys. This survey enabled Chmura to obtain reliable estimates of direct spending for Richmond 2015 visitors, with a 5.0% margin of error.

4. Economic Impact of Richmond 2015

4.1. Economic Impact of Event Organization

4.1.1. Richmond 2015 Expenses

As of November 19, 2015, Richmond 2015 spent \$19.5 million for the event. In addition, the value of in-kind services (VIK) was \$3.7 million, provided by various businesses and local government agencies. As a result, the total cost of hosting the 2015 UCI Championships was estimated to be \$23.2 million (Table 4.1).¹⁵ Total expenditures were classified into the following major categories: administration (including rights fees), business development, technical and competition, event operations, marketing and communications, and collegiate championships as the official test event. Although some spending (such as administration, marketing, and collegiate championship) occurred during the years leading up to the event, a significant portion (such as event operations and technical and competition) occurred in 2015.

Paid Expenses as of November 19, 2015	
Administration (including rights fees)	\$11.8
Business Development	\$0.2
Technical and Competition	\$1.2
Event Operations	\$5.3
Marketing and Communication	\$0.3
Collegiate Championships	\$0.6
Value of In-kind Services	\$3.7
Total Estimated Expenses	\$23.2

Source: Richmond 2015

Not all of the above spending items will benefit businesses in the Richmond MSA or in Virginia. While the organizers made an effort to use local businesses as much as possible, some expenses, such as rights fees paid to the UCI, out-of-town travel expenses, and international consultant fees leaked out of the Richmond MSA and Virginia. Based on vendor information provided by Richmond 2015, an estimated 56.6% of total event expenditure was paid to vendors in the Richmond MSA, and 56.7% was paid to Virginia suppliers.¹⁶ Consequently, it was estimated that \$13.1 million of total event expenditures occurred in the Richmond MSA, and \$13.2 million was spent in Virginia.¹⁷

4.1.2. Economic Impact of Event Organization

Table 4.2 presents the estimated economic impact of organizing the UCI Championships in both the Richmond MSA and Virginia. Estimated spending activities from hosting the event generated a cumulative economic impact (including direct, indirect, and induced impacts) of \$23.0 million in the Richmond MSA from 2012 to 2015. Among the total impact, \$13.1

¹⁵ Source: Richmond 2015. This is the latest information as of December 2, 2015.

¹⁶ Data from Richmond 2015 showed that 43.2% of paid vendor expenditures were in the Richmond MSA and 43.4% were in Virginia. For in-kind services, 94.5% of expenditures were in the Richmond MSA and Virginia. For personal expenditures, 100% was in the Richmond MSA and Virginia.

¹⁷ The total amount spent in Virginia includes what was spent in the Richmond MSA.

million was the estimated direct spending in the Richmond MSA to organize the event. The indirect impact in the region was estimated to total \$3.6 million. The induced impact in the region was estimated to total \$6.3 million.

	Direct	Indirect	Induced	Total Impact
Richmond MSA	\$13.1	\$3.6	\$6.3	\$23.0
Virginia	\$13.2	\$4.0	\$6.8	\$24.0

Note: Numbers may not sum due to rounding
 Source: IMPLAN Pro 2013 and Chmura

The economic impact of staging the event in Virginia is slightly larger than the impact in the Richmond MSA, as businesses outside of Richmond benefited from the event organization. The event organization injected an estimated \$24.0 million (direct, indirect, and induced) into the state economy from 2012 to 2015.

The above estimates of the economic impact from organizing the UCI Championships are conservative, as they do not include the economic impact of spending by local governments and other organizations to stage a successful event. In addition, the estimated impact does not include spending by corporate sponsors and FanFest vendors to set up their venues.¹⁸

4.2. Economic Impact of Richmond 2015 Visitor Spending

4.2.1. Estimating Direct Visitor Spending

The UCI Road World Cycling Championships is a prestigious event that typically attracts a large number of visitors to host cities. Those visitors spend a considerable amount in the area, benefiting the regional economy. To estimate the economic impact of visitor spending, three important economic indicators are needed—number of visitors, length of stay, and average spending per visitor.

For the total number of visitors, Table 4.3 lists the total credentialed participants and the estimated number of spectators—according to the Richmond 2015 organizers. There were 5,284 credentialed personnel at the UCI Championships. Among those, 1,393 athletes from around the world competed in the UCI Championships in Richmond. The supporting staff for national and trade teams amounted to 1,117. The event officials numbered 877, including UCI staff and management, official delegations from various countries, and representatives from future UCI Championships hosting cities. The number of credentialed participants representing the media was 696. Finally, there were 1,201 other participants such as service providers, event workers, and guests.

Outside those credentialed participants to the UCI Championships, onsite spectators for Richmond 2015 reached an estimated 645,000.¹⁹ This number was estimated by the event organizers and industry experts with experience in cycling events. The number of spectators does not represent unique individuals, as the same individual attending races on multiple days was counted multiple times. In addition, this figure includes both local residents and out-of-town visitors.²⁰

¹⁸ The spending by spectators at FanFest vendors was included in the visitor spending estimated in Section 4.2.

¹⁹ In previous economic impact studies, it was estimated that the total number of spectators would be 452,580.

²⁰ Please see Appendix 1 for details on the residences of the Richmond 2015 spectators.

Table 4.3: Richmond 2015 Credentialed Participants and Spectators

	Number of Participants
Cyclists	1,393
Support Staff	1,117
Officials	877
Media	696
Other Participants	1,201
Estimated On site Spectators	645,000
Source: Richmond 2015	

Some credentialed participants were from local areas, such as Richmond 2015 staff members and local media personnel. For non-local participants, it was assumed that athletes, their support staff, officials, and media personnel spent an average of 10.7 days in the Richmond region.²¹ Among spectators to the event, Chmura’s survey found that 55% were day-trippers.²² The remainder represents overnight visitors who stayed in either the Richmond region or Virginia for an average of 5.4 days as a result of Richmond 2015.²³

Average spending of visitors in the Richmond MSA and Virginia was estimated based on the intercept survey conducted by Chmura during the event. The Chmura survey found that day-trippers spent an average of \$59.10 per person per day in Virginia. The survey also found that overnight visitors whose primary trip purpose was Richmond 2015 spent \$139.90 per person per day in Virginia. This spending was \$123.80 for those whose primary motivations were other events.²⁴ However, visitor spending on items such as bike race tickets and Richmond 2015 merchandise were already included as part of the event spending analyzed in Section 4.1.²⁵ Excluding overlapping spending items, the total visitor spending attributable to Richmond 2015 was an estimated \$74.6 million in the Richmond MSA and \$75.7 million in Virginia.²⁶ Based on the Chmura intercept survey, visitor spending was allocated to different sectors such as lodging, food and drink, transportation, shopping, and entertainment (Table 4.4).

