

# Welfare Costs of Border Delays: Numerical Calculations From a Canadian Regional Trade Model\*

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## Abstract

This paper provides a quantitative assessment of the welfare costs of border delays as a result of recent increases in post 9/11 security measures. Although bilateral trade with the United States ranks high in both volumes and political context, we widen our scope by considering border delays in trade with all countries in the rest of the world. The focus of the paper is on the provincial and sector allocation of the burden of border delays using a static regional computable general equilibrium model of Canada. Preliminary simulation results indicate that all regions in Canada could incur significant welfare losses ranging from \$5.5 to \$13 billion from increases in transport costs in both merchandise and service trade. In particular, Ontario stands out with the heaviest burden in the country. Our analysis suggests that border delays are important to Canada to warrant further investigations, and the modeling approach outlined in this paper could provide a venue to quantify these costs.

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# 1 Introduction

Canada's dominant trading partner is the neighboring United States which traditionally accounts for over three quarters of its exports and half of its imports. With such an order of magnitude, the Canada-US bilateral trade continues to rank high in both volumes (about a billion dollars per minute) and political context even in the presence of trade disputes and frictions over softwood lumber and various contestable agriculture products. Trade and security concerns dominate negotiation agendas between the two countries.

This paper provides a quantitative assessment of the welfare costs of border delays as a result of recent increases in post 9/11 security measures. Although bilateral trade with the United States still tops the priority list, we widen our scope to consider border delays in trade with all countries in the rest of the world. This is sensible since border security has more or less become a global issue. Outside the United States, a number of countries such as Britain, Spain, Turkey, and Indonesia have experienced terrorist attacks and as a result, many countries have tightened border security as a precautionary measure.

We investigate the regional and sectoral consequences of time delays arising from tightened security as well as congestion at inadequate border-crossing facilities (e.g., Windsor-Detroit bridge/tunnel). We also make some illustrative simulations related to border security measures and services trade including tourism and travel. Tourism has lately become an issue of interest as stringent travel document requirements recently passed by the US Congress raise fear of business downturns for border towns and travel industries on both sides of the border.

The focus of this paper is on the provincial and sectoral distribution of the welfare costs arising from border delays. We model these using a variant of BMRT (Basic Model of Regional Trade) — a computable general equilibrium (CGE) model of regional trade for Canada. We will crudely model both the private and public burdens of increased security. This incidence of burden of cost is similar to the distinction made by Brück [5] between private costs associated with increased security (e.g., higher cost of passports or waiting time) and public costs of administering and enforcing the border (e.g., more guards, new scanning technology).

Our results, though still preliminary, indicate that the issue of border delays is extremely important to Canada, and worth further investigations. The modeling approach outlined in this paper suggests a venue to quantify the welfare costs of these border delays in a regional context.

Despite that BMRT is essentially a Canadian model designed to address issues of interest to Canadians, we believe that our work can help serve as a starting point for further research on similar issues of welfare costs on the US side of the border.

The plan of the remaining of the paper is as follows: section 2 briefly surveys the small but growing literature of border delays, and trade. Section 3 gives a short summary of the CREAP (Canadian Regional Economic Analysis Project) benchmark-equilibrium data set and its companion numerical model BMRT. Section 4 describes how our regional model needs to be modified to include the added resource costs from border delays. Section 5 discusses some difficulties and challenges in data collection and adaptation. Section 6 provides some preliminary simulation results. Section 7 ends the paper with a summary and conclusions.<sup>1</sup>

## 2 Literature Review

The early literature on border delays and trade liberalization, e.g., Cudmore and Whalley [10], focuses on issues faced by developing and transition countries in a pre-9/11 context such as excessive delays in customs clearance for bureaucratic and bribe-seeking purposes. These issues are however quite different from recent experiences of security-driven delays occurred at the Canada-US border as documented by various government and private agencies such as Ontario Chamber of Commerce [16] [17] [18], Canada Border Services Agency [6], Canada-US-Ontario-Michigan Border Transport Planning/Need Feasibility Study [7], ShipNorthAmerica Transportation [19], Canadian Manufacturers and Exporters [9], and Canadian Centre for Pollution Prevention [8]. These documents provide useful background information to our study.

In a recent study based on Québec provincial input-output model and extraneous trucking cost data, Martin et al [13] [14] [15] estimate that border delays could cost truckers, on average, about 32 minutes per shipment which translates into about C\$290 million per year for Canadian exporters. Since these cost estimates apply to truckers only, they can be best viewed as a lower bound for the actual costs of border delays. Other potential economic costs on business travels and tourism remain to be investigated.

Looking from a global point of view, Bergeijk [2] reviews recent theoretical and empirical studies on the impact of transnational terrorism

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<sup>1</sup>Additional tables are provided at the end of the paper for the interested reader.

on trade for a number of countries, and suggests that more attention be given to the interdependence of trade and security in both theory and policy.

On a worldwide basis, Walkenhorst and Dihel [23] cite earlier studies which estimate that while the *pre*-9/11 frictional costs (e.g., paperwork, time and other compliance costs) normally associated with border crossing amount to 5-13% of the value of traded goods, the additional *post*-9/11 frictional and security costs could raise an extra amount of 1-3% of the value of goods. In their simulation based on the GTAP [11] global trade model, they consider the following counterfactual scenarios for ten regions and ten sectors:<sup>2</sup>

- i. transportation costs of all goods are uniformly increased by 1% of the original value of traded goods,
- ii. transportation costs of all goods are uniformly increased by 2.5% of the original value of traded goods,
- iii. other runs where the rates applied still average 1%, but the relative height of costs depends on the mode of travel and the regions in question.

Their results show that under scenario (i), the welfare cost of worldwide heightened border security, calculated in terms of Hicksian equivalent variations, could be about US\$75 billion per year — about 0.7% of the world gross national product.

In an analytical vein, Huang and Whalley [12] suggest that the adverse effects of border delays could be more than just the time delay costs which are usually calculated. Using the inventory-theoretic approach in the theory of demand for money (in which consumers balance money holdings against frequent trips to banks), they argue that, in the presence of costly border delays, importers tend to hold larger inventories to guard against the risk of being out of stock. In the simple case with certainty in border delays, the social cost of border delays are twice the time delay costs, i.e., the additional inventory costs equal the time delay costs. In case of uncertainty in border delays, for a given average delay, the added inventory costs tend to increase with the variance of the delays.

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<sup>2</sup>The ten regions include Western Europe, Eastern Europe, North Africa & Middle East, Sub-Saharan Africa, Oceania, North Asia, South Asia, North America, Latin America, and Rest of the World. The ten sectors include agriculture, mining, food, textiles & leather, wood & paper, chemicals, non-metallic minerals, basic metals, machinery, and other manufacturing & services.

