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The Economic Impacts of Cross-Border Retailing

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The Economic Impacts of Cross-Border Retailing: An Observational Analysis of British Columbian Same-Day Retail Shoppers in Whatcom County

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Many border economies are strongly influenced by travel from their neighboring country. In Whatcom County, the influence comes in the form of a large community of retail shoppers from British Columbia. According to the U.S. Bureau of Transportation Statistics, 15% of U.S. northern-border personal vehicle traffic in 2014 occurred through Blaine, making it the second-busiest port for such traffic. A winter 2014 survey by the International Mobility and Trade Corridor Program found that 67.62% of crossers through Whatcom County's four continental border ports (called collectively the Northern Cascade Gateway) were bound for Whatcom County, and that 54.2% of Canadian travelers through the Peace Arch-Douglas cited shopping as the purpose of their trip. License plate surveys further indicate extensive cross-border retail shopping in Whatcom County (BPRI, 2013).

The result of this sort of economic activity is a sales tax base and retail sector that depends in part upon non-domestic economic trends such as the bilateral exchange rate. Ghaddar & Brown (2005) show that cross-border shopping along the U.S.-Mexico border leads to a retail sector that is much larger than the community's domestic income when compared to national averages. However, the exchange rate is a weaker determinant of cross-border shopping after the turn of the century. Security measures after the September 11th attacks likely contributed to the decoupling of exchange rates and border crossings, as shown by Ferris (2010) and Hodges (2007). Hodges argues that some of this decoupling must be due to structural changes beyond border security.

Figure 1 shows same-day border crossings and the US/Canadian exchange rate from January 1997 to November 2014. After a sustained decrease in same-day crossings following September 11th, 2001, crossings began to increase and track more closely to the exchange rate starting in mid-2010. The recent decline in the exchange rate appears to have caused a concurrent slump in same-day crossings. In January 2016, the Canadian dollar fell below 70 U.S. cents, its lowest in over a decade as the price of oil closed below $30 per barrel. Local newspapers in Whatcom County closely followed the decline, pondering its consequences for local retailers.

This study seeks to uncover the new determinants of cross-border travel, estimate the impact that cross-border shopping has on Whatcom County's economy, and model the impact that changes in the determinants of cross-border shopping would have on the economy of Whatcom County. Lastly, this study will forecast the economic impacts of recent movements in the exchange rate.

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[1] Daniel is an undergraduate Economics student. This study was performed as a senior thesis for Western Washington University's Honors program, in coordination with the Border Policy Research Institute. It was supervised by Hart Hodges, an Economics professor at Western Washington University and the Director of its Center for Economic and Business Research.
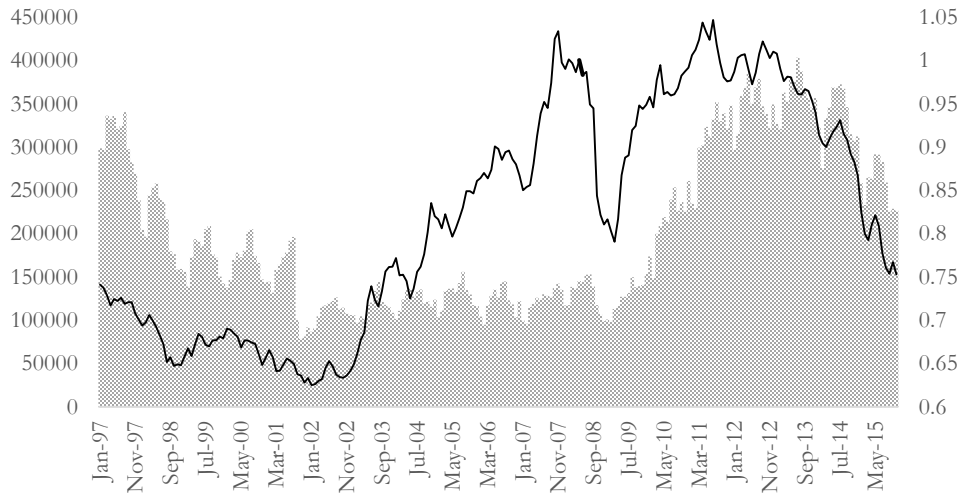
Figure 1: Monthly Border Crossings and the Exchange Rate

Data

Crossing Model

Most variables used were inspired by the model built by Hodges (2007). However, the data used in this model begin in the first quarter of 2002, so a dummy variable modeling the effects of the September 11th terror attacks was not significant. Seven years of additional data and changing economic conditions require the analysis of new variables, as well. A dummy variable intended to capture the impact of the financial crisis, for example, proved to be insignificant. The recession's impacts may have been captured in the variable of wages in British Columbia, which shrank during that period.