²¹ For assumptions, please see: “The Economic Impact of Richmond 2015 in the Greater Richmond Region, Virginia,” Prepared by Chmura Economics & Analytics, August 21, 2012.

²² This number was estimated based on the Chmura intercept survey. Please note that this number includes all visitors, while data in the intercept survey includes only Richmond 2015 spectators. Please see Appendix 1 for more details.

²³ Ibid. Please note that this number is slightly smaller than what is reported in Appendix 1. This is because it only captures the number of days in the study region attributable to Richmond 2015, for visitors whose primary purposes were not the UCI Championships.

²⁴ Visitors who purchased travel packages were asked to report the total amount paid for such packages. The total spending on travel packages was allocated to lodging, transportation, food, and ticket sales.

²⁵ The spending by spectators at FanFest vendors was included in the visitor spending estimated.

²⁶ In the 2012 study, total visitor spending was estimated at \$72 million in the Richmond region. While the actual number of spectators was larger than the estimate in the 2012 study, the actual average spending per person was lower than what was used in the 2012 study.

Table 4.4: Average Visitor Spending in Virginia (Per Person Per Day)			
	Day Trip	Overnight Trip	
		Primary	Non-Primary
Lodging	\$0.00	\$45.20	\$18.10
Travel packages from event partner	\$0.00	\$0.00	\$0.00
Food & drink	\$25.80	\$29.60	\$25.70
Transportation	\$13.40	\$48.30	\$40.20
Shopping	\$16.70	\$11.20	\$22.00
Entertainment and attractions*	\$1.20	\$2.20	\$8.10
Any other expenses	\$2.00	\$3.30	\$9.80
Total	\$59.10	\$139.90	\$123.80
* Includes admission to UCI events			
Source: Chmura			

4.2.2. Economic Impact of Visitor Spending

Direct visitor spending generated significant economic impact in the Richmond MSA and Virginia (Table 4.5). In the Richmond MSA, the total economic impact (direct, indirect, and induced) of visitor spending was estimated to be \$138.4 million in 2015. Among those, direct visitor spending in the region was estimated to reach \$74.6 million. The indirect impact was estimated at \$32.1 million, benefiting other businesses within the region supporting the tourism industry. The induced impact was an estimated \$31.8 million in the region in 2015.

Table 4.5: Economic Impact of Richmond 2015 Visitor Spending (\$Million, 2015)				
	Direct	Indirect	Induced	Total Impact
Richmond MSA	\$74.6	\$32.1	\$31.8	\$138.4
Virginia	\$75.7	\$35.6	\$34.5	\$145.9
Note: Numbers may not sum due to rounding				
Source: IMPLAN Pro 2013 and Chmura				

The economic impact of Richmond 2015 visitor spending in Virginia was slightly larger than the impact in the Richmond MSA. Visitor spending generated an estimated \$145.9 million (direct, indirect, and induced impacts) in Virginia. The reason that spending is only slightly larger in the state is because a dominant share of visitors to Richmond 2015 came primarily for the UCI Championships. These visitors spent almost all their time in the Richmond region, and very few of them stayed outside the Richmond MSA.

4.3. Richmond 2015 Economic Impact Summary

Combining event organization expenditures and visitor spending, Table 4.6 presents the overall economic impact of Richmond 2015 in the Richmond MSA and Virginia. Total economic impact (including direct, indirect, and induced) of Richmond 2015 was estimated to be \$161.5 million in the Richmond MSA from 2012 to 2015. Total economic impact of this event in Virginia was an estimated \$169.8 million.

Table 4.6: Economic Impact of Richmond 2015 (\$Million, 2012-2015)				
	Direct	Indirect	Induced	Total Impact
Richmond MSA	\$87.7	\$35.6	\$38.1	\$161.5
Virginia	\$88.9	\$39.6	\$41.4	\$169.8

Note: Numbers may not sum due to rounding
Source: IMPLAN Pro 2013 and Chmura

The economic impact of Richmond 2015—estimated based on the actual number of participants and spectators, and from the visitor intercept survey conducted during the event—does not deviate materially from the estimates in prior studies. In the 2012 report, it was estimated that the total economic impact (direct, indirect, and induced) of Richmond 2015 in the Richmond region²⁷ would be \$150.5 million. In the same report, the total economic impact in Virginia was estimated to be \$158.1 million.²⁸ While the actual number of spectators was significantly larger than the 2012 estimate, the average visitor spending per person turned out to be lower than in the 2012 estimate. Consequently, the economic impact estimate for 2015 is only slightly larger than the impact estimated in 2012.

This estimate presented in Table 4.6 only captures the economic impact directly associated with Richmond 2015 participants and spectators. It does not take into consideration other factors that may have affected local businesses. For example, Virginia Commonwealth University cancelled its classes for a week, and some students left Richmond. During the race week, some downtown workers chose to work from home, and some local residents avoided downtown areas.²⁹ Those factors are beyond the control of the Richmond 2015 organizers and were not incorporated into this analysis.

²⁷ Please note that in the 2012 report, the Richmond region includes only the counties of Henrico, Chesterfield, Hanover, and the City of Richmond. However, those four localities should capture the dominant share of the economic impact of Richmond 2015 in the MSA.

²⁸ Please see “The Economic Impact of Richmond 2015 in the Greater Richmond Region, Virginia,” prepared by Chmura Economics & Analytics, August, 2012.

²⁹ Source: Richmond Times-Dispatch, available at http://www.richmond.com/richmond-2015/article_3d860c83-2dc1-5a0b-bada-2e51fb9a16de.html.

5. Fiscal Impact

Richmond 2015 also generated tax revenue for the Commonwealth of Virginia and localities where event staging or visitor spending occurred. The state of Virginia benefits from the following three main tax streams: sales tax, individual income tax, and corporate income tax. For local governments in the Richmond MSA and Virginia, major tax revenue from Richmond 2015 visitor and event organization spending includes sales tax; meals tax; lodging tax; admissions tax; and business, professional, and occupational license tax (BPOL). To be conservative, only tax revenue from the direct impact was estimated.³⁰

5.1. Fiscal Impact from Event Organization

For spending related to event organization, BPOL tax was collected for local governments if businesses in those localities were contracted to work on the event. It was estimated that local governments in the Richmond MSA collected \$19,930 BPOL tax from money spent to organize the UCI Championships from 2012 to 2015.³¹ The BPOL tax for all local governments in Virginia was an estimated \$20,005 (Table 5.1).³² BPOL tax is estimated based on spending patterns (retail, meals, or professional services) as well as the regional and state average BPOL tax rates for different spending items.