### 3 Basic Framework

This section gives a short summary of the basic framework of the CREAP benchmark-equilibrium data set and its companion BMRT numerical model.<sup>3</sup> This package provides a starting point for our modeling work on border delays from a Canadian perspective.

#### CREAP Data

The CREAP data set used here is based on the 1998 S-level provincial Input-Output (IO) data compiled by the IO Division of Statistics Canada. The raw data from Statistics Canada contain missing values in suppressed cells and need to be balanced to produce a benchmark micro-consistent data set satisfying the usual zero profit and market equilibrium conditions. In particular, the IO matrix is rectangular which means that each sector can produce a vector of outputs (multi-product) instead of the usual single-product case as in most CGE models with squared data.

The data set provides a numerical snapshot of Canada as a small open regional economy with 10 provinces, 25 sectors, and 56 aggregate commodities. In addition, there are sufficient details on emission, energy, taxes, and trade to explore various policy issues on the environment, public finance, agriculture, and trade.

#### BMRT Model

The BMRT model is a static provincial CGE model of Canada. All productive sectors have nested CES/CET<sup>4</sup> production functions with intermediate goods and constant returns to scale. The model features perfect competition in all markets and multi-product technology in all sectors. Produced outputs are differentiated between those destined for the own province and those destined for other markets. There are interprovincial trade as well as international trade. Domestic and imported products are considered to be imperfect substitutes (i.e., Armington goods [1]).

Each province has a representative household which receives all income and tax revenues (local, provincial and federal) collected in the province. Households substitute between labor and leisure based on in-

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<sup>3</sup>See the documentations by Snoddon and Wigle [20] [21] for more details.

<sup>4</sup>CES (constant elasticity of substitution) and CET (constant elasticity of transformation) refer to a class of well-behaved functional forms often used in CGE models.

comes, the cost of goods and the price of leisure, which is dependent on, among other things, direct taxation of labor income.

The model includes exports and imports to and from the rest-of-world. The export activities use ‘inputs’ of provincial exports and produce ‘outputs’ of foreign exchange. Similarly, the import activities take ‘inputs’ of foreign exchange and produce ‘outputs’ of the rest-of-world goods destined for the provinces. To implement the experiments considered here, we assume that additional inputs<sup>5</sup> are required to complete the import and export transactions. A key consideration for the pattern of regional and sectoral effects is the input profile assumed.

## 4 Experiment Designs

To focus on issues of trade and border delays, we need to make some modifications of both the original CREAP data and BMRT model in section 3 above. We aggregate the ten Canadian provinces into five regions, namely, Québec (QC), Ontario (ON), British Columbia (BC), Atlantic Canada (AC), and Prairie Provinces (PP)<sup>6</sup>. In addition, there are 12 sectors and 23 commodities (see table 4, p. 16) instead of 25 sectors and 56 commodities in the original S-level data set.

We consider the following four illustrative experiments to look at border delays and related costs:

Exp 1. *1% Transport Cost Increase On Merchandise Trade*

We simulate an across-the-board increase of transportation costs associated with imports and exports of all merchandise trade. In this experiment, the transport costs will rise by 1% of the initial cost of the imports or exports. Exp 1 is thus similar to the 1% experiment in Walkenhorst and Dihel’s [23].

Exp 2. *2% Transport Cost Increase On Merchandise Trade*

Same as Exp 1 except that the cost increase is doubled to 2% of the initial value of trade. Exp 2 thus loosely corresponds to the ‘high-cost’ case in Walkenhorst and Dihel’s [23] as well as the initial case in Huang and Whalley [12] where costs are multiplied by two to reflect inventory costs.

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<sup>5</sup>See more details on p. 7.

<sup>6</sup>Atlantic Canada consists of four smaller provinces on the East Coast, namely, Newfoundland, Prince Edward Island, New Brunswick, and Nova Scotia while the Prairie includes Alberta, Saskatchewan, and Manitoba.

Exp 3. *5% Transport Cost Increase On Services Trade*

We simulate an increase in the cost of selected services trade, notably, accommodation services and meals (AMS), business and computer services (BSV), and transportation and storage (TRS). Tourism is inextricably linked to border crossings, and selected business services are commonly associated with border crossings; in this case the cost increase is 5% of the initial trade volume.

Exp 4. *Both Exp 2 and Exp 3 Combined*

This is the most severe case with cost increases of 2% on merchandise trade and 5% on service trade.

As mentioned above, we assume that border delays require additional inputs to complete the import and export transactions. In the case of merchandise trade, the added ‘delay’ costs are inputs of domestically-produced ‘transportation and warehousing’ (TRS). That is, for the 1% cost increase in Exp 1, after the border delays, an amount of C\$10,000 in inputs of TRS would be required to import an additional C\$1 million in imports. Similarly, for the 2% cost increase in Exp 2, this number is doubled. Note again that transportation services (delays) and storage (warehousing) are the *same* commodity (TRS) in our model.

In the case of services trade, we assume that border delays mean that firms are required to use more domestically-produced business services (BSV) to complete all imports or exports.

Our intention would be to model a given average increase in trade-related costs, but differentiate the costs by province and good as well as by imports and exports. The model is capable of doing so once data are available. At this point we have not modeled the direct public cost to Canadians of providing further border security. Undoubtedly this is an area that urgently needs further work as there will be important policy implications for the years to come.

## 5 Data Challenges

Border crossing is a complex phenomenon that goes beyond country boundaries as well as the usual paradigms of rational behavior and government policy. As a result, attempts to investigate the extent of border delays will face serious challenges both at conceptual and practical levels. This section discusses some of these data issues encountered in our modeling effort.

i. *Transport Mode*

To make the experiment more realistic, it would be useful to find out what mode of transport is used by different export and import flows. For example, trucking is the most popular transport mode in merchandise trade across the Canada-US border (e.g., Windsor-Detroit bridge/tunnel) while business travelers would prefer air travel. Presumably these data can be found by source province and commodity. Walkenhorst and Dihel [23] argued that air travel was the highest risk and would therefore have the highest increase in costs.

ii. *Tourism*

One of the most visible impacts immediately after 9/11 was the marked decline in non-business travel. Although there is a small growing literature on CGE modeling of the tourism sector (e.g., Blake [3], Blake and Sinclair [4]), we are unaware of attempts to model this in a multisectoral context across the Canada-US border. It would seem that these impacts were mostly related to the sense of insecurity engendered by 9/11, and only slightly to delays and tightened security.

iii. *Business Services*

It would be useful to know which business services rely most on temporary entry of business travelers to conduct their business, and furthermore, what amount of trans-border travel is associated with the trade flows we observe. Further, it would be interesting to know how essential the travel is to the completion of the transactions. We are not aware of any data that would illuminate the relevant empirical magnitudes.

iv. *Input Composition*

So far we have made what strike us as reasonable assumptions in terms of interpreting what exactly constitutes the 'costs' associated with border delays. In our terminology, we would like to know the input composition of various elements of these costs. In addition to finding what these goods and services are, we would also like to know whether the flows require domestically-produced inputs, imported inputs, or an Armington composite of the goods in question.

v. *Input Incidence*

There is an added modeling issue associated with exports. Currently, the added costs are associated with the act of exporting, when in fact, it would be quite natural to think of them being associated with the domestic-imported transformation in the model.