Precedent and anecdotal evidence suggest that milk prices are a key factor. Two variables were tested to model this effect: the ratio of U.S. to British Columbian dairy price indexes, and the relative prices of a gallon of milk in each country. The index ratio is sounder empirically, as it captures regional variation in Canada, whereas the national differentials cannot. The gasoline price differential of a gallon in Vancouver (CA$) and Seattle (US$) is also included for the same reasons. Seattle gas prices come from the U.S. Energy Information Administration (EIA), and Vancouver gas price data were retrieved from Statistics Canada.

Hodges (2007) proposes that increases in online retail shopping by British Columbians may be a contributing factor in changes in post-2002 trends. News reports (*The Columbian*, 2015) and a disproportionate amount of personal mailbox stores in Blaine and Sumas suggest that shoppers from British Columbia choose to register a mailbox in those cities to avoid paying B.C.'s value-added tax and international shipping fees on online purchases. Data on per capita online sales, displayed in Table 1 using population data from the Washington OFM and U.S. Census Bureau, support this theory. The variable used to capture this effect is online sales revenue from Blaine and Sumas, retrieved from the Washington Department of Revenue. Because online per-capita sales in Blaine and Sumas is significantly larger than any other Washington locality, the number of British Columbian residents shipping their packages to these two towns is likely to outweigh the rates of online shopping of domestic residents. Therefore,

this variable is a reliable indicator of cross-border online shopping trends. Data after 2005 is provided quarterly, while data from 2002 to 2005 is provided annually. Quarterly data during this period was determined using linear extrapolation.

Table 1: Per capita online sales

	Washington	Blaine & Sumas	Difference
2000	$43.91	$39.44	-$4.47
2001	$43.66	$41.83	-$1.83
2002	$47.45	$51.19	$3.74
2003	$53.68	$77.86	$24.17
2004	$58.29	$147.02	$88.72
2005	$71.34	$206.88	$135.54
2006	$72.93	$279.86	$206.93
2007	$88.12	$430.15	$342.03
2008	$97.51	$555.99	$458.48
2009	$104.60	$615.86	$511.26
2010	$134.21	$1,064.31	$930.10
2011	$172.02	$1,747.71	$1,575.69
2012	$207.32	$2,678.76	$2,471.44
2013	$254.13	$3,403.14	$3,149.02
2014	$300.52	$3,538.61	$3,238.10

Exchange rate data (Canadian dollars per U.S. dollar) come from the United States Federal Reserve Bank of St. Louis. The real exchange rate was found by multiplying the exchange rate by the ratio of consumer price indexes from the United States and British Columbia. Data on B.C.'s CPI and the population and wages of Lower-Mainland British Columbia were retrieved from Statistics Canada. U.S. CPI data were acquired from the Federal Reserve Bank of St. Louis.

Impact Analysis

The economic impact analysis was conducted using the input-output modeling program IMPLAN. This study's estimates were calculated using an IMPLAN model of Whatcom County's 2008 economy stored at Western Washington University's Center for Economic & Business Research. Statistics Canada's Survey of Household Spending details the average expenditures of Canadian households. The results are available by province, and the latest data from British Columbia is from 2013. Retail purchases from each category of spending were assigned to each of IMPLAN's nine retail sector codes (excluding online sales).

The International Mobility and Trade Corridor (IMTC) Program conducted a survey of passenger vehicles crossing through Northern Cascade Gateway Ports in 2013 and 2014. The results of the survey were published in July 2014, and the raw data was provided for this study's analysis by the Whatcom Council of Governments.

Crossing Model Results and Methodology

The model is this study uses same-day border crossings as the sole dependent variable. This study seeks to determine the impact of retail shoppers from British Columbia on Whatcom County's economy. The overwhelming majority of these border crossers return to B.C. on the day of their arrival, while only a small share stay overnight. Conversely, over 90% of same-day crossers are bound for Whatcom County, according to the 2014 IMTC survey. A model of same-day crossings by Canadians through The Northern Cascade Gateway largely models Canadians bound for Whatcom County. The dependent variable of the regression model is quarterly same-day personal vehicle crossings by Canadians through the Peace Arch, Pacific Highway, Lynden, and Sumas ports.

