

NAFTA Renegotiation – Economic Impact on Provincial and Local Economies

Introduction

An economic impact analysis examines the effect of an event on a specified economy. With North American Free Trade Agreement (NAFTA) renegotiations underway, Praxis thought it timely to conduct an economic impact analysis to consider the following event: **Saskatchewan's exports to the United States (U.S.) return to pre-Free Trade Agreement levels and structure?**

The Free Trade Agreement (FTA) was signed by Canada and the U.S. on January 2, 1988 to eliminate barriers for the trade of goods and services between countries. With the addition of Mexico, the FTA was superseded by NAFTA on January 1, 1994. Under NAFTA, the U.S., Canada, and Mexico became an integrated market of approximately 400 million people with \$6.5 trillion in goods and services traded annually.

Analysis

Implicit in our approach are the following assumptions:

- Service exports are not impacted;
- Trade with other countries is not impacted;
- All changes in structure and value of exports to the U.S. from 1988 to 2016 are due to the FTA and NAFTA; and,
- Imports are not impacted i.e., Saskatchewan businesses and consumers will continue to import from the U.S. (and other countries) at the same volume and price.

Saskatchewan input-output (IO) models are generally used to simulate the economic impacts of an expenditure on a given basket of goods and services or the output of one or several industries. At study initiation, 2014 was the most recently published Saskatchewan IO models available; therefore, a base year of 2014 was chosen. Praxis then deflated Saskatchewan's 1988 and 2016 exports to the U.S. to the base year (2014) dollar levels using Statistics Canada's Canadian Industrial Product Price Indexes (Cansim Table 329-0074).

Results of the deflation process are below:

	1988 Sask US Exports (Current \$M)	2016 Sask US Exports (Current \$M)	Difference (\$M)	Difference in Constant 2014 \$M
Total merchandise trade	1,960.6	12,800.8	10,840.2	9,799.2
Live animals and animal products.	98.9	318.8	219.9	160.4
Vegetable products	98.2	1,211.6	1,113.4	1,024.0
Animal or vegetable fats and oils ; prepared edible fats; etc.	3.2	1,294.5	1,291.3	1,233.3
Prepared foodstuffs; beverages, spirits and vinegar; tobacco	7.4	750.7	743.4	720.5
Mineral products	735.4	4,922.2	4,186.8	3,797.7
Products of the chemical or allied industries.	709.1	3,213.8	2,504.7	2,146.0
Plastics and articles thereof; rubber and articles thereof.	4.3	27.2	22.8	19.6
Raw hides and skins, leather, fur skins and articles thereof.	1.3	0.7	0.5	0.8
Wood and articles of wood;	23.9	306.3	282.4	257.7
Pulp of wood or of other fibrous cellulosic material;	116.5	2.9	113.5	137.3
Textiles and Textile Articles	3.0	2.0	1.1	1.8
Footwear, headgear, etc.	0.0	0.0	0.0	0.0
Articles of stone, plaster, cement, etc.	1.1	3.0	1.9	1.2
Precious or semi-precious stones, precious metals, etc.	0.1	14.1	14.0	14.1
Base metals and articles of base metal	70.6	157.9	87.2	43.5
Machinery and mechanical appliances; etc.	68.2	402.7	334.5	300.7
Vehicles, aircraft, vessels and associated transport equipment.	12.3	82.9	70.6	65.6
Optical, photographic, cinematographic, measuring instruments, etc.	2.8	7.3	4.5	2.9
Arms and ammunition; parts and accessories thereof.	-	-	-	-
Miscellaneous manufactured articles	0.7	3.6	2.8	2.5
Works of art, collectors' pieces and antiques.	3.6	78.5	74.9	73.6

Source: Statistics Canada Canadian International Merchandise Trade Database, Cansim Table 329-0074

The difference in 2014 constant dollars was aggregated into IO industries and used as a provincial economic model “shock”. Praxis’ provincial economic model was then able to derive the impact on industrial output, GDP, jobs, and wages in the province.

The impact of our chosen event on Saskatchewan’s industries is shown below:

Total Impacts (\$M) Returning to pre-FTA US exports	Gross Output Impact	GDP @ Basic Prices Impact	Employment Impact (Positions)	Labour Income Impact
Crop and Animal Production	-1,859.8	-649.8	-5,655.5	-68.6
Forestry and Logging	-36.7	-10.4	-86.7	-7.5
Fishing, Hunting and Trapping	-0.3	-0.1	-4.9	0.0
Support Activities for Agriculture and Forestry	-26.2	-17.3	-238.2	-9.6
Mining and Oil and Gas Extraction	-5,050.9	-3,342.5	-3,367.1	-466.3
Utilities	-225.0	-141.2	-244.4	-33.8
Construction	-150.8	-87.3	-969.2	-55.7
Manufacturing	-5,224.3	-1,392.3	-8,524.5	-626.3
Wholesale Trade	-306.9	-200.3	-1,198.1	-86.8
Retail Trade	-348.1	-225.3	-4,741.1	-155.3
Transportation and Warehousing	-314.7	-167.3	-1,500.9	-77.3
Information and Cultural Industries	-101.6	-56.1	-426.3	-28.5
Finance, Insurance, Real Estate and Rental and Leasing	-558.2	-304.4	-2,014.6	-124.3
Professional, Scientific and Technical Services	-380.8	-339.9	0.0	0.0
Administrative and Support, Waste Management and Remediation Services	-132.9	-85.6	-770.2	-47.6
Educational Services	-85.0	-52.1	-1,086.7	-36.8
Health Care and Social Assistance	-4.4	-3.0	-78.9	-2.0
Arts, Entertainment and Recreation	-56.7	-36.3	-434.7	-14.9
Accommodation and Food Services	-34.9	-17.0	-419.6	-11.8
Other Services (Except Public Administration)	-126.9	-61.9	-2,005.0	-45.8
Operating, Office, Cafeteria and Laboratory Supplies	-84.2	-54.4	-1,149.6	-35.3
Travel, Entertainment, Advertising and Promotion	0.0	0.0	0.0	0.0
Transportation Margins	0.0	0.0	0.0	0.0
Non-Profit Institutions Serving Households	-22.4	-12.7	-343.2	-11.8
Government Sector	-174.7	-114.2	-1,308.4	-87.6
Total	-15,306.3	-7,371.6	-36,567.9	-2,033.4