## 6 Simulation Results

Table 1 below presents summary of simulation results of the four experiments outlines in Section 4, namely, 1% transport cost increase on merchandise trade (Exp 1), 2% transport cost increase on merchandise trade (Exp 2), 5% transport cost increase on services trade (Exp 3), and both Exp 2 and Exp 3 combined (Exp 4). The results show that all regions in Canada incur significant welfare costs of border delays (measured in terms of Hicksian equivalent variations) ranging from C\$5.5 billion for 1% increase in transport costs on merchandise trade (Exp 1) to C\$13 billion for increase in transport costs on both merchandise and services trade (Exp 4). Our Canadian welfare cost of 0.6% of gross national product in Exp 1 is probably comparable with the global estimate of 0.7% by Walkenhorst and Dihel [23].

Table 1: Summary of Results: Welfare Changes

	Welfare Change (C\$ million)						
Exp	QC	ON	BC	AC	PP	Canada	
1	-1093.60	-2967.34	-479.38	-222.37	-687.70	-5450.39	
2	-2165.92	-5865.53	-945.72	-438.33	-1360.02	-10775.52	
3	-430.64	-1119.42	-227.15	-100.37	-314.07	-2191.65	
4	-2604.81	-7018.98	-1176.19	-539.57	-1677.82	-13017.37	

	Welfare Change (%)						
Exp	QC	ON	BC	AC	PP	Canada	
1	-0.55	-0.86	-0.38	-0.35	-0.41	-0.60	
2	-1.10	-1.69	-0.75	-0.69	-0.80	-1.19	
3	-0.22	-0.32	-0.18	-0.16	-0.19	-0.24	
4	-1.32	-2.03	-0.93	-0.85	-0.99	-1.44	

Among all regions of Canada, Ontario stands out as the biggest and the most extensive in trade linkage with the United States. As a result, it is probably not surprising that Ontario consistently has the highest welfare costs of border delays both in dollar terms and percent of gross national product. In fact, Ontario alone bears more than half of the national welfare costs (e.g., C\$7 billion for Ontario compared to C\$13 billion for Canada in Exp 4). In all four experiments, it is the only region that stands above the national figures.

Table 2 summarizes the impacts of border delays on transportation and storage (TRS). In the experiments that involve merchandise trade (Exp 1, 2, 4), all regions experience unexpected results of extraordinarily high order of magnitude and with opposite signs. One would expect the transportation sector to struggle rather than thrive as a result of tighter border security. This points out the importance of choosing the ‘input bundle’ carefully. As it is, we use the output of the transportation sector, when it likely makes more sense to have an input bundle for waiting that includes selected *inputs* into transportation (fuel and labor). Likewise, we should have a different bundle of *inputs* for the ‘inventories’ aspect of exports (e.g., space rental and maintenance).

Table 2: Transportation Overview

	Change in Activity (%)				
Exp	QC	ON	BC	AC	PP
1	16.41	22.23	10.49	13.19	12.52
2	32.29	43.48	20.62	25.92	24.66
3	-0.55	-0.73	-0.50	-0.24	-0.25
4	31.71	42.71	20.09	25.67	24.39

Finally, Table 3 below summarizes the impacts of border delays on business and computer services (BSV). In the experiments that involve services trade (Exp 3, 4), all regions experience increases in business services activities. This again points back to issues of data challenges discussed in section 5 above.

Table 3: Business Services Overview

	Change in Activity (%)				
Exp	QC	ON	BC	AC	PP
1	-0.22	0.01	-0.22	-0.38	-0.31
2	-0.45	-0.01	-0.44	-0.77	-0.62
3	1.32	1.72	1.03	1.02	1.01
4	0.86	1.71	0.59	0.23	0.39

## 7 Summary & Conclusion

This paper presents our attempt to investigate the welfare impacts of border delays arising from post-9/11 security concerns using a regional CGE model of Canada. The simulation results presented here should be taken as preliminary or illustrative. As a result, they should be treated with extreme caution. We do however believe that a few broad lessons can emerge from our modeling effort.

- i. If the order of magnitudes of costs suggested by Walkenhorst and Dihel [23] as well as our results are to be believed, and further if even these can be argued to under-represent the ‘true’ burden, our first cut at modeling suggests that *the issue of border delays is extremely important to Canada* and warrants further investigations.
- ii. Ontario stands out with the highest cost burden in the country. As a result, the issue of border delays should be extremely important to Ontario as well.
- iii. For some sectors (e.g., transportation in merchandise trade and business services in services trade), the results can go against intuition and expectation. That is, one would expect these sectors to struggle rather than thrive as a result of tighter border security. These unexpected results might arise from modeling issues or data challenges or both. At the same time, we would argue that *the approach we have adopted allows us to highlight some of the unanticipated impacts of border delays*, including those sectors whose activity levels could expand in response to border delays.

The paper can be further extended and refined in a number of directions as follows:

- i. In the absence of other data, we have restricted ourselves to across-the-board trade costs for merchandise trade. These costs are more likely to be differentiated by provinces and commodities resulting even higher overall welfare costs and more concentrated welfare burdens.
- ii. The BMRT model essentially assumes a small open economy taking world prices for exports and imports as exogenously given. This means that Canada would have to bear the brunt of the costs of delays and increased security. This is probably not unreasonable for a first approximation. However, it would be more realistic to think of Canada as facing a relatively elastic demand for her exports (instead of an infinitely elastic demand). Likewise, it is likely that

the elasticity of supply of Canada's imports is quite high (but not infinite). It would be useful to incorporate these features into the modeling.

- iii. Because the model is perfectly competitive, we also abstract from one of the serious difficulties that arise with *unanticipated* or *unpredictable* delays. This is the existence of pre-existing contracts which bind firms to prices (of, say, transportation services) which no longer reflect the costs associated with them
- iv. In our calculations, border delay costs are formulated as added margins in exactly the same manner for both freight and passengers. While added margins appear reasonable for freight, it would be preferable to calculate delays for passengers in terms of added time costs at border-crossing points. Provided data are available, the model can be modified to handle passenger added time costs as have been done by transportation engineers (e.g., see Ueda et al [22]).