Various tests of the model conclude that the most fitting explanatory variables are the real exchange rate, relative prices of gasoline and milk, the population of and wages in Lower-Mainland British Columbia, and online sales in Blaine and Sumas. Unit root tests showed that most of the explanatory variables[2] and the dependent variable are stationary in first differences, but not in levels. All variables were regressed in first differences, resulting in the following model:

$$\Delta \ln(\text{crossings})_t = \beta_1 \Delta \ln(\text{exchangerate})_t + \beta_2 TaxExemption_t$$
$$+\beta_3 \Delta pricemilk_t + \beta_4 \Delta pricegas_{t-1} + \beta_5 \Delta BCfamilies_t + \beta_6 \Delta BCIncome_t + \beta_7 \Delta ESales_t$$
$$+ \beta_8 Olympics_t$$

The model regresses same-day crossings from the fourth quarter of 2003 to the first quarter of 2014. The first quarter of the period is determined by the unavailability of Seattle gasoline price data prior to the third quarter of 2003, and the upper bound is determined by the unavailability of data on British Columbia population data after 2014. Quarterly dummy variables are included to control for seasonal variation, and tests for autocorrelation, heteroscedasticity, and omitted variables were negative. Many qualitative variables, such as changes in attitude toward Canadian shoppers, are not included in this model, and the quantitative variable of average border wait times is omitted due to a lack of reliable data. Nevertheless, this model is assumed to be correctly specified. The results of this regression are shown in Table 2.

The natural log of the real exchange rate, rather than the absolute exchange rate, is used to model the effect of relative changes in the Can/US exchange rate. Economic theory suggests that relative, rather than absolute, increases in income will determine changes in shopping habits. The natural log of wages accounts for this. The natural log of Blaine and Sumas online sales is used to account for exponential increases in online shopping over the sample period and was found to more effectively explain changes in crossings with respect to online sales. The significance and sign of the coefficient associated with online sales is consistent with expectations. As more residents of British Columbia make online purchases with a Whatcom County address, same-day crossings should increase.

From July 2010 to March 2011, residents of British Columbia were exempted from all Washington State sales taxes due to British Columbia's switch to a Value-Added Tax (VAT), which, at the time, was not considered a sales tax by Washington State law (Simmons, 2010) (Thompson & Globerman, 2010) (Wintonyk, 2013). The Law of Demand implies that this

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[2] The gasoline price differential is the only variable that is stationary in levels. It is also stationary in first differences.

decrease in the costs of Whatcom County goods would lead to an increase in cross-border retail shopping in Whatcom County by residents of British Columbia. A dummy variable modeling the period from the third quarter of 2010 to the second quarter of 2011 estimates this effect. Same-day crossings increased by approximately 6.5% for each quarter during this period.

Table 2: Regression Model Results

Variable	Coffecient	Standard Error	t-value
log(Real exchange rate)	-0.6631957*	0.2485106	-2.67
Tax exemption dummy	0.0650761*	0.268017	2.43
Log(Relative price of milk)	0.6053113	0.3781029	1.60
Relative price of gasoline, lag(1)	0.060182**	0.0211065	2.85
B.C. Population	5.50E-06	5.07E-06	1.09
Log(B.C. wages)	-0.7168578	0.8202865	-0.87
Log(Blaine, Sumas online sales)	0.12805922*	5.46E-02	2.21
2010 Olympics Dummy	0.2208738**	5.67E-02	3.97
Observations	41		
Adjusted R²	0.84		
* significant at the 95% confidence level			
** Significant at the 99% confidence level			

Reports during the 2002 Olympics in Salt Lake City suggest that many locals flee to nearby towns and cities during major events such as the Olympics (Clarke, 2000). This led to speculation that Bellingham would see an uptick in cross-border travel during the 2010 Winter Olympics in Vancouver, which took place in February of 2010. A dummy variable was used to control for the Olympics, with a value of 1 for the first quarter of 2010. This model found a 22% increase in same-day border crossings during the Winter Olympics, significant at the 99% confidence level. However, hotels in Utah and Wyoming reportedly saw increases in demand during the 2002 Olympics, suggesting that there would also be an increase in overnight border crossings, which are not included in this model.

Relative milk prices were tested using logged and un-logged index ratios and price differentials. Each of these forms had insignificant coefficients, while the log of price index ratios had the most explanatory power in the model. The log of this variable was used because absolute changes in the log of the index ratio represents relative changes in the price level, to which consumers are most likely to respond. The result that relative milk prices are insignificant is inconsistent with anecdotal evidence, but consistent with the results from Hodges (2007), who found that the relative price of milk was significant only at the 90% confidence level, and only during the period from May 1990 to August 2001.