Praxis could not apply the same process to estimate the impacts of this event on the Regina census metropolitan area (CMA), as detailed international export data by commodity is not available for the Regina CMA and the Regina economic model does not differentiate between international and inter-provincial trade.

However, it is possible to allocate the initial provincial decline in exports to Regina industries using location quotients. Location quotients are typically based on the proportion of the provincial labor force residing in the area of interest. Location quotients were derived for the Regina CMA as the ratio of employment by industry in the Regina CMA to provincial employment by industry. These were applied to the \$9,799.2M decline in merchandise imports by industry and resulted in a \$1,461.8M decline in Regina region merchandise exports. This, in turn, was used as the Regina Economic Model input.

The impact of our chosen event on industries in the Regina CMA is shown below:

Total Impacts (\$M) Regina CMA Returning to pre-FTA US exports	Gross Output Impact	GDP @ Basic Prices Impact	Employment Impact (Positions)	Labour Income Impact
Crop and Animal Production	-92.2	-32.2	-280	-3.4
Forestry and Logging	0	0	0	0
Fishing, Hunting and Trapping	0	0	0	0
Support Activities for Agriculture and Forestry	-0.8	-0.5	-7	-0.3
Mining and Oil and Gas Extraction	-336.9	-222.9	-225	-31.1
Utilities	-19.7	-12.4	-21	-3.0
Construction	-10.1	-3.8	-32	-2.1
Manufacturing	-1238.0	-329.9	-2020	-148.4
Wholesale Trade	-48.1	-31.4	-188	-13.6
Retail Trade	0.0	0.0	0	0.0
Transportation and Warehousing	-41.8	-22.2	-200	-10.3
Information and Cultural Industries	-7.8	-4.3	-33	-2.2
Finance, Insurance, Real Estate and Rental and Leasing	-104.3	-71.7	-223	-13.8
Professional, Scientific and Technical Services	-11.8	-7.6	-69	-4.2
Administrative and Support, Waste Management and Remediation Services	-6.1	-3.7	-78	-2.6
Educational Services	0.0	0.0	0	0.0
Health Care and Social Assistance	-2.3	-1.5	-18	-0.6
Arts, Entertainment and Recreation	0.0	0.0	0	0.0
Accommodation and Food Services	0.0	0.0	0	0.0
Other Services (Except Public Administration)	-1.6	-1.0	-22	-0.7
Operating, Office, Cafeteria and Laboratory Supplies	0.0	0.0	0	0.0
Travel, Entertainment, Advertising and Promotion	0.0	0.0	0	0.0
Transportation Margins	0.0	0.0	0	0.0
Non-Profit Institutions Serving Households	-0.5	-0.3	-7	-0.3
Government Sector	-7.2	-4.7	-57	-3.9
Total	-1929.2	-750.2	-3,479	-240.4

Results¹²³

In conclusion, our analysis determined Saskatchewan's exports to the U.S. returning to pre-Free Trade Agreement (1988) levels and structure could yield the following potential impacts for Saskatchewan:

1. Decrease in total Saskatchewan merchandise exports to the U.S. by \$9.8 billion
2. Provincial GDP⁴ decline by as much as \$7.4 billion, or 11.4% of 2014 GDP (\$64.2 billion)
3. Decrease in employment by almost 37,000 jobs, or 6.4% of 2014 employment levels (570,925 jobs)

Saskatchewan's exports to the U.S. returning to pre-Free Trade Agreement (1988) levels and structure could yield the following potential impacts for the Regina CMA:

1. \$1.5 billion decline in Regina CMA merchandise exports to the U.S.
2. Loss of \$750 million in GDP, approximately 6.7% of regional GDP
3. Loss of almost 3,500 jobs, 2.5% of total Regina employment
4. Agriculture, resource extraction, manufacturing, finance, transportation, and warehousing industries would be most impacted

Business Implications

While returning to a pre-FTA U.S. trade pattern represents an extreme case in a renegotiation of NAFTA, the results of the analysis demonstrate the importance of international trade to the Saskatchewan and Regina CMA economies, particularly with the U.S. Businesses engaged in exporting must continue to diversify into other export markets. Although the future of trade with the U.S. contains many unknowns, over-reliance on this single export market is not necessarily a sound strategy.

¹ Total impacts are the sum of direct, indirect and induced impacts. Direct impacts represent the initial shock of a decline in merchandise exports of \$9.8 billion.

² Indirect impacts are the secondary impact that includes inter-industry transactions or the purchases of inputs from supporting industries.

³ Induced impacts are the spending impacts of the additional income earned by employees of the direct and indirectly impacted sectors.

⁴ GDP is the measure of net economic activity within a prescribed geographic area. It represents the payments made to final factors of production: Labour, unincorporated business profits, and other operating surplus and excludes the value of intermediate goods and services used in production. GDP is the appropriate measure of the size of an economy.