	Local Governments in Richmond MSA	Local Governments in Virginia	State Government
BPOL	\$19,930	\$20,005	
Individual Income			\$264,735
Corporate Income			\$53,453
Total	\$19,930	\$20,005	\$318,188

Source: Chmura

The state government received an estimated \$318,188 in tax revenue from the Richmond 2015 event organization. This includes individual income tax from staff and event workers,³³ as well as corporate income tax from Virginia businesses working the event. For corporate and individual income tax estimates, the IMPLAN model provided profit margins and the proportion of employment compensation in total sales for different businesses, such as construction or professional services.

³⁰ This approach is recommended by Burchell and Listokin in *The Fiscal Impact Handbook*. Source: Burchell, R.W. and Listokin, D. 1978. *The Fiscal Impact Handbook: Estimating Local Costs and Revenues of Land Development*. Center for Urban Policy Research, New Brunswick, NJ; Rutgers, The State University of New Jersey.

³¹ The value of in-kind services was excluded from estimation for local tax revenues.

³² This figure includes tax revenue to local governments in the Richmond MSA

³³ The value of in-kind services was not removed in estimating individual income tax, as those businesses and government agencies still need to pay their employees.

Based on the above information, Chmura estimated total profit and wages attributed to event organization, before applying the state corporate income tax rate of 6% and average state individual income tax rate of 5%.³⁴

5.2. Fiscal Impact from Visitor Spending

From visitor spending, local governments benefit from sales, meals, lodging, admissions, and BPOL tax, while the state government can collect sales, individual, and corporate income tax.

The Virginia state sales tax rate is 5.3% for retail sales; 1% of which is returned to the local governments while the state retains 4.3% of total sales as state revenue. Sales tax is collected from visitor spending in hotels, restaurants, and retail establishments. Total sales tax was estimated to be \$716,406 for local governments in the Richmond MSA and \$727,525 for all local governments in Virginia.³⁵ Sales tax allocated to the state government was estimated to be \$3.1 million.

	Local Governments in Richmond MSA	Local Governments in Virginia	State Government
Sales	\$716,406	\$727,525	\$3,128,357
Meals	\$674,780	\$677,776	
Lodging	\$1,432,555	\$1,456,362	
Admissions	\$21,685	\$21,834	
BPOL	\$144,859	\$146,899	
Individual Income			\$1,181,987
Corporate Income			\$259,942
Total	\$2,990,285	\$3,030,396	\$4,570,286

Source: Chmura

Several localities in the Richmond MSA have a meals tax, which is applied to visitor spending on food and drink. The average meals tax rate for the Richmond MSA is 3.3%. The total meals tax was estimated to be \$674,780 for all local governments in the Richmond MSA, and \$677,776 for all local governments in Virginia.

Many localities in the Richmond MSA have a lodging tax, which is applied to visitor spending on lodging. Average lodging tax in the Richmond MSA is 7.5%. The total lodging tax was estimated to be \$1.43 million for all local governments in the Richmond MSA, and \$1.46 million for all local governments in Virginia.

Admissions tax is collected from visitor spending on admissions to parks, museums, and other recreation facilities.³⁶ Average admissions tax for the Richmond MSA is 2.0%. The total admissions tax was estimated to be \$21,685 for all local governments in the Richmond MSA, and \$21,834 for all local governments in Virginia.

Local governments can also collect BPOL tax from visitor spending in retail, food service, lodging, transportation, recreation, and other services. Depending on the type of business where visitors spend their money, BPOL tax rates vary. The total BPOL

³⁴ Virginia has a progressive state income tax system where higher income individuals pay higher percentages of their income as income tax. The rate ranges from 2% to 5.75%. As a result, 5% is a reasonable assumption, since many jobs resulting from visitor spending or event organization pay low wages.

³⁵ This figure includes tax revenue to local governments in the Richmond MSA.

³⁶ Ticket sales to the Richmond 2015 official event are exempt from City of Richmond admissions tax. Source: Richmond 2015.

tax for local governments in the Richmond MSA was an estimated \$144,859, and \$146,899 for all local governments in Virginia.

Other than sales tax, the state government can also collect individual and corporate income tax from businesses serving Richmond 2015 visitors. The state individual and corporate income taxes were estimated to be \$1.18 million and \$259,942, respectively.

In summary, visitor spending from Richmond 2015 was estimated to generate \$2.99 million in tax revenue for all local governments in the Richmond MSA, and \$3.03 million for all local governments in Virginia.³⁷ The state government is set to receive \$4.57 million in tax revenue from visitor spending.

³⁷ This is smaller than the local tax revenue figure of \$3.7 million estimated in the 2012 study. The difference is in the visitor spending pattern. In the 2012 study, it was assumed that 38% of total visitor spending was on lodging, while Chmura's 2015 intercept survey implies that 26% of total visitor spending was on lodging. This alone implies a reduction in lodging tax revenue of \$0.7 million. Instead, the 2015 Chmura intercept survey found visitors spent more on transportation than in the 2012 study.

6. Broad and Continuing Benefits

Though constituting a major part of the economic impact of the UCI Championships in the Richmond MSA and Virginia, Richmond 2015 event organization and visitor spending do not capture all the economic benefits resulting from Richmond 2015. In this section, Chmura discusses other benefits of Richmond 2015—some of which cannot be easily quantified.

In hosting the UCI Championships, the City of Richmond, surrounding Henrico and Hanover counties, and the state of Virginia gained tremendous media exposure throughout the world. Data from Richmond 2015 indicate that hundreds of journalists from 60 media outlets in 17 countries came to Richmond to report on the event. Many of those media outlets were not just specialized niche media of cycling or sporting events, but top domestic and international media organizations. Domestically, national news organizations such as the Washington Post, Wall Street Journal, New York Times, USA Today, and Associated Press sent journalists to Richmond. International media such as British Broadcasting Corporation (BBC), De Telegraaf, and Eurosport were also represented. Locally, the Richmond Times-Dispatch and local television networks also provided extensive coverage before and during the UCI Championships.³⁸

The UCI Championships generated over one hundred broadcast hours in the United States (original and reruns), and about 800 hours of original broadcast globally. More than 150 countries carried the events on television or online. More importantly, the event received “ubiquitously positive coverage.”³⁹ This coverage shines a favorable light and can provide future benefits to Richmond and Virginia as well.