Possible Overstatement of Future Same-Day Crossings

A wealth of research finds that consumption habits can persist even while alternatives that are more economical are available (Clarke, et al., 2006) (Wood & Neal, 2009). Once consumers build a routine of shopping at certain retail establishments, budgeting for expenses from them,

and planning their schedule around trips to and from them, they will not change their behavior until social, economic, or environmental factors break them of their shopping habits.

This trend could be particularly strong for retail shopping across the border. A lack of information about prices and product selection, border-crossing hassles, and travel time could all inhibit cross-border retailing even when potential savings are significant. Figure 1 on page 2 shows that, even as the exchange rate climbed from about 60 U.S. cents per Canadian dollar in November 2002 to $1.05 in November 2007, same-day border crossings remained essentially unchanged. It is likely that consumer habits contributed to British Columbian shoppers' slow adaptation to the advantageous Canadian dollar.

The reversal of the decoupling of the exchange rate and same-day crossings appears to begin after the 2008 financial crisis. A 2013 survey by Canada's Office of Consumer Affairs (2013) found that 77 percent of respondents reported paying closer attention to prices after the recession. It is likely that the increase in same-day crossings resulted from more Canadian consumers seeking lower prices on the other side of the border. When the Canadian dollar appreciated and floated at or above parity, it allowed time for more Canadian consumers to break their habits and cross the border.

The current exchange rate exhibits the first sustained depreciation of the Canadian dollar since the turn of the century. In forecasts that include an appreciation of the Canadian dollar, the coefficient determined in this model may overstate the consequent same-day crossings. However, greater availability of information and increased familiarity with American product selection could make British Columbian consumers more sensitive to exchange rates even after periods of sustained lows.

IMPLAN Methodology and Results

In a report prepared for U.S. Customs and Border Protection, Industrial Economics, Inc. (IEc) (2007) determined the average expenditure of a Canadian shopper in Washington State by dividing the amount of money Canadians spent in Washington in a given year by the number of Canadians who travelled to Washington that year, using data from Statistics Canada's annual International Travel survey[3]. Same-day visit spending was organized only by province. Assuming spending during same-day visits is equally distributed among U.S. destinations, the same methodology yields a per-trip expenditure of C$128 per same-day visit from British Columbia to Whatcom County.

Ghaddar & Brown (2005) determined the spending composition of cross-border retail shoppers using data from surveys of crossers. In the absence of an identical survey of northern border shoppers, the spending composition of shoppers is determined using the expenditure composition of British Columbian families. Two spending patterns were used: the unadjusted spending of British Columbian families, and the adjusted spending, where categories such as furniture and appliances are removed. The unadjusted distribution assumes crossers shop exactly the same way on each side of the border. The adjusted distribution simply removes categories that seem illogical for a same-day border-crosser to purchase, either due to its unwieldiness or due to border-related hassles.

The results of a 2013 license plate survey by the Border Policy Research Institute suggest that cross-border retail shoppers largely shop in franchise super markets, such as Fred Meyer and Costco (BPRI, 2013). The IMPLAN sector that includes such stores is "general merchandise".

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[3] After 2010, Statistics Canada started offering their International Travel survey only in microdata sets.

The adjusted spending distribution accounted for this trend by internalizing likely purchases at such stores into the general merchandise category.

The proportion of same-day crossers who travel to Whatcom County to shop was determined using the raw data from the 2013-2014 IMTC survey[4]. 90.9% of same-day crossers were bound for Whatcom County, and 49.1% of those travelers intended to shop. Another 17.4% of travelers to Whatcom County cited gasoline as their primary travel purpose. Crossers intending only to purchase gasoline realistically spent fewer than C$128 with each trip. Per-trip spending for gasoline-only trips was found by multiplying the price-per-gallon of gasoline by 10, which was assumed to be the average number of gallons of gasoline purchased per trip[5]. The average spending of other shopping residents was adjusted accordingly. The results and spending distributions used, adjusted to U.S. dollars using the average 2013 exchange rate, are shown in Table A of the appendix.

IMPLAN includes a category for online retail sales. The impact from British Columbian shoppers using a Whatcom County address for their online sales was estimated by multiplying Washington's per capita sales by the population of Blaine and Sumas to estimate the amount that full-time residents of these two towns spent online. This number was subtracted from the online sales of Blaine and Sumas provided by the Washington Department of Revenue. Under the assumption that residents of Blaine and Sumas purchase the same amount of online goods as the average Washington resident, the resulting differential is assumed to be the total online sales in Whatcom County attributable to residents of British Columbia.