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Table 4: Regions, Sectors, and Commodities

Region	Description
1 QC	Québec
2 ON	Ontario
3 BC	British Columbia
4 AC	Atlantic Canada
5 PP	Prairie Provinces
ROW	Rest of World
ROC	Rest of Canada

Sector	Description
1 UTL	Utilities
2 FIR	Finance, insurance, real estate
3 BSV	Business and computer services
4 AGR	Primary agriculture
5 MIN	Mining
6 CON	Construction
7 WRT	Wholesale and retail
8 SGS	Social and government services
9 OPR	Other primary (agriculture, fisheries, forestry)
10 MFG	Manufacturing
11 TRN	Transportation
12 AFE	Accommodations, meals and entertainment

Commodity	Description
1 LUM	Lumber
2 PRP	Printing and publishing
3 MET	Primary metals and metal products
4 OMP	Other manufactured products
5 MEQ	Machinery and equipment
6 MVP	Vehicles and parts
7 TRS	Transportation and storage
8 UTL	Utilities (including communication services)
9 FIR	Finance, insurance, and real estate services
10 BSV	Business and computer services
11 ELY	Electricity
12 AGR	Agricultural goods
13 FFT	Forestry products, fish and fur
14 MIN	Ores and minerals
15 PFD	Processed food
16 TCL	Textiles and clothing
17 FAF	Furniture and fixtures
18 PPP	Pulp and paper
19 CON	Construction
20 WRT	Wholesale and retail
21 SGS	Social and government services
22 AMS	Accommodations, meals and entertainment
23 FUE	Fuels

Table 5: Sectoral Overview — Experiment 1

Exp 1		Change in Employment (%)				
Sector		QC	ON	BC	AC	PP
1	UTL	-0.66	-2.86	-0.67	-1.13	-0.83
2	FIR	-0.06	0.27	-0.02	0.07	-0.13
3	BSV	-0.24	0.06	-0.24	-0.45	-0.36
4	AGR	-1.92	-2.18	-1.99	-2.34	-3.75
5	MIN	-1.22	-0.07	-0.51	-1.28	-0.79
6	CON	-0.28	-0.56	-0.32	-0.39	-0.36
7	WRT	-0.03	0.72	-0.06	0.01	-0.24
8	SGS	-0.16	-0.22	-0.03	-0.09	-0.18
9	OPR	-2.02	-1.96	-3.41	-2.97	-2.70
10	MFG	-2.38	-3.03	-3.48	-3.30	-3.03
11	TRN	16.32	22.18	10.44	13.10	12.38
12	AFE	-0.51	-1.17	-0.63	-0.73	-0.98

Exp 1		Change in Activity (%)				
Sector		QC	ON	BC	AC	PP
1	UTL	-0.38	-2.66	-0.53	-0.85	-0.56
2	FIR	0.06	0.31	0.06	0.28	0.02
3	BSV	-0.22	0.01	-0.22	-0.38	-0.31
4	AGR	-1.84	-2.08	-1.93	-2.19	-3.52
5	MIN	-1.10	0.07	-0.40	-1.08	-0.55
6	CON	-0.26	-0.62	-0.31	-0.34	-0.32
7	WRT	0.02	0.76	-0.03	0.10	-0.16
8	SGS	-0.14	-0.24	-0.01	-0.04	-0.13
9	OPR	-1.97	-1.96	-3.33	-2.93	-2.61
10	MFG	-2.23	-2.91	-3.43	-3.16	-2.87
11	TRN	16.41	22.23	10.49	13.19	12.52
12	AFE	-0.38	-1.09	-0.58	-0.57	-0.85

Table 6: Sectoral Overview — Experiment 2

Exp 2		Change in Employment (%)				
Sector		QC	ON	BC	AC	PP
1	UTL	-1.30	-5.40	-1.31	-2.22	-1.64
2	FIR	-0.12	0.53	-0.04	0.14	-0.26
3	BSV	-0.49	0.09	-0.48	-0.90	-0.71
4	AGR	-3.79	-4.35	-3.92	-4.63	-7.33
5	MIN	-2.41	-0.23	-1.06	-2.53	-1.60
6	CON	-0.55	-1.12	-0.63	-0.78	-0.73
7	WRT	-0.07	1.44	-0.12	0.02	-0.48
8	SGS	-0.32	-0.43	-0.07	-0.18	-0.36
9	OPR	-3.99	-3.89	-6.69	-5.85	-5.30
10	MFG	-4.72	-6.01	-6.83	-6.49	-5.95
11	TRN	32.09	43.36	20.51	25.73	24.36
12	AFE	-0.89	-2.04	-1.20	-1.40	-1.90

Exp 1		Change in Activity (%)				
Sector		QC	ON	BC	AC	PP
1	UTL	-0.75	-5.04	-1.04	-1.67	-1.10
2	FIR	0.12	0.62	0.11	0.55	0.04
3	BSV	-0.45	-0.01	-0.44	-0.77	-0.62
4	AGR	-3.65	-4.15	-3.81	-4.34	-6.89
5	MIN	-2.17	0.04	-0.86	-2.15	-1.13
6	CON	-0.52	-1.24	-0.62	-0.68	-0.65
7	WRT	0.05	1.51	-0.07	0.20	-0.31
8	SGS	-0.27	-0.47	-0.02	-0.07	-0.26
9	OPR	-3.91	-3.90	-6.54	-5.77	-5.12
10	MFG	-4.42	-5.78	-6.73	-6.22	-5.64
11	TRN	32.29	43.48	20.62	25.92	24.66
12	AFE	-0.64	-1.88	-1.10	-1.09	-1.64

Table 7: Sectoral Overview — Experiment 3

Exp 3		Change in Employment (%)				
Sector		QC	ON	BC	AC	PP
1	UTL	0.00	0.07	-0.05	0.01	0.01
2	FIR	-0.30	-0.36	-0.18	-0.13	-0.17
3	BSV	1.32	1.72	1.03	1.02	1.01
4	AGR	0.00	-0.05	-0.01	0.12	0.11
5	MIN	0.23	0.01	0.11	-0.05	-0.01
6	CON	-0.15	-0.20	-0.12	-0.14	-0.14
7	WRT	-0.08	-0.07	0.00	-0.01	-0.02
8	SGS	-0.11	-0.17	-0.08	-0.08	-0.11
9	OPR	0.02	-0.05	0.18	0.19	0.08
10	MFG	0.13	0.11	0.18	0.17	0.15
11	TRN	-0.56	-0.75	-0.51	-0.24	-0.26
12	AFE	-0.09	-0.04	-0.10	-0.06	-0.09

Exp 3		Change in Activity (%)				
Sector		QC	ON	BC	AC	PP
1	UTL	0.01	0.11	-0.03	0.01	0.01
2	FIR	-0.28	-0.34	-0.16	-0.13	-0.16
3	BSV	1.32	1.72	1.03	1.02	1.01
4	AGR	0.01	-0.02	0.01	0.12	0.11
5	MIN	0.24	0.04	0.13	-0.05	0.00
6	CON	-0.14	-0.20	-0.12	-0.14	-0.13
7	WRT	-0.07	-0.06	0.00	-0.01	-0.02
8	SGS	-0.11	-0.17	-0.08	-0.08	-0.11
9	OPR	0.03	-0.04	0.19	0.19	0.09
10	MFG	0.14	0.14	0.19	0.17	0.15
11	TRN	-0.55	-0.73	-0.50	-0.24	-0.25
12	AFE	-0.08	-0.02	-0.09	-0.06	-0.08