Richmond 2015 provided a boost to both state and regional tourism. Media exposure, as well as word-of-mouth-marketing on social media increased the interest in the region. During Richmond 2015, some individuals also visited other tourist attractions around the region, boosting their visitations. Through several media reports, many domestic and international visitors commented that the region was beautiful and the people were very friendly. Many of them stated they would come back and visit again in the future. The event also brought families and friends back to the Richmond region. Some of them were prior residents of or prior visitors to the region. They took advantage of this opportunity to visit the Richmond area⁴⁰

Using Richmond 2015 as a catalyst, local governments implemented several infrastructure improvement projects, such as road paving, new bike routes, and sidewalk repair. Those projects are related, but not exclusive to the UCI Championships.⁴¹ Regional residents can enjoy improved infrastructure in the coming months or years. Other streetscape improvement programs such as murals, new street signs, and bike racks throughout the city also improve the image of the region.

The tremendous media exposure can also help Virginia businesses that sponsored the event. Major corporate sponsors have utilized their sponsorship and associated media exposure to reach out to their customers, clients, and business partners—thus strengthening business relationships and expanding business opportunities. This event can also increase the appeal of the Richmond region to attract talent and businesses. Some regional business leaders remarked that such a major

³⁸ Source: Richmond 2015.

³⁹ Ibid.

⁴⁰ Source: Richmond Times-Dispatch, September 27, 2015, available at: http://www.richmond.com/richmond-2015/article_bd66328e-841f-5aca-9f7e-e7ec93d81299.html

⁴¹ Source: Richmond Times-Dispatch, November 22, 2015, available at: http://www.richmond.com/news/local/article_bbf59ec4-3acc-5740-87a4-c965411140e1.html

international sporting event was critical in creating a civic culture that helps them recruit top talent and national and international businesses to the region.

Finally, Richmond 2015 has implemented a youth education and outreach program that could have long-lasting benefits to the residents of the region. The youth program organized events at schools throughout the area and used the UCI Championships to hopefully inspire more children to participate in the cycling sport. This outreach program connected with children at an impressionable age and might instill a life-long love for the cycling sport. The youth program may help to grow the sport in the Richmond region and the United States, and it may also have public health benefits as more residents participate in cycling.⁴²

⁴² http://velonews.competitor.com/2015/05/news/the-world-championships-an-opportunity-to-change-u-s-cycling_369127

7. Conclusion

This study estimated that the economic impact of Richmond 2015 amounted to \$161.5 million (direct, indirect, and induced) in the Richmond MSA and \$169.8 million in Virginia (Table 7.1). The economic impact from this event was derived from visitor spending as well as spending on organizing the event.

	Direct Impact	Total Impact	Tax Revenue
Richmond MSA	\$87.7	\$161.5	\$3.0
Virginia	\$88.9	\$169.8	\$4.9

Note: Numbers may not sum due to rounding
Source: IMPLAN Pro 2013 and Chmura

Local and state governments benefited from the UCI Championships as well. Richmond 2015 was estimated to have generated \$4.9 million in tax revenue for the state and \$3.0 million in tax revenue for local governments in the Richmond MSA.

Though not quantified in this study, Richmond 2015 garnered significant national and international media attention, increasing the exposure and visibility of the Richmond region and Virginia. This positive exposure is likely to benefit the region and the state well after the successful completion of the UCI Championships.

Appendix 1: Intercept Survey

A1.1. Methodology

Chmura worked with BARE International, a full-service market research firm, to obtain 407 survey responses from spectators during the UCI Championships. This survey enabled Chmura to obtain reliable estimates of direct spending for Richmond 2015 visitors, with a 5.0% margin of error.

As Table A1.1 shows, intercept surveys were gathered on four of the most popular race days. Interviewers were positioned to maximize spectator responses along Broad Street from 2nd to 9th Streets, as well as at FanFest in the Greater Richmond Convention Center. Chmura also obtained 64 responses from the VIP spectator pavilion on Broad Street.⁴³

	FanFest	Broad Street	VIP Pavilion	Total
Sunday, 9/20	3	9	44	56
Tuesday, 9/22	25	84	20	129
Friday, 9/25	38	71		109
Sunday, 9/27	54	59		113
Total	120	223	64	407

Source: Chmura

A1.2. Survey Results

A1.2.1. Respondents' Demographics

Spectators came from Virginia, other states across the country, and around the world. There was strong local support from residents in the Richmond MSA as well. As Table A1.2 shows, 44% of the survey respondents were from the Richmond MSA, and 13% of respondents were from other cities and towns in Virginia. Of all survey respondents, 31% came from other states, and 12% were international visitors.

Richmond MSA	181	44%
Other Virginia	52	13%
Other States in the United States	125	31%
International	49	12%
Total	407	100%

Source: Chmura

⁴³ Collection of responses in the VIP pavilion was stopped after the first two days in order to maintain an appropriate ratio of VIP to non-VIP responses in our sample.

As Table A1.3 shows, outside Virginia, 33 states and 29 countries are represented in Chmura’s survey respondents. The most-represented states in the United States are those close to Virginia such as Maryland, North Carolina, and Pennsylvania. Other states with a large population base are also represented, including California, New York, and Florida. For international spectators, there were visitors from Africa, Asia, and South America, in addition to those from Europe, North America, and Oceania. It is not surprising that many international visitors were from Europe where cycling is very popular, especially in Belgium, England, Holland, Denmark, France, Germany, and Sweden. Outside the group of European countries, Canada and Australia were also well-represented.