The results of the IMPLAN analysis are summarized in table 3. Table B in the appendix reports the full IMPLAN results. Using the adjusted spending distribution, same-day Canadian travelers through the Cascade Gateway ports sustained roughly 1,325 jobs and accounted for roughly 1.4% of Whatcom County's gross domestic product[6]. In 2013 (the last year for which data is available), retail income in Whatcom County was $784 million. According to the Bureau of Labor Statistics, there were nearly 80 thousand jobs in Whatcom County in 2014. 1.7% of these jobs were dependent upon shoppers from British Columbia. The largest share of jobs sustained by cross-border shopping was in the general merchandise sector (35.3%), closely followed by clothing and clothing accessories (30.9%).

Table 3: Impact to Whatcom County of same-day crossings by spending composition, 2014

	Employment	Labor Income	State and Local Tax Revenue	Output
Unadjusted	1302.8	$45,253,319	$14,072,216	$148,711,945
Adjusted	1346.2	$48,073,268	$16,606,980	$144,728,819

Crossing and Impact Forecasts

[4] Two surveys were taken, in the summer of 2013 and in the winter of 2014. The findings described are from the winter 2014 survey. Because same-day crossing behavior is slightly different in the summer than in the winter, the proportions from the summer survey were used to calculate retail spending during the summer months (June-August).

[5] No precedent for studies involving travel for the purchase of gasoline could be found. Most passenger gasoline tanks range from 12 to 15 gallons. Purchasers must travel to fill their car, so 2-5 gallons of gasoline are assumed to be in the tank of the average car that crosses the border to be filled.

[6] Data on Whatcom County's 2014 GDP is not yet available. According to the Bureau of Economic Analysis, Whatcom County's 2013 GDP was approximately $10.3 billion in 2015 dollars. Assuming Whatcom County grew by the Washington State average in 2014, its 2014 GDP was roughly $10.6 billion.

The availability of GDP data for Whatcom County truncates after 2013, and data for same-day border crossings ends at November of 2015. The Canadian dollar began its decline in the fourth quarter of 2014 and is projected to hit its nadir only after the first quarter of 2016. Border crossings accompanied the exchange rate, decreasing for every quarter but one over the same period, ending 2015 with roughly 1 million fewer same-day crossings than occurred in 2014.[7] A spattering of news coverage followed, including articles titled "Slumping dollar keeps British Columbians at home" (Larsen, 2015), "Cross-border shopping and travelling halted due to low loonie" (Slattery, 2015), and "Cross-border shopping takes nosedive as Canadian dollar drops" (Luymes, 2015). This analysis seeks to estimate the economic impact of 2015's decline in border crossings, forecast same-day crossings in 2016 and their economic impacts, and model the effect of policy proposals that would impact border crossings.
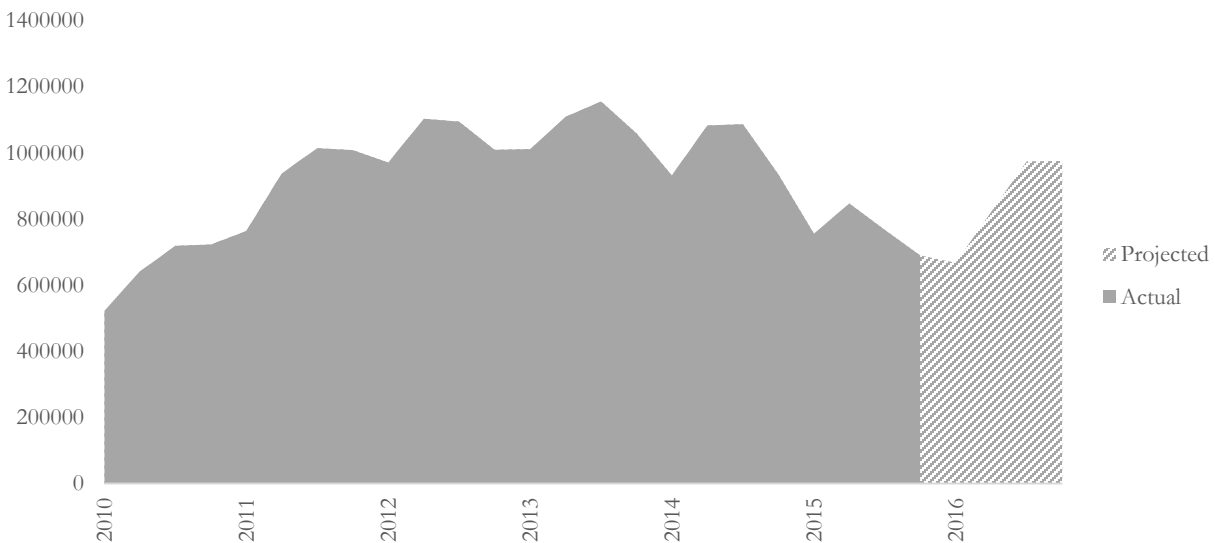