Table 8: Sectoral Overview — Experiment 4

Exp 4		Change in Employment (%)				
Sector		QC	ON	BC	AC	PP
1	UTL	-1.29	-5.36	-1.36	-2.20	-1.63
2	FIR	-0.41	0.17	-0.22	0.01	-0.43
3	BSV	0.82	1.81	0.55	0.10	0.29
4	AGR	-3.79	-4.39	-3.92	-4.51	-7.22
5	MIN	-2.17	-0.16	-0.95	-2.58	-1.59
6	CON	-0.70	-1.33	-0.76	-0.92	-0.86
7	WRT	-0.15	1.38	-0.12	0.02	-0.50
8	SGS	-0.43	-0.61	-0.15	-0.25	-0.47
9	OPR	-3.96	-3.93	-6.51	-5.65	-5.21
10	MFG	-4.58	-5.89	-6.65	-6.33	-5.80
11	TRN	31.50	42.57	19.98	25.48	24.09
12	AFE	-0.96	-2.03	-1.29	-1.44	-1.97

Exp 4		Change in Activity (%)				
Sector		QC	ON	BC	AC	PP
1	UTL	-0.73	-4.96	-1.07	-1.65	-1.08
2	FIR	-0.17	0.28	-0.05	0.42	-0.12
3	BSV	0.86	1.71	0.59	0.23	0.39
4	AGR	-3.64	-4.16	-3.80	-4.21	-6.77
5	MIN	-1.92	0.13	-0.73	-2.20	-1.12
6	CON	-0.67	-1.45	-0.74	-0.82	-0.78
7	WRT	-0.03	1.45	-0.07	0.19	-0.33
8	SGS	-0.38	-0.64	-0.10	-0.15	-0.37
9	OPR	-3.87	-3.92	-6.34	-5.58	-5.03
10	MFG	-4.27	-5.65	-6.54	-6.05	-5.49
11	TRN	31.71	42.71	20.09	25.67	24.39
12	AFE	-0.70	-1.86	-1.18	-1.14	-1.71

Table 9: Trade Overview — Experiment 1

Exp 1		Change in Exports to ROW (%)					Change in Imports from ROW (%)				
Commodity		QC	ON	BC	AC	PP	QC	ON	BC	AC	PP
1	LUM	-2.72	-3.20	-3.81	-3.57	-3.36	-1.18	-1.64	-1.99	-1.30	-0.79
2	PRP	-3.09	-4.01	-3.77	-3.10	-4.08	1.92	1.31	1.54	1.80	1.92
3	MET	-2.72	-3.56	-4.18	-3.50	-3.37	-1.41	-2.26	-1.30	-1.09	-0.97
4	OMP	-2.90	-3.48	-4.16	-3.92	-3.40	-0.99	-1.71	-0.77	-0.83	-1.10
5	MEQ	-2.55	-3.22	-3.65	-3.63	-3.40	-1.47	-2.09	-1.07	-1.03	-1.11
6	MVP	-1.07	-3.04	-2.55	-2.77	-2.51	-1.28	-2.48	-0.77	-0.93	-0.75
7	TRS	15.74	21.32	10.29	13.21	12.60	5.72	7.21	3.35	4.83	4.87
8	UTL	4.47	7.65	2.90	3.04	2.79	-4.82	-4.71	-4.49	-4.18	-4.32
9	FIR	1.07	1.92	0.88	1.34	0.72	-1.88	-1.80	-1.79	-2.08	-1.79
10	BSV	0.21	0.80	0.02	-0.11	-0.22	-0.91	-0.89	-0.69	-0.88	-0.58
11	ELY	0.79	-2.69	-0.10	0.00	-0.17	-1.46	-0.56	-1.10	-1.19	-1.03
12	AGR	-2.50	-2.16	-2.93	-2.80	-4.30	-2.13	-2.73	-1.91	-2.69	-2.35
13	FFT	-2.39	-1.77	-3.58	-3.45	-3.32	-3.03	-3.54	-3.98	-3.23	-3.29
14	MIN	-0.90	-0.53	-0.77	-1.16	-0.81	-3.59	-3.35	-1.77	-2.62	-2.07
15	PFD	-3.09	-3.88	-4.26	-3.73	-3.95	-0.51	-1.41	-0.41	-0.71	-0.41
16	TCL	-2.88	-3.35	-4.17	-3.74	-3.82	-1.33	-1.86	-1.00	-0.99	-0.77
17	FAF	-2.84	-3.49	-4.54	-4.40	-3.67	-0.96	-2.13	-1.11	-0.93	-0.66
18	PPP	-2.64	-3.47	-3.69	-3.65	-3.39	-1.31	-1.92	-1.45	-1.75	-0.92
19	CON	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
20	WRT	0.75	1.98	0.63	0.94	0.32	-2.62	-2.65	-2.01	-2.28	-1.93
21	SGS	0.69	1.17	0.65	0.66	0.29	-1.86	-1.74	-1.17	-1.46	-1.23
22	AMS	-0.08	-0.76	-0.35	-0.25	-1.01	-0.52	-0.90	-0.23	-0.45	-0.16
23	FUE	-3.51	-4.40	-1.38	-3.39	-1.18	0.27	-0.03	0.80	-1.21	-0.52