Table A1.3: Out-of-State and Foreign Survey Respondents				
State	Out-of-Virginia		Foreign Countries/Territories	
		Number of Respondents	Country	Number of Respondents
Maryland		16	Belgium	5
North Carolina		14	Canada	4
California		9	England	4
Pennsylvania		9	Holland	4
New York		8	Australia	3
Florida		7	Denmark	3
Massachusetts		6	France	2
Colorado		4	Germany	2
Delaware		4	Sweden	2
Georgia		4	Bermuda	1
Tennessee		4	Brazil	1
Illinois		3	Columbia	1
Minnesota		3	Guam	1
Ohio		3	Italy	1
South Carolina		3	Japan	1
Texas		3	Latvia	1
Washington		3	Libya	1
Arizona		2	Luxembourg	1
Connecticut		2	Mexico	1
District of Columbia		2	Netherlands	1
New Jersey		2	New Zealand	1
Nevada		2	Peru	1
Utah		2	Philippines	1
Iowa		1	Poland	1
Maine		1	Russia	1
Michigan		1	Rwanda	1
Missouri		1	Slovakia	1
New Hampshire		1	Spain	1
New Mexico		1	Switzerland	1

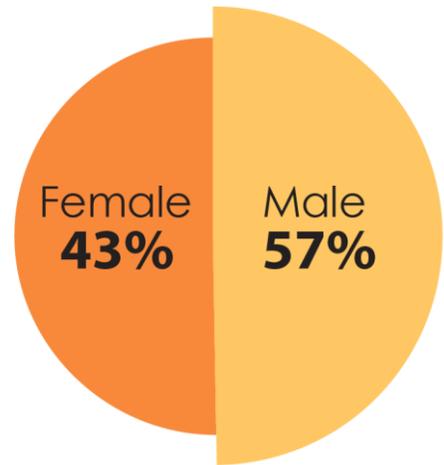
Table A1.3: Out-of-State and Foreign Survey Respondents			
Oklahoma	1		
Oregon	1		
Vermont	1		
Wisconsin	1		
Total	125	Total	49

Source: Chmura

By gender, male spectators exceeded females, as shown in Figure A1.1. Females represented 43% of the entire respondent group, while males constituted 57% of all survey respondents.

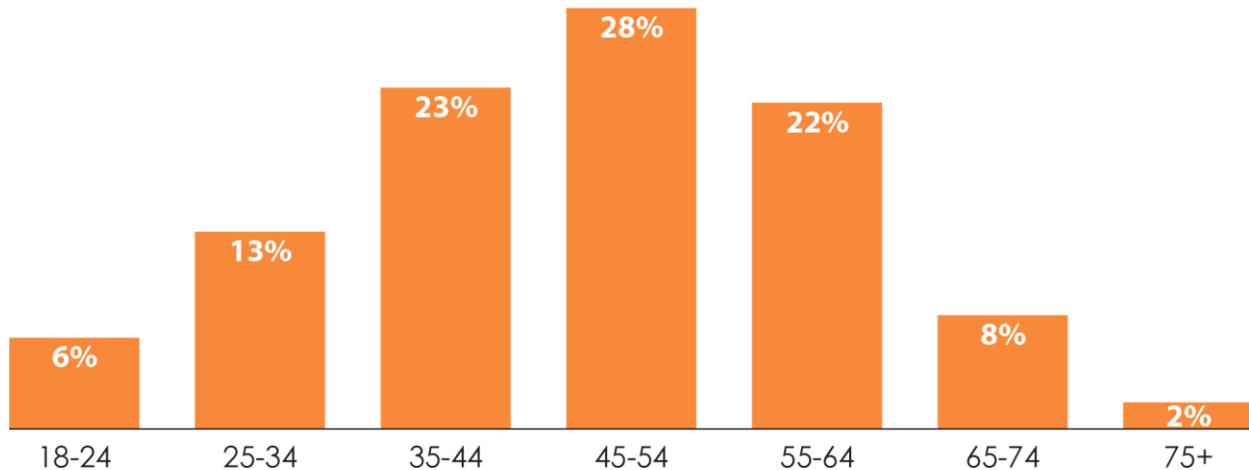
Cycling is popular with all age groups, including with younger and senior individuals. In terms of the age of spectators,⁴⁴ the largest group of survey respondents was in the age cohort of 45-54, accounting for 28% of total respondents. This is followed by the age groups of 35-44 and 55-64, which constituted 23% and 22%, respectively, of the entire respondent population. Ten percent of respondents were older than 65, and 6% were between 18 and 24 years old (Figure A1.2).

Figure A1.1: Respondent Gender



N=407
Source: Chmura

Figure A1.2: Survey Respondent by Age

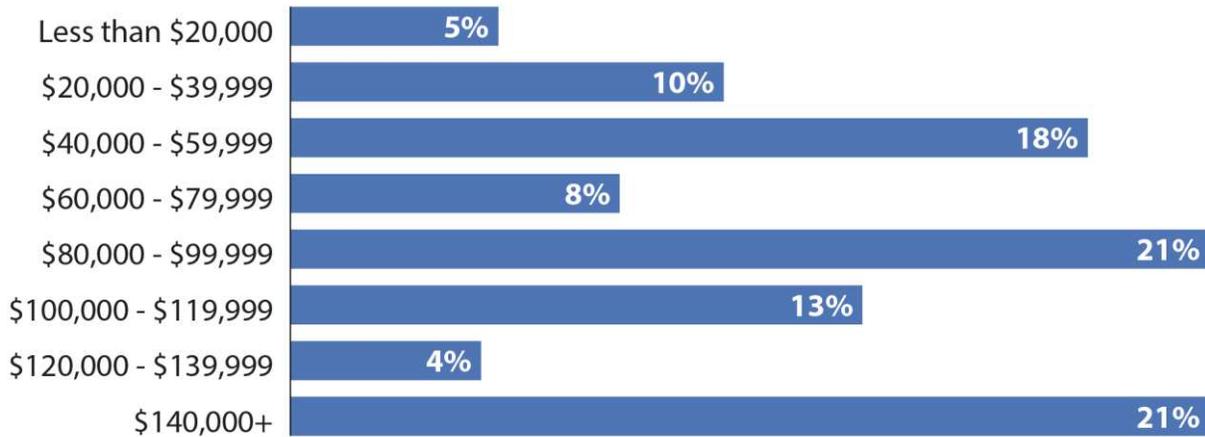


N=400
Source: Chmura

⁴⁴ Four hundred respondents provided a valid answer on their age.

To avoid confusion due to different currencies or exchange rates, household income questions were only asked of survey respondents from the United States. Of 358 domestic respondents, 106 of them chose not to answer this question. For those reporting income data, the highest percentage of respondents (21%) belonged to both those making between \$80,000 and \$99,999, and those making over \$140,000. The income bracket of \$40,000 – \$59,999 comprised 18% of respondents. There were 13% of respondents in the \$100,000 – \$119,999 income range, and 10% in the \$20,000 – \$39,999 income range (Figure A1.3).