Figure 2: Same-Day crossings, 2010q1-2016q4, actual and projected

Figure 2 shows quarterly crossing totals from 2010 to 2016, with projections performed using this study's crossing model and exchange rate forecasts from the National Bank of Canada. Same-day crossings are projected to hit their lowest level since the recession in the first quarter of 2016, at just under 670,000 crossings. 2015 also had the lowest annual crossings since 2010, at just over 3 million, following 2013's 20-year high of 4.3 million. As stated earlier, this model may overestimate the crossings that result from new currency appreciations by neglecting to account for the persistence of consumer habits.

To calculate the economic impact of falling border crossings, IMPLAN models were run for 2015 and 2016, then compared to the results for 2014. For this comparison, 2014's economic impact calculations excluded online sales. Table B in the appendix contains a table showing the complete IMPLAN results of same-day shoppers in 2015. From 2014 to 2015, cross-border shopping sustained 330 fewer jobs, output dropped by nearly $31.6 million, and state and local tax revenues declined by approximately $3.5 million.

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[7] December 2015's crossings were estimated using the exchange rate coefficient from Table 2 on page 4.

The National Bank of Canada estimates that the Can/US exchange rate will peak in the first quarter of 2016 and end the year at $1.35. On July 1st, 2016, an increase in Washington State's gasoline sales tax will take effect, increasing gasoline prices by 7 cents. The model used in this study predicts that the increase in gasoline prices will slightly offset the strengthening of the Canadian dollar, causing a decrease of about 4000 border crossings in the 4th quarter of 2016. All told, same-day crossings are projected to climb to just below 2014 levels by the end of 2016, for an annual total of 3.44 million crossings. As a result, output, employment, and tax revenues are expected to climb from 2015 to 2016, but not enough to return to 2014 levels. Table 4 compares the economic impact of same-day crossings throughout these three years. The complete IMPLAN results are shown in Table C of the appendix.

Table 4: Economic impact to Whatcom County from Canadian same-day border crossings

	2015		2016	
	Employment	Output	Employment	Output
	958.4	$84,943,300.00	1060	$92,553,019.00
Change from 2014	-387.8	-$59,785,519.00	-286.2	-$52,175,800.00
(percentage change)	-28.81%	-41.31%	-21.26%	-36.05%
Change from 2015	-	-	101.6	$7,609,719.00
(percentage change)			10.60%	8.96%

In November 2015, Oregon Representative Earl Blumenauer proposed a 15-cent-per-gallon increase in the federal gasoline tax, phased in over the course of three years. His proposal would increase the gasoline sales tax by 7.5 cents at the beginning of 2016. This proposal did not come up for a vote, but with the federal highway program consistently underfunded, an increase in the gasoline tax is plausible. Rep. Blumenauer's proposal is used to model the effect of an increase in the gasoline tax on same-day border crossings and their effect on Whatcom County's economy. The effect of the tax is summarized in Table 5.

Table 5: Effect of Canadian same-day crossings in 2016

	Without Tax	With Tax	Tax Effect
Crossings	3,438,999	3,412,999	-25,999
Output	$92,553,019	$86,501,218	-$6,051,801
Employment	1,060.0	987.3	-72.7
State/Local Tax Revenue	$10,472,773	$9,786,390	-$686,383

Conclusion

Cross-border retail shoppers from British Columbia play a key role in Whatcom County's economy. Since the recession, Whatcom County's economy has benefitted from thrifty Canadians with a strong currency. The first decade of the millennium saw a shrinkage of cross-border travel, but there appears to be a trend toward pre-9/11 norms. This could be due to an improvement in bilateral security operations, a subsidence of distrust and/or fear, or to the expansion of trusted traveller programs. Regardless, cross-border shopping tracks the exchange rate and other measures of economic incentives more closely than it did during the seven years following 9/11. A result of this readjustment is the economy's increased dependence on national

and international factors. A global oversupply of oil in 2014 resulted in the loss of approximately 330 jobs and $31.6 million of output throughout 2015, possibly with long-term economic consequences due to the anchoring of consumer habits.