Exp 1		Change in Exports to ROC (%)					Change in Imports from ROC (%)				
Commodity		QC	ON	BC	AC	PP	QC	ON	BC	AC	PP
1	LUM	-1.87	-1.78	-2.09	-2.16	-1.97	-1.97	-2.18	-2.69	-1.90	-1.55
2	PRP	-1.32	-1.92	-1.76	-0.80	-1.31	-1.79	-1.68	-2.08	-1.27	-1.27
3	MET	-2.00	-1.76	-2.95	-2.11	-1.97	-2.00	-2.49	-1.89	-1.51	-1.60
4	OMP	-1.95	-1.85	-3.25	-2.27	-1.95	-1.93	-2.55	-1.64	-1.64	-1.88
5	MEQ	-1.63	-1.72	-2.59	-2.20	-1.98	-2.07	-2.40	-1.57	-1.44	-1.65
6	MVP	-0.72	-0.96	-1.90	-1.60	-1.36	-1.37	-1.71	-0.67	-0.85	-0.73
7	TRS	7.21	6.07	7.19	6.29	6.17	6.91	8.39	4.50	5.94	5.98
8	UTL	1.77	5.74	-0.15	0.59	0.48	2.95	0.45	3.46	1.15	1.08
9	FIR	0.23	1.47	-0.20	0.23	0.02	1.14	-0.04	1.22	0.31	0.16
10	BSV	-0.12	0.79	-0.34	-0.25	-0.24	0.51	-0.38	0.43	-0.12	-0.14
11	ELY	0.00	-3.59	-0.10	-0.70	-0.43	-1.71	-0.05	-0.59	-0.70	-0.43
12	AGR	-2.17	-0.75	-2.26	-2.16	-2.96	-1.44	-3.06	-2.50	-2.25	-2.88
13	FFT	-2.28	-0.75	-2.05	-2.74	-2.63	-1.33	-2.64	-3.41	-2.67	-2.50
14	MIN	0.15	0.24	-1.43	-1.13	-0.59	-1.41	-1.53	0.16	-0.67	-0.45
15	PFD	-1.96	-1.91	-2.82	-2.08	-2.13	-1.99	-2.68	-1.90	-1.98	-1.91
16	TCL	-1.82	-1.77	-2.98	-2.23	-2.15	-2.18	-2.44	-1.68	-1.59	-1.52
17	FAF	-1.92	-1.52	-2.94	-2.50	-2.02	-1.80	-2.88	-1.96	-1.69	-1.57
18	PPP	-1.83	-1.96	-2.24	-2.33	-1.97	-2.04	-2.21	-2.09	-2.23	-1.67
19	CON	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
20	WRT	-0.58	1.27	-0.71	-0.06	-0.33	0.54	-0.95	0.39	0.13	-0.07
21	SGS	-0.04	1.26	-0.19	-0.04	-0.14	0.75	-0.38	0.46	-0.04	-0.14
22	AMS	-0.29	-0.28	-0.48	-0.34	-0.65	-0.50	-0.92	-0.59	-0.32	-0.55
23	FUE	-2.33	-3.19	-0.98	-1.77	-0.23	-1.12	-0.43	0.39	-2.78	-0.78

Table 10: Trade Overview — Experiment 2

Exp 2		Change in Exports to ROW (%)					Change in Imports from ROW (%)				
Commodity		QC	ON	BC	AC	PP	QC	ON	BC	AC	PP
1	LUM	-5.38	-6.35	-7.47	-7.02	-6.58	-2.33	-3.26	-3.89	-2.55	-1.55
2	PRP	-5.98	-7.68	-7.30	-6.00	-7.90	3.74	2.54	2.99	3.50	3.75
3	MET	-5.38	-7.05	-8.18	-6.88	-6.61	-2.78	-4.47	-2.53	-2.12	-1.90
4	OMP	-5.73	-6.90	-8.14	-7.69	-6.66	-1.95	-3.39	-1.49	-1.62	-2.16
5	MEQ	-5.05	-6.39	-7.15	-7.14	-6.67	-2.90	-4.11	-2.10	-2.01	-2.18
6	MVP	-2.14	-6.05	-4.99	-5.44	-4.93	-2.53	-4.92	-1.51	-1.82	-1.46
7	TRS	31.12	42.00	20.31	26.10	24.93	11.08	13.88	6.48	9.31	9.45
8	UTL	9.02	15.62	5.79	6.06	5.60	-9.33	-9.10	-8.69	-8.11	-8.37
9	FIR	2.15	3.85	1.75	2.65	1.42	-3.70	-3.55	-3.51	-4.09	-3.53
10	BSV	0.42	1.61	0.03	-0.22	-0.45	-1.81	-1.77	-1.36	-1.73	-1.16
11	ELY	1.58	-4.93	-0.20	0.00	-0.33	-2.94	-1.24	-2.15	-2.35	-2.04
12	AGR	-4.95	-4.34	-5.78	-5.55	-8.40	-4.17	-5.37	-3.72	-5.25	-4.58
13	FFT	-4.72	-3.53	-7.05	-6.78	-6.51	-5.94	-6.94	-7.76	-6.31	-6.39
14	MIN	-1.78	-1.14	-1.60	-2.32	-1.68	-6.98	-6.59	-3.44	-5.09	-4.00
15	PFD	-6.09	-7.66	-8.32	-7.34	-7.73	-0.95	-2.73	-0.76	-1.36	-0.74
16	TCL	-5.70	-6.64	-8.17	-7.36	-7.48	-2.63	-3.67	-1.94	-1.92	-1.50
17	FAF	-5.61	-6.92	-8.90	-8.61	-7.19	-1.88	-4.20	-2.17	-1.79	-1.27
18	PPP	-5.22	-6.89	-7.24	-7.18	-6.65	-2.57	-3.79	-2.82	-3.40	-1.77
19	CON	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
20	WRT	1.50	3.98	1.24	1.86	0.63	-5.15	-5.20	-3.95	-4.48	-3.79
21	SGS	1.40	2.35	1.29	1.32	0.57	-3.67	-3.44	-2.29	-2.88	-2.43
22	AMS	0.03	-1.09	-0.64	-0.44	-1.94	-1.10	-1.84	-0.49	-0.94	-0.36
23	FUE	-6.93	-8.68	-2.78	-6.66	-2.37	0.54	-0.05	1.63	-2.38	-0.98

Exp 2		Change in Exports to ROC (%)					Change in Imports from ROC (%)				
Commodity		QC	ON	BC	AC	PP	QC	ON	BC	AC	PP
1	LUM	-3.73	-3.56	-4.14	-4.27	-3.89	-3.92	-4.34	-5.30	-3.77	-3.07
2	PRP	-2.59	-3.69	-3.46	-1.57	-2.57	-3.46	-3.28	-4.04	-2.47	-2.48
3	MET	-3.99	-3.52	-5.83	-4.16	-3.89	-4.00	-4.95	-3.75	-3.01	-3.18
4	OMP	-3.88	-3.69	-6.41	-4.49	-3.85	-3.85	-5.07	-3.26	-3.27	-3.71
5	MEQ	-3.26	-3.45	-5.12	-4.36	-3.90	-4.14	-4.76	-3.14	-2.88	-3.27
6	MVP	-1.45	-1.94	-3.74	-3.15	-2.67	-2.74	-3.41	-1.34	-1.68	-1.45
7	TRS	14.14	12.09	14.10	12.36	12.14	13.67	16.42	8.90	11.69	11.80
8	UTL	3.51	11.55	-0.32	1.15	0.96	5.92	0.89	6.95	2.29	2.15
9	FIR	0.46	2.95	-0.42	0.46	0.03	2.27	-0.09	2.45	0.61	0.32
10	BSV	-0.22	1.59	-0.70	-0.50	-0.48	1.02	-0.75	0.88	-0.24	-0.28
11	ELY	0.00	-6.62	-0.22	-1.38	-0.84	-3.26	-0.23	-1.15	-1.37	-0.85
12	AGR	-4.30	-1.54	-4.46	-4.27	-5.80	-2.88	-6.05	-4.92	-4.44	-5.64
13	FFT	-4.49	-1.49	-4.08	-5.40	-5.17	-2.65	-5.24	-6.69	-5.27	-4.91
14	MIN	0.34	0.46	-2.88	-2.24	-1.19	-2.82	-3.12	0.28	-1.32	-0.90
15	PFD	-3.88	-3.82	-5.55	-4.11	-4.19	-3.96	-5.28	-3.77	-3.93	-3.77
16	TCL	-3.62	-3.55	-5.88	-4.41	-4.24	-4.36	-4.85	-3.35	-3.15	-3.03
17	FAF	-3.82	-3.08	-5.81	-4.94	-3.99	-3.62	-5.71	-3.89	-3.36	-3.14
18	PPP	-3.64	-3.91	-4.43	-4.62	-3.87	-4.07	-4.40	-4.15	-4.41	-3.31
19	CON	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
20	WRT	-1.14	2.55	-1.43	-0.12	-0.66	1.08	-1.88	0.79	0.27	-0.13
21	SGS	-0.07	2.54	-0.42	-0.09	-0.27	1.51	-0.77	0.94	-0.08	-0.27
22	AMS	-0.42	-0.16	-0.95	-0.66	-1.26	-0.73	-1.78	-0.99	-0.59	-1.04
23	FUE	-4.61	-6.34	-1.97	-3.52	-0.47	-2.27	-0.89	0.74	-5.48	-1.54