Figure A1.3: Survey Respondent by Household Income

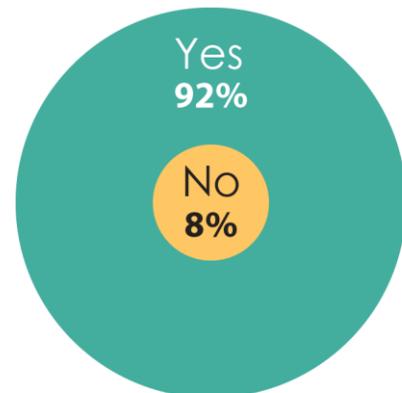


N=252
Source: Chmura

A1.2.2. Travel Patterns

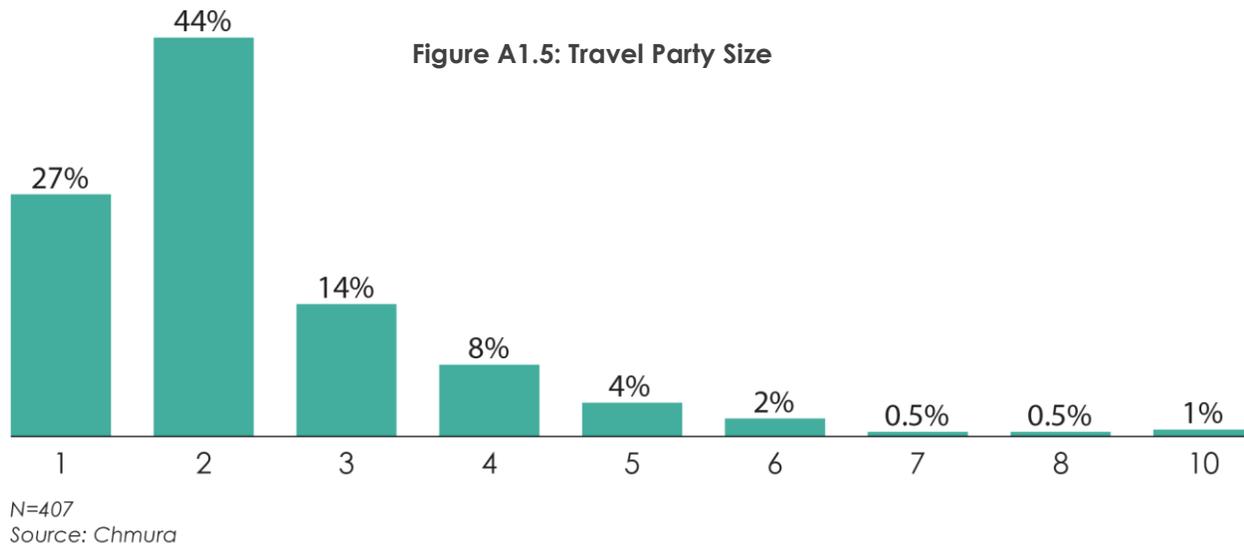
Respondents were asked if the UCI Road World Championships was the primary motivator of their trip to the Richmond region, and 92% of surveyed individuals responded affirmatively. This is not surprising, considering this is the first time in 29 years the event has been held in the United States. Many local and U.S. cycling fans considered it a once-in-a-generation opportunity and wanted to experience the UCI Championships in person.

Figure A1.4: UCI Road World Championships as the Primary Trip Purpose

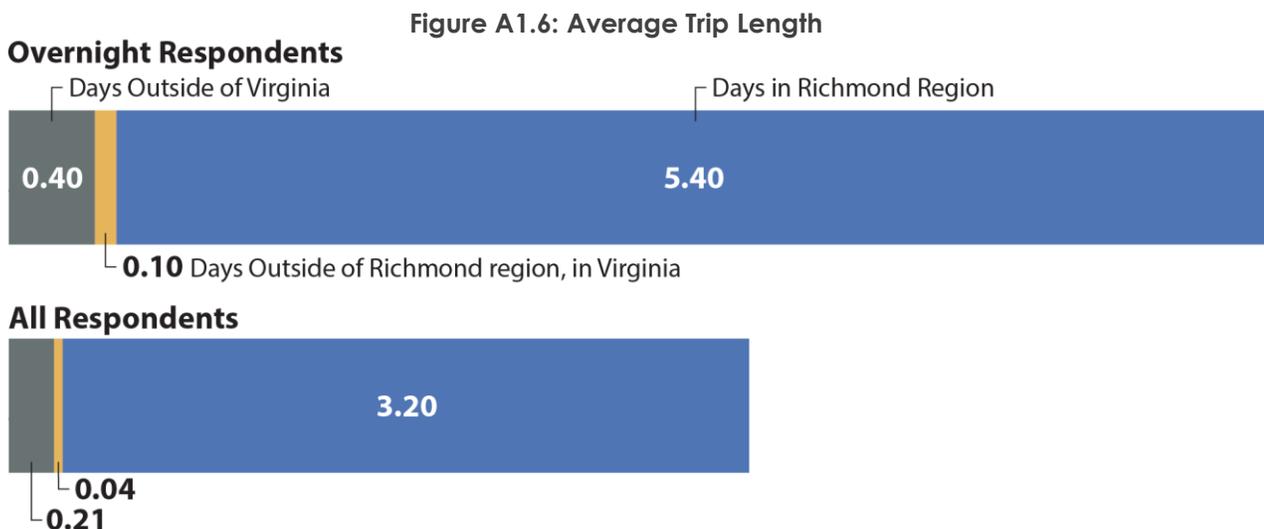


N=407
Source: Chmura

Average travel party size⁴⁵ of the respondents was approximately 2.3 people. Almost half of all respondents (44%) traveled in parties of 2. A sizable number of survey respondents traveled alone, with 27% of respondents in that group. Only 7% of parties shared expenses with more than five people (Figure A1.5).



The average total trip length⁴⁶ of respondents was 3.5 days, with almost all of that time spent in the Richmond region (Figure A1.6). On average, respondents spent 0.21 days outside Virginia and 0.04 days in Virginia, outside of the Richmond region. The above trip length includes both day-trippers and overnight spectators. Excluding day-trippers, the average trip length for overnight spectators was 5.9 days, with 5.5 days spent in Virginia, and 5.4 days in the Richmond region.