Anecdotal evidence of the importance of milk prices may be overstated. Two explanations are possible: milk is not a deciding factor in the choice to cross-border shop, or the choice to buy milk in the U.S. depends on factors other than price. In the first case, anecdotal evidence of British Columbians flooding the Bellingham Costco to buy shopping carts full of milk could be hyperbolic, or consumers that cross regardless of milk prices choose to stock up on milk after the initial decision to shop in Whatcom County. Another explanation is that consumers in British Columbia cross the border specifically to shop for milk, incentivized not by price, but by the heterogeneity of milk products between British Columbia and Whatcom County. Lastly, movements in the relative price of milk were minimal over the sample period. It is possible that, because milk is a commodity, there is a threshold price differential after which consumers will travel for their product regardless of the absolute difference in prices. In this case, the change in consumer behavior for the purchase of milk depends more on the exchange rate, while changes in the price of milk do little to influence consumer behavior.

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Appendix

Table A: 2014 Expenditures by Same-Day Canadian Retail Shoppers in Whatcom County

IMPLAN Sector	Unadjusted Spending (2015 dollars)		Adjusted Spending (2015 dollars)	
	Proportion	2014 Sales	Proportion	2014 Sales
Furniture and home furnishings	0.136	$ 24,911,793.83	0.008	$ 1,479,368.48
Clothing and clothing accessories	0.207	$ 37,879,907.12	0.299	$ 54,701,825.01
Gasoline stations*	0.000	$ 107,692,679.09	0.000	$ 107,692,679.09
Sporting goods, hobby, book, and music	0.077	$ 14,185,380.43	0.016	$ 2,976,141.29
General Merchandise	0.146	$ 26,767,824.92	0.677	$ 124,023,291.46
Direct and electronic sales**	0.000	$ 22,607,272.03	0.000	$ 22,607,272.03
Electronics and appliances	0.010	$ 1,783,718.18	0.000	$ -
Building material and garden supply	0.004	$ 662,868.24	0.000	$ -
Food and beverage	0.374	$ 68,540,576.45	0.000	$ -
Health and personal care	0.046	$ 8,448,557.08	0.000	$ -
Total	1.000	$ 313,480,577.37	1.000	$ 313,480,577.37

* Gasoline spending found by assuming 10 gallons of gasoline were purchased with each crossing, using monthly gas price averages

** Online sales retrieved from Washington Department of Revenue

Table B: IMPLAN Results, Adjusted and Unadjusted Spending Distributions

Impact by type and sector, 2014, Unadjusted Spending

Impact Type	Employment	Labor Income	Value Added	Output
Direct	960	$ 31,241,365.00	$ 54,565,582.00	$ 102,955,889.00
Indirect	154	$ 6,722,288.00	$ 12,915,989.00	$ 21,923,528.00
Induced	188.9	$ 7,289,665.00	$ 13,914,100.00	$ 23,832,528.00
Total	1302.8	$ 45,253,319.00	$ 81,395,671.00	$ 148,711,945.00
Sector, top ten affected industries				
Clothing and clothing accessories	289.6	$ 5,532,591.00	$ 11,282,327.00	$ 17,973,902.00
Food and beverage	225.6	$ 8,736,954.00	$ 13,326,773.00	$ 20,308,210.00
Furniture and home furnishings	114.3	$ 5,064,137.00	$ 8,148,840.00	$ 12,165,570.00
Sporting goods, hobby, book and music	113.5	$ 2,132,622.00	$ 3,505,353.00	$ 5,663,160.00
General merchandise	107.9	$ 3,581,380.00	$ 5,314,476.00	$ 7,703,541.00
Gasoline stations	93.2	$ 5,364,703.00	$ 11,860,191.00	$ 17,572,471.00
Real estate establishments	43.6	$ 1,138,591.00	$ 5,256,776.00	$ 6,827,204.00
Health and personal care	35.8	$ 1,424,141.00	$ 2,230,595.00	$ 2,798,678.00
Food services and drinking places	30.9	$ 601,030.00	$ 895,840.00	$ 1,631,177.00
Wholesale trade businesses	14.4	$ 1,013,832.00	$ 1,726,790.00	$ 2,672,676.00

