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The Impact of Membership in the North American Free Trade Area (NAFTA) on Canada's Economy

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Abstract
In this article we have tried to show the impact of Canadian membership in NAFTA on the Canadian economy namely its trade with the USA and Mexico. Economic theory teaches us that membership in regional economic integrations in our case NAFTA has positive impact on trade between member countries. By using gravity econometric model to analyze empirical data we have managed to prove that membership in NAFTA had a positive effect on trade between Canada and the USA and Canada and Mexico.

Keywords: NAFTA, Canada`s trade with Mexico and the USA, regional economic integrations, gravity econometric models

Résumé
Dans cet article, nous avons essayé de montrer l'impact de l'adhésion du Canada à l'ALENA sur l'économie canadienne à savoir son commerce avec les USA et le Mexique. La théorie économique nous enseigne que l'appartenance à des intégrations économiques régionales dans notre cas de l'ALENA a un impact positif sur le commerce entre les pays membres. En utilisant la gravité modèle économétrique pour analyser les données empiriques que nous avons réussi à prouver que l'appartenance à l'ALENA a un effet positif sur le commerce entre le Canada et les USA et le Canada et le Mexique.

Mots-clés : l'ALENA, les relations commerciales du Canada, l'intégration économique régionale, les modèles de gravité économétriques

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The political economy of NAFTA

Today every single country in the world is a member of a regional trade agreement or regional trade bloc (even Mongolia succumbed to this trend, though it was the last country in the world to do this). Regional trade has grown faster than global trade in the last couple of decades (Ravenhill: 2008). Due to the shifting political and economic landscape during the late 1980s and early 1990s even the only superpower left in the world, the USA, decided it was in its best interest to form a North American trading bloc by establishing free trade area with its neighbors Canada and Mexico. Nevertheless the USA still remains committed to promoting global trade through the WTO. Regional trade agreements are not forbidden under the rules of the WTO:

a) Article XXIV of the GATT lays down conditions for the establishment and operations of free trade agreements and customs unions covering trade in goods.
b) The Enabling clause (formally, the 1979 Decisions on Differential and More Favorable Treatment, Reciprocity and Fuller Participation of Developing countries) permits regional agreements among developing countries regarding trade in goods.
c) Article V of the General Agreement on Trade in Services (GATs) establishes conditions that permit liberalization in services among regional partners (Ravenhill 2008: 173)

We should always keep in mind that as Leamer claimed "trade in products is a neighborhood experience", as trade flows decline dramatically with the distance despite the relative fall in transportation and communication costs (qtd. in Mauro et al 2008: 8). And as Des et al. claim "Global integration has also been accompanied by a sharp increase in regional trade agreements (RTAs), which constitute a logical means by which neighboring countries may take up the challenges and opportunities implied by globalization" (qtd. in Di Mauro et al 2009: 1). So geography plays an important part in regionalism and the only two land neighbors of the USA are Canada and Mexico.

NAFTA was not an easy thing to achieve, since relations between the USA and its neighbors were not always the friendliest. In 1986 the Canadian government felt the need to respond to rising neo-protectionist sentiment in the US Congress, which was at the time very concerned with the country's rising trade deficits; the Canadian government was fearful that increased US tariffs would hurt the largest export market for Canadian products. The Canada-US Free Trade Agreement (CUSFTA) was signed in 1988. The USA and Canadian trade relationship was one of the most intensive prior to this agreement, and the trade barriers were already low so it was not that difficult to remove the remaining few. Under the provisions of the agreement both countries would completely remove all tariff barriers by the 1999 and try and reduce or if possible eliminate all of the non-tariff barriers. The Canadians insisted that any eventual disputes among trade partners be brought before a new body, the Canada-United States Trade Commission, and not, as it had been up until then, before the notoriously biased American Chamber of Commerce and other equally biased US trade officials. Investment barriers were also dismantled and a boom in trade and investment followed. Seeing how things had worked out between the USA and Canada, Mexico decided it was time to try and negotiate its own trade deal with the USA. The negotiations between the countries took most of 1992 and became the central theme in the US elections in 1992. Finally, NAFTA came into being in 1994.