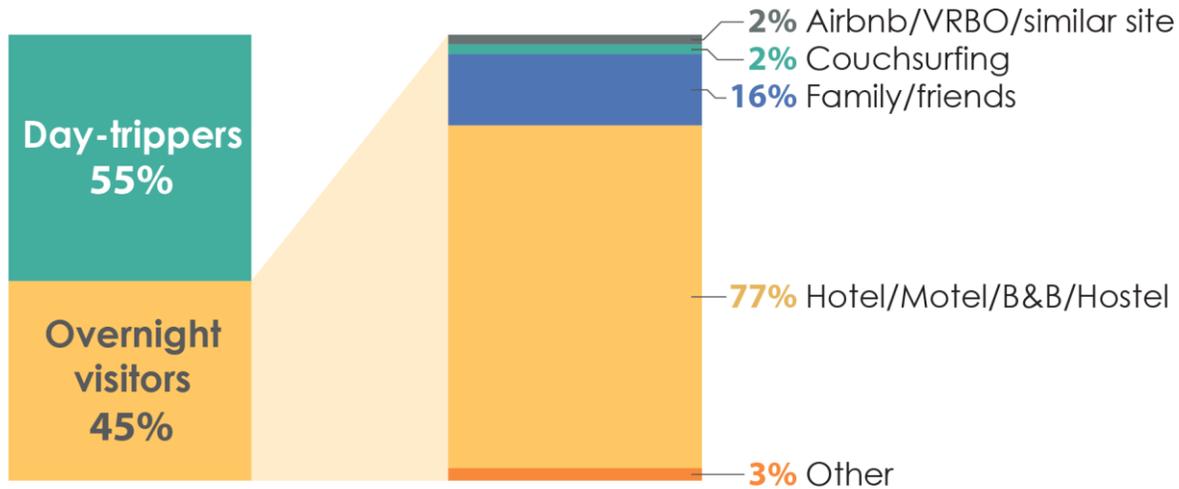
N=407
Source: Chmura

⁴⁵ A respondent’s travel party is defined as the number in the party, including themselves, with whom they share expenses.

⁴⁶ Trip length is weighted by travel party size. Therefore, larger travel parties will have a greater impact on average trip length.

Among survey respondents, nearly half (45%) were overnight visitors for at least one night (Figure A1.7). Over three-quarters (77%) of overnight visitors stayed in a hotel, motel, bed and breakfast, or hostel. The vast majority (89%) of these respondents were staying at hotels or motels. Almost all of these hotels were located in the Richmond region, with the exception of one hotel in Williamsburg. Outside of overnight spectators staying in hotels, motels, or at other accommodations, most of the other overnight visitors (16%) stayed with family or friends. Only a very few number of respondents used Airbnb, VRBO, or Couchsurfing.

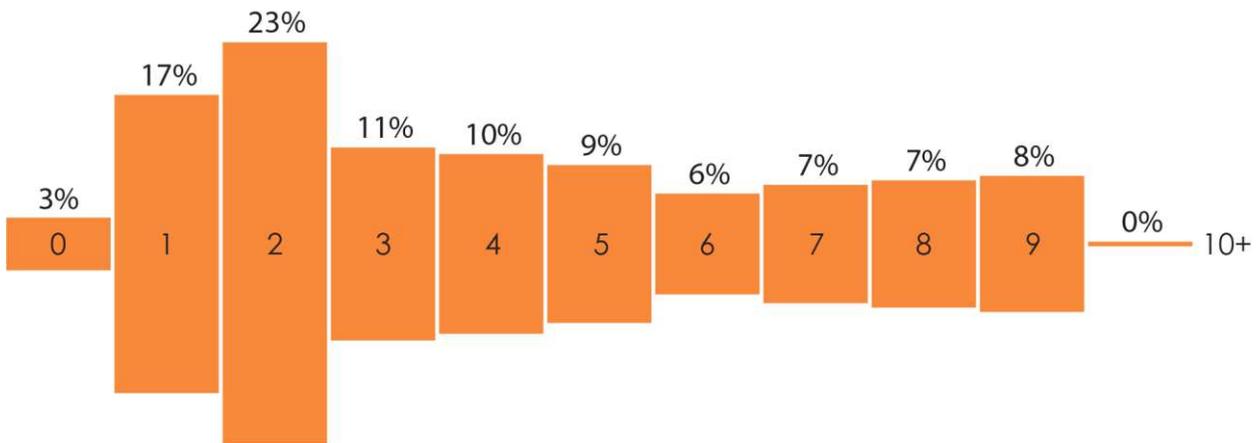
Figure A1.7: Day-trippers vs Overnights and Lodging Choices



N=407
Source: Chmura

The average spectator watched 4.2 races when they were in Richmond. An estimated 43% of survey spectators watched two or fewer races (Figure A1.8). Presumably, many of the day-trippers only watched a few top races, such as the elite men’s or women’s individual road races. Race attendance picked up significantly during the last weekend, so those spectators were only able to watch a few top races.

Figure A1.8: Number of Races Watched



N=407
Source: Chmura

A1.2.3. Spending Patterns

Chmura’s survey asked respondents a series of questions regarding their spending. Some items were asked for the entire traveling party during the whole trip (for example, transportation and lodging), while some items were asked on a per-day basis (for example, food and shopping). From those data, Chmura calculated the average expenses in Virginia, on a per-person, per-day basis. Visitors who purchased travel packages were asked to report the total amount paid for such packages. The amount for packages was allocated to lodging, transportation, food, and ticket sales.

Average spending of Richmond 2015 visitors is listed in Table A1.4. On a per-person, per-day basis, day-trippers spent much less than overnight visitors. Chmura’s survey found that day-trippers spent an average of \$59.10 per person per day. For overnight visitors, Chmura’s survey found that per-person per-day spending in Virginia was \$139.90 for visitors whose primary trip purpose was Richmond 2015, and \$123.80 for those whose primary motivation was other events.

For day-trippers, the largest expense categories were food and drink, shopping, and transportation. For overnight visitors, top expense categories were lodging, transportation, food and drink, and shopping.

Table A1.4: Average Expenses in Virginia, Per Person Per Day			
	Day Trip	Overnight Trip	
		Primary	Non-Primary
Lodging	\$0.0	\$45.2	\$18.1
Travel packages from event partner**	\$0.0	\$0.0	\$0.0
Food & Drink	\$25.8	\$29.6	\$25.7
Transportation	\$13.4	\$48.3	\$40.2
Shopping	\$16.7	\$11.2	\$22.0
Entertainment and attractions*	\$1.2	\$2.2	\$8.1
Any other expenses	\$2.0	\$3.3	\$9.8
Total	\$59.1	\$139.9	\$123.8
N=407	225	171	11
* Includes admission to UCI events			
** Allocated to lodging, transportation, food, and ticket sales			
Source: Chmura			

A1.3. Questionnaire

Hello. I’m _____. We are conducting a three-minute survey of visitors to understand the economic impact of the UCI Road World Championships in Richmond. All of your answers will be kept strictly confidential. Do you mind answering some of our questions?

