

2006


# Explaining the Decline in Border Crossings Since 1990

Border Policy Research Institute

Hart Hodges

*Western Washington University*

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## Recommended Citation

Border Policy Research Institute and Hodges, Hart, "Explaining the Decline in Border Crossings Since 1990" (2006). *Border Policy Research Institute Publications*. 66.

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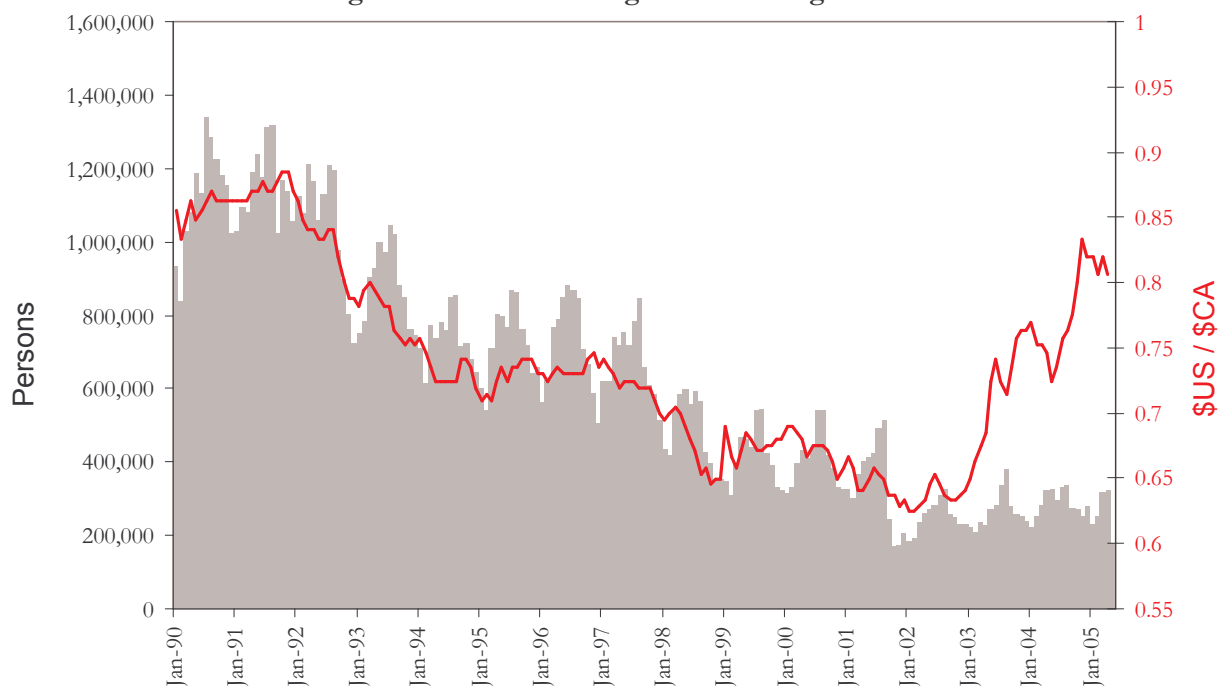
## Introduction

For many years it was believed that the US-Canada exchange rate was the dominant factor affecting the number of Canadians driving south to visit Washington State. When the Canadian dollar was strong in the early 1990s, border crossings were high. The Canadian dollar weakened relative to the US dollar in the mid and late 1990s, and border crossings likewise fell. However, as shown in Figure 1, when the Canadian dollar began to strengthen in 2003, border crossings did not increase as expected. While a number of possible reasons have been suggested, most attention has been given to increased border security in the wake of 9/11. This note summarizes the results of research performed by Dr. Hart Hodges at Western Washington University in Whatcom County, Washington. Hodges developed an econometric model with the goal of determining what factors can explain the pattern of Canadian same-day border crossings that occurred in Whatcom County from 1990 onward. His research indicates that 9/11 significantly changed the behavior of Canadian travelers, such that certain factors prominent prior to 9/11, including the exchange rate and the prices of clothing and milk, are no longer as significant. Other factors, including gasoline prices and the wages of Canadians, have greater explanatory power in the period since 9/11.

## Explanatory Factors That Were Considered

While preparing the model, Hodges investigated the significance of several factors suspected to influence the number of crossings. The prices of cigarettes, clothing, milk, and consumer electronics were all considered. For these variables, the method involved use of an index of the *relative* price of an item in each country, based upon historic values of the exchange rate and of the item's commodity price. Of these factors, the relative prices of milk and clothing appeared significant prior to 9/11, but less significant thereafter. With

Figure 1. Border Crossings and Exchange Rates



respect to gasoline, the relative-price variable was based not upon the historic pricing within the commodity markets, but upon the exchange-rate-adjusted retail prices in the immediate border region, because gasoline pricing does not always follow broader national trends. The price of gasoline had significant explanatory power throughout the study period. The exchange rate was itself a variable of interest, but as noted earlier, its significance has diminished since 9/11. The shopping choices available to Canadians were considered, because when border crossings were high in the past, companies such as Wal-Mart and Costco did not have stores in Canada. Several “big box” chains were contacted to determine the actual dates of store openings in B.C., and specific dates were introduced as variables, but the variables failed to have significance. Average wage levels in B.C. were retrieved from government databases and were found to be somewhat significant, particularly in the period post 9/11. Seasonality of travel has long been recognized as significant, so the model incorporates a variable to capture that trend. Finally, a variable was introduced to reflect the fact that the number of crossings in the very recent past (i.e., in the month immediately preceding a given point in time) is a strong predictor of current activity. This so-called “lag” variable has significant explanatory power. Figure 2 shows a comparison of the model output to the actual crossing-counts for the period from 2002 through early 2005. The model output closely mimics the *pattern* of the actual values, but predicted values are about 50 percent higher than actual values. There appears to be a structural change in the behavior of Canadians associated with the 9/11 event. Possible future research involves developing variables to account for anti-American sentiment or for changes in people’s *perceptions* of the difficulty of crossing the border.

### Relevance Beyond Whatcom County

This research focused on same-day automobile trips by Canadians into a single border county, but likely has significance elsewhere on the northern border. The pattern of crossings found in Whatcom County closely resembles the pattern found at crossings along the borders of Quebec and Ontario.

Figure 2. Predicted vs. Actual Border Crossings