Table 11: Trade Overview — Experiment 3

Exp 3		Change in Exports to ROW (%)					Change in Imports from ROW (%)				
Commodity		QC	ON	BC	AC	PP	QC	ON	BC	AC	PP
1	LUM	0.14	0.12	0.20	0.19	0.16	0.08	0.12	0.13	0.11	0.05
2	PRP	-0.79	-0.80	-0.72	-0.83	-0.70	2.44	2.21	1.83	2.23	2.01
3	MET	0.14	0.13	0.20	0.23	0.21	0.15	0.16	0.13	0.09	0.06
4	OMP	0.14	0.13	0.18	0.19	0.14	0.08	0.10	0.08	0.05	0.06
5	MEQ	0.13	0.13	0.18	0.17	0.14	0.20	0.23	0.27	0.20	0.16
6	MVP	0.08	0.14	0.15	0.18	0.16	-0.04	0.04	-0.11	-0.08	-0.10
7	TRS	-0.79	-1.02	-0.69	-0.46	-0.43	0.40	0.30	0.30	0.57	0.50
8	UTL	-0.27	-0.22	-0.20	-0.04	-0.10	0.19	0.12	0.07	-0.03	0.03
9	FIR	-0.33	-0.38	-0.14	-0.08	-0.14	-0.23	-0.32	-0.17	-0.17	-0.17
10	BSV	0.70	0.93	0.61	0.59	0.61	0.36	0.27	0.28	0.31	0.25
11	ELY	0.21	0.59	0.25	0.00	0.18	-0.28	-0.40	-0.18	-0.12	-0.33
12	AGR	0.06	0.09	0.16	0.21	0.16	0.01	0.00	-0.01	0.01	0.02
13	FFT	-0.17	-0.22	0.18	0.19	0.02	0.34	0.22	0.19	0.20	0.20
14	MIN	0.30	0.06	0.17	-0.03	0.11	-0.03	0.09	-0.10	-0.10	-0.23
15	PFD	0.18	0.20	0.22	0.21	0.21	-0.13	-0.12	-0.15	-0.14	-0.17
16	TCL	0.14	0.14	0.20	0.19	0.17	0.11	0.14	0.10	0.07	0.06
17	FAF	0.19	0.19	0.28	0.29	0.21	-0.17	-0.15	-0.17	-0.21	-0.21
18	PPP	0.12	0.12	0.18	0.17	0.14	0.24	0.28	0.26	0.26	0.25
19	CON	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
20	WRT	-0.10	-0.05	0.02	0.03	-0.01	-0.01	-0.02	-0.01	-0.06	-0.02
21	SGS	-0.11	-0.15	-0.03	-0.02	-0.08	-0.15	-0.21	-0.15	-0.17	-0.17
22	AMS	0.23	0.30	0.12	0.21	0.11	-0.85	-0.83	-0.71	-0.80	-0.60
23	FUE	0.18	0.18	0.16	0.14	0.02	0.01	-0.01	-0.07	0.07	0.02

Exp 3		Change in Exports to ROC (%)					Change in Imports from ROC (%)				
Commodity		QC	ON	BC	AC	PP	QC	ON	BC	AC	PP
1	LUM	0.16	0.09	0.14	0.16	0.13	0.12	0.17	0.18	0.15	0.10
2	PRP	-0.20	-0.31	0.12	0.25	0.27	0.02	-0.05	-0.43	0.04	0.10
3	MET	0.14	0.09	0.17	0.18	0.16	0.14	0.18	0.15	0.09	0.09
4	OMP	0.13	0.11	0.17	0.14	0.11	0.12	0.15	0.12	0.10	0.10
5	MEQ	0.16	0.13	0.16	0.19	0.16	0.14	0.18	0.21	0.14	0.12
6	MVP	0.06	0.03	0.15	0.09	0.07	0.09	0.13	0.01	0.02	0.01
7	TRS	-0.50	-0.64	-0.32	-0.14	-0.14	-0.48	-0.41	-0.46	-0.17	-0.17
8	UTL	-0.26	-0.18	-0.07	-0.04	-0.06	0.00	-0.05	-0.16	-0.12	-0.10
9	FIR	-0.33	-0.25	-0.18	-0.13	-0.16	-0.26	-0.29	-0.23	-0.14	-0.17
10	BSV	-0.18	-0.24	-0.03	0.23	0.29	-0.15	-0.11	-0.18	0.16	0.24
11	ELY	0.00	0.63	0.06	0.04	0.01	0.21	-0.06	0.15	0.05	0.01
12	AGR	0.02	0.09	0.16	0.13	0.11	0.11	0.08	0.08	0.12	0.11
13	FFT	-0.21	-0.09	0.21	0.18	0.09	0.10	0.10	0.16	0.15	0.11
14	MIN	0.18	-0.07	0.16	-0.04	-0.03	0.06	0.19	0.15	-0.01	-0.07
15	PFD	0.09	0.11	0.12	0.09	0.08	0.12	0.12	0.10	0.09	0.07
16	TCL	0.13	0.11	0.18	0.16	0.13	0.14	0.17	0.13	0.10	0.10
17	FAF	0.09	0.10	0.16	0.11	0.06	0.13	0.13	0.12	0.07	0.06
18	PPP	0.18	0.13	0.20	0.20	0.18	0.14	0.19	0.16	0.18	0.17
19	CON	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
20	WRT	-0.09	-0.04	0.03	-0.01	-0.01	-0.01	-0.04	-0.03	-0.04	-0.01
21	SGS	-0.18	-0.09	-0.06	-0.08	-0.11	-0.07	-0.13	-0.08	-0.08	-0.11
22	AMS	0.16	0.27	0.01	-0.17	-0.16	0.08	-0.07	0.03	-0.15	-0.11
23	FUE	0.14	0.17	0.18	0.10	0.02	0.09	0.03	-0.04	0.16	0.06