SCREENER

1. **(SKIP IF OBVIOUS)** We are only supposed to interview people 18 years or older. Are you 18 or older?
IF NO, THANK & TERMINATE

2. **What is your primary role at the World Cycling Championships?**

- 01 spectator
- 02 athlete/participant
- 03 volunteer
- 04 media
- 05 coach
- 06 organizer/official
- 07 other

If anyone other than spectator, terminate (we only want to interview visitors)

MAIN QUESTIONNAIRE

3. Was today's or this week's cycling event the primary motivator for your trip?
01 YES 02 NO 99 DK/REF

4. Including yourself, how many people are in your traveling party, that is, *the group with whom you share expenses?*
_____ **(IF THE # IS VERY LARGE, BE SURE THEY UNDERSTAND THE DEFINITION)**

5. Is your visit today part of a daytrip, or will you (most likely) be staying somewhere overnight? **(IF THEY ARE UNSURE, ASK FOR THE MOST LIKELY CASE)**
01 Daytrip → **IF DAYTRIP, JUMP TO Q10**
02 Overnight

6. What is the total length of your trip in days and nights?
_____ 01 days & _____ 02 nights 99 DK/REF

7. How many of those days and nights will be spent in the Richmond area?
_____ 01 days & _____ 02 nights 99 DK/REF

8. How many of those days and nights will be spent in Virginia?
_____ 01 days & _____ 02 nights 99 DK/REF

9. What type of lodging are you staying at while you're in the Richmond area?
a. Hotel/Motel/Bed and Breakfast/Hostel, please list the name of hotel: _____
b. Airbnb/VRBO/similar site
c. Couchsurfing
d. Family/friends
e. Other: _____

10. For your trip in the Richmond area, how much will your party spend on lodging? **(IT IS OK IF THEY ESTIMATE. ROUND TO NEAREST DOLLAR. INCLUDE ALL COSTS ASSOCIATED WITH THE ROOM – E.G., ROOM, TAXES, INCIDENTALS, ETC. DO NOT INCLUDE MEALS CHARGED TO THE ROOM.)**
01 Total \$ _____ OR 02 Per Night \$ _____
99 DK/REF

11. [For your traveling party,] how much do you estimate you will spend in total for your trip in the Richmond area on...?
(ROUND TO THE NEAREST DOLLAR, USE 9999 FOR DK/REF; SAY "FOR YOUR...PARTY" IF 2+ SIZED PARTY)
- a) Travel packages from event partner \$ _____ b) Food & Drink \$ _____
- c) Transportation to Virginia (e.g. plane, train, bus) \$ _____
→ b2) Ask if they drove their own car; if yes, about how many miles both ways TOTAL for the trip:⁴⁷ _____
- d) Transportation within Virginia (e.g. car rental, taxi, Uber, gas, parking, etc.) \$ _____
- e) Shopping (gifts, clothing, personal items) \$ _____
- f) UCI World Championship Events/Admissions \$ _____
- g) Entertainment and attractions NOT related to UCI World Championship Events \$ _____
- h) Any other expenses \$ _____
12. How many races have you attended or will you attend through the World Championships? _____ (make sure this is all races they attended/plan to attend in the whole 9 days)

I have a few final questions about yourself.

13. What state do you live in? **(DO NOT READ LIST, ACCEPT ONLY ONE RESPONSE)**
 01 _____ → What is your zip code? _____ 99999 DK/REF
 96 If no state, specify country: _____
 99 DK/REF
14. Which category does your age fall into? **(SHOW CARD⁴⁸)**
 01 A) 18-24 04 D) 45-54 07 G) 75+
 02 B) 25-34 05 E) 55-64 99 DK/REF
 03 C) 35-44 06 F) 65-74
15. **[ASK ONLY IF US RESIDENT]** Which of these categories includes your total household income before taxes last year?
(SHOW CARD) Include your own income plus all members of your household living with you. 01 H) Less than \$20,000
 04 K) \$60,000 - \$79,999 07 N) \$120,000 - \$139,999
 02 I) \$20,000 - \$39,999 05 L) \$80,000 - \$99,999 08 O) \$140,000+
 03 J) \$40,000 - \$59,999 06 M) \$100,000 - \$119,999 99 DK/REF

Those are all the questions I have. Thank you very much for your participation!

RECORDED BY INTERVIEWER

16. **GENDER OF RESPONDENT:** 01 Female 02 Male
17. **WHEN SURVEY WAS COMPLETED:** Hour of day for survey: ____ 01 AM 02 PM

⁴⁷ This is so we can estimate their gasoline expenditures (and yes, if we estimate this way, we will estimate for the total trip rather than the average per day).

⁴⁸ The categories for age and income will be labeled with capital letters so the respondent can indicate an answer via the letter (to lessen hesitancy to respond).

18. LOCATION OF SURVEY: _____

19. INTERVIEWER: _____

RECORDED BY RESPONDENT

AGE

A: 18-24

B: 25-34

C: 35-44

D: 45-54

E: 55-64

F: 65-74

G: 75+

HOUSEHOLD INCOME

H: Less than \$20,000

I: \$20,000 - \$39,999

J: \$40,000 - \$59,999

K: \$60,000 - \$79,999

L: \$80,000 - \$99,999

M: \$100,000 - \$119,999

N: \$120,000 - \$139,000

O: \$140,000+

Appendix 2: Impact Study Glossary

IMPLAN Professional is an economic impact assessment modeling system. It allows the user to build economic models to estimate the impact of economic changes in states, counties, or communities. It was created in the 1970s by the Forestry Service and is widely used by economists to estimate the impact of specific event on the overall economy.

Input-Output Analysis—an examination of business-business and business-consumer economic relationships capturing all monetary transactions in a given period, allowing one to calculate the effects of a change in an economic activity on the entire economy (impact analysis).

Direct Impact—economic activity generated by a project or operation. For construction, this represents activity of the contractor; for operations, this represents activity by tenants of the property.

Overhead—construction inputs not provided by the contractor.

Indirect Impact—secondary economic activity that is generated by a project or operation. An example might be a new office building generating demand for parking garages.

Induced (Household) Impact—economic activity generated by household income resulting from the direct and indirect impact.

Multiplier—the cumulative impacts of a unit change in economic activity on the entire economy.