Impact by type and sector, 2014, Adjusted Spending

Impact Type	Employment	Labor Income	Value Added	Output
Direct	998.8	$ 33,947,791.00	$ 67,240,016.00	$ 98,595,060.00
Indirect	146.7	$ 6,379,680.00	$ 12,262,591.00	$ 20,809,143.00
Induced	200.7	$ 7,745,796.00	$ 14,785,373.00	$ 25,324,615.00
Total	1346.2	$ 48,073,268.00	$ 94,287,980.00	$ 144,728,819.00
Sector, top ten affected industries				
General merchandise	475.5	$ 15,779,340.00	$ 23,415,252.00	$ 33,941,329.00
Clothing and clothing accessories	416.5	$ 7,957,769.00	$ 16,227,865.00	$ 25,852,650.00
Gasoline stations	93.2	$ 5,369,518.00	$ 11,870,835.00	$ 17,588,241.00
Real estate establishments	42.7	$ 1,113,749.00	$ 5,142,078.00	$ 6,678,242.00
Food services and drinking places	31.9	$ 621,032.00	$ 925,653.00	$ 1,685,461.00
Sporting goods, hobby, book and music	25.9	$ 485,815.00	$ 798,525.00	$ 1,290,077.00
Wholesale trade businesses	14.5	$ 1,020,952.00	$ 1,738,917.00	$ 2,691,446.00
Direct and electronic sales	13.9	$ 4,725,457.00	$ 15,782,981.00	$ 21,157,791.00
Offices of physicians, dentists, and other health practitioners	13.2	$ 962,057.00	$ 1,114,194.00	$ 1,520,663.00
Private hospitals	9	$ 654,946.00	$ 687,824.00	$ 1,245,048.00

Table C: Projected Economic Impact, 2015 and 2016

Impact by type and sector, 2015

Impact Type	Employment	Labor Income	Value Added	Output
Direct	748.5	$ 21,585,278.00	$ 37,774,673.00	$ 56,843,911.00
Indirect	84.2	$ 3,759,722.00	$ 7,192,192.00	$ 12,227,169.00
Induced	125.7	$ 4,856,052.00	$ 9,265,935.00	$ 15,872,220.00
Total	958.4	$ 30,201,052.00	$ 54,232,800.00	$ 84,943,300.00
Sector, top ten affected industries				
General merchandise	361.9	$ 12,009,527.00	$ 17,821,157.00	$ 25,832,466.00
Clothing and clothing accessories	317.3	$ 6,061,271.00	$ 12,360,436.00	$ 19,691,439.00
Gasoline stations	57	$ 3,281,539.00	$ 7,254,769.00	$ 10,748,918.00
Real estate establishments	25.7	$ 670,513.00	$ 3,095,699.00	$ 4,020,520.00
Food services and drinking places	19.7	$ 384,022.00	$ 572,388.00	$ 1,042,223.00
Sporting goods, hobby, book and music	19.4	$ 364,160.00	$ 598,564.00	$ 967,024.00
Wholesale trade businesses	8.9	$ 624,377.00	$ 1,063,458.00	$ 1,645,990.00
Offices of physicians, dentists, and other health practitioners	8.3	$ 604,082.00	$ 699,610.00	$ 954,835.00
Furniture and home furnishings	6.1	$ 266,683.00	$ 429,127.00	$ 640,653.00
Private Hospitals	5.7	$ 411,571.00	$ 432,232.00	$ 782,394.00

Impact by type and sector, 2016

Impact Type	Employment	Labor Income	Value Added	Output
Direct	830.6	$ 23,639,159.00	$ 41,079,679.00	$ 61,849,514.00
Indirect	91.9	$ 4,102,959.00	$ 7,847,605.00	$ 13,342,040.00
Induced	137.5	$ 5,312,055.00	$ 10,135,110.00	$ 17,361,466.00
Total	1060	$ 33,054,173.00	$ 59,062,394.00	$ 92,553,019.00
Sector, top ten affected industries				
General merchandise	406.7	$ 13,496,908.00	$ 20,028,309.00	$ 29,031,822.00
Clothing and clothing accessories	356.6	$ 6,812,620.00	$ 13,892,623.00	$ 22,132,370.00
Gasoline stations	53.1	$ 3,056,729.00	$ 6,757,763.00	$ 10,012,536.00
Real estate establishments	28.1	$ 732,640.00	$ 3,382,535.00	$ 4,393,046.00
Sporting goods, hobby, book and music	21.7	$ 408,473.00	$ 671,400.00	$ 1,084,697.00
Food services and drinking places	21.6	$ 419,867.00	$ 625,815.00	$ 1,139,507.00
Wholesale trade businesses	9.7	$ 682,665.00	$ 1,162,737.00	$ 1,799,651.00
Offices of physicians, dentists, and other health practitioners	9.1	$ 661,066.00	$ 765,604.00	$ 1,044,905.00
Furniture and home furnishings	6.8	$ 208,574.00	$ 480,444.00	$ 717,264.00
Private Hospitals	6.2	$ 450,484.00	$ 473,098.00	$ 856,367.00