Table 12: Trade Overview — Experiment 4

Exp 4		Change in Exports to ROW (%)					Change in Imports from ROW (%)				
Commodity		QC	ON	BC	AC	PP	QC	ON	BC	AC	PP
1	LUM	-5.24	-6.23	-7.27	-6.84	-6.42	-2.27	-3.77	0.13	-2.45	-1.51
2	PRP	-6.72	-8.41	-7.95	-6.76	-8.53	6.23	4.84	1.83	5.76	5.80
3	MET	-5.24	-6.93	-7.98	-6.66	-6.41	-2.64	-2.41	0.13	-2.04	-1.85
4	OMP	-5.59	-6.76	-7.96	-7.51	-6.52	-1.88	-1.43	0.08	-1.58	-2.10
5	MEQ	-4.92	-6.26	-6.97	-6.97	-6.53	-2.71	-1.84	0.27	-1.83	-2.03
6	MVP	-2.06	-5.91	-4.85	-5.27	-4.77	-2.58	-1.64	-0.11	-1.92	-1.58
7	TRS	30.21	40.79	19.55	25.59	24.45	11.60	6.84	0.30	9.95	9.99
8	UTL	8.76	15.38	5.59	6.03	5.51	-9.04	-8.54	0.07	-8.06	-8.28
9	FIR	1.82	3.49	1.62	2.59	1.28	-3.86	-3.64	-0.17	-4.23	-3.69
10	BSV	1.13	2.57	0.66	0.37	0.17	-1.41	-1.06	0.28	-1.42	-0.91
11	ELY	1.81	-4.40	0.06	0.00	-0.14	-3.22	-2.34	-0.18	-2.48	-2.38
12	AGR	-4.88	-4.24	-5.61	-5.35	-8.24	-4.18	-3.75	-0.01	-5.26	-4.58
13	FFT	-4.87	-3.72	-6.86	-6.60	-6.48	-5.65	-7.59	0.19	-6.14	-6.22
14	MIN	-1.46	-1.04	-1.41	-2.35	-1.56	-7.04	-3.55	-0.10	-5.22	-4.26
15	PFD	-5.89	-7.46	-8.10	-7.13	-7.52	-1.11	-0.93	-0.15	-1.52	-0.94
16	TCL	-5.56	-6.51	-7.97	-7.17	-7.32	-2.54	-1.86	0.10	-1.87	-1.45
17	FAF	-5.42	-6.74	-8.62	-8.34	-6.98	-2.07	-2.36	-0.17	-2.03	-1.51
18	PPP	-5.09	-6.78	-7.06	-7.02	-6.51	-2.34	-2.57	0.26	-3.16	-1.53
19	CON	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
20	WRT	1.42	3.96	1.28	1.90	0.63	-5.13	-3.96	-0.01	-4.54	-3.83
21	SGS	1.30	2.22	1.27	1.31	0.51	-3.77	-2.42	-0.15	-3.03	-2.59
22	AMS	0.30	-0.71	-0.49	-0.19	-1.80	-1.92	-1.21	-0.71	-1.74	-0.98
23	FUE	-6.75	-8.51	-2.61	-6.53	-2.34	0.53	1.53	-0.07	-2.32	-0.98

Exp 4		Change in Exports to ROC (%)					Change in Imports from ROC (%)				
Commodity		QC	ON	BC	AC	PP	QC	ON	BC	AC	PP
1	LUM	-3.56	-3.46	-3.98	-4.10	-3.75	-3.79	-4.16	-5.11	-3.61	-2.97
2	PRP	-2.78	-4.00	-3.34	-1.32	-2.31	-3.45	-3.31	-4.45	-2.44	-2.38
3	MET	-3.84	-3.42	-5.64	-3.98	-3.72	-3.85	-4.76	-3.59	-2.91	-3.09
4	OMP	-3.74	-3.57	-6.22	-4.35	-3.73	-3.71	-4.90	-3.13	-3.16	-3.60
5	MEQ	-3.09	-3.31	-4.95	-4.17	-3.74	-3.98	-4.56	-2.92	-2.73	-3.15
6	MVP	-1.39	-1.89	-3.59	-3.06	-2.59	-2.64	-3.27	-1.32	-1.66	-1.44
7	TRS	13.60	11.42	13.75	12.22	12.00	13.16	15.96	8.44	11.51	11.63
8	UTL	3.30	11.43	-0.33	1.12	0.91	5.99	0.87	6.85	2.18	2.06
9	FIR	0.13	2.73	-0.60	0.33	-0.13	2.04	-0.42	2.26	0.47	0.15
10	BSV	-0.43	1.37	-0.73	-0.28	-0.20	0.88	-0.90	0.71	-0.08	-0.04
11	ELY	0.00	-6.06	-0.15	-1.34	-0.83	-3.06	-0.29	-0.99	-1.31	-0.83
12	AGR	-4.26	-1.42	-4.29	-4.14	-5.69	-2.76	-5.97	-4.83	-4.33	-5.53
13	FFT	-4.68	-1.55	-3.86	-5.22	-5.07	-2.53	-5.14	-6.51	-5.12	-4.80
14	MIN	0.53	0.42	-2.72	-2.28	-1.22	-2.75	-2.90	0.46	-1.32	-0.97
15	PFD	-3.77	-3.70	-5.41	-4.02	-4.10	-3.84	-5.15	-3.66	-3.84	-3.70
16	TCL	-3.47	-3.44	-5.69	-4.25	-4.10	-4.21	-4.66	-3.21	-3.05	-2.93
17	FAF	-3.72	-2.96	-5.64	-4.83	-3.92	-3.47	-5.57	-3.76	-3.28	-3.07
18	PPP	-3.45	-3.77	-4.22	-4.41	-3.69	-3.91	-4.19	-3.98	-4.24	-3.14
19	CON	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
20	WRT	-1.24	2.53	-1.41	-0.13	-0.67	1.09	-1.93	0.77	0.24	-0.14
21	SGS	-0.30	2.48	-0.49	-0.17	-0.38	1.46	-0.96	0.88	-0.16	-0.38
22	AMS	-0.27	0.18	-0.95	-0.81	-1.40	-0.62	-1.88	-0.93	-0.73	-1.14
23	FUE	-4.47	-6.15	-1.78	-3.41	-0.45	-2.16	-0.85	0.71	-5.31	-1.47