NAFTA is basically a free trade area, which is the simplest form of regional trade integration. The lowest level of it is a free trade area: the countries that agree to it remove tariffs and non-tariff protections to create a free flow of goods and services (all or some) between them. Meanwhile, each of the signatories is free to pursue its own trade policy towards other countries that are not parties to the free trade area agreement. There are no common institutions and membership of one free trade area does not prevent a country from joining another free trade areas. Because free trade areas impose relatively few constraints on national decision-making autonomy, they are the easiest of regional arrangements to negotiate (Ravenhill 2008: 174).

What did NAFTA represent for the countries that signed it? What were the stakes for member countries? Hufbauer and Schoot point out that

> For the United States, NAFTA was an economic opportunity to capitalize on a growing export market to the south and a political opportunity to repair the sometimes-troubled relationship with Mexico. At the same time, NAFTA was seen as a way to support the growth of political pluralism and deepening of democratic processes in Mexico and as part of the long-term response to chronic migration pressures. (Hufbauer, Schoot, 2005: 2–3)

Gilpin on the other hand points out that

> The American decision to participate in the NAFTA negotiations was strongly influenced by political motives, including the need to resolve the issue of illegal Mexican immigration into the United States. Stated crudely, the United States was motivated by a very simple calculus: it had to accept either an ever-increasing flow of illegal Mexican immigrants or greater number of manufactured goods from Mexico. (Gilpin 2000: 242–243)

The argument that Gilpin made about the choice between more illegal Mexican immigrates to the US or the outsourcing of labor-intensive sectors of industry to Mexico by US firms is a valid one. The impact and the numbers of Mexicans or people of Mexican origin working and living in the USA have been steadily growing ever since 1848. As Hakim and Litan point out

> Mexicans continue to migrate in large numbers to the United States, principally in search of jobs and higher wages. Mexicans and Mexican Americans now send some $8 billion annually back to their communities. Although the numbers are still modest, a growing number of Mexicans are also finding their way to Canada. (Hakim, Litan 2002: 5)

One of the centerpieces of the US election campaign of 1992 was the NAFTA issue. Bill Clinton, who supported NAFTA, won the election, but Ross Perot, who opposed NAFTA because he thought that the US would lose jobs to Mexico - an eventuality he summed up in the phrase "a giant sucking sound" - came third in the presidential race with 19 percent of the votes. After his victory Clinton managed to get NAFTA ratified but he also managed to negotiate an additional chapters to NAFTA that dealt with labor rights and environmental protection that in turn hurt Mexico's chances of attracting a lot more foreign direct investment (FDI). NAFTA is seen differently by different parts of US society. The capital owners welcomed NAFTA because they could now more easily make investments in the labor-intensive sectors of industry in Mexico; Mexican labor costs only a fraction of American labor (its productivity is also only a fraction of American productivity as well). Workers in the USA who were working in low paid labor-intensive sectors of the industry viewed NAFTA as an enemy of all things American. Finally, there is a lot of literature on NAFTA coming from the extreme right to moderate right, which view NAFTA as the end of American freedom and as the "first step to rule by the United Nations". Not all were happy with this. American right-wing and conservative groups (libertarian in their ideology), which fear any state, have made a lot of noise about the coming "merger of the USA with Mexico and Canada within the framework of NAFTA". One thing is certain: the attacks on NAFTA always manifest themselves most during the US presidential election and are usually waged by Democrats. In the 2004 campaign John Kerry (who voted in favor of NAFTA in 1993 in the US Senate) and John Edwards expressed the opinion that NAFTA should be renegotiated. In 2008 Barack Obama did the same when campaigning in Ohio and other hard-hit industrial places that employ many blue-collar workers (labor intensive industries).

What about Mexico? If there is a country that would benefit from NAFTA, then economic theory teaches us that it would be Mexico with its abundant and relatively cheap labor force. Hufbauer and Schoot explain that "For Mexico, NAFTA represented a way to lock in the reforms of the apertura, or 'market opening', that President Miguel de la Madrid inaugurated in the mid-1980s to transform Mexico's formerly statist economy in the wake of the devastating debt crisis of the 1980s" (Hufbauer, Schoot 2005: 3). Gilpin on the other hand paints this picture of the Mexican reasons for joining NAFTA:

> Like Canada, Mexico had previously suffered from American protectionism and desired some guarantee that such behavior would cease. Also, like Canada, Mexico feared negative consequences from the unification of the European Union and its enlargement to include the economies of Eastern Europe. The NAFTA, on the other hand, would give Mexican-based firms privileged access to the American market and would also encourage Japanese and other multinational firms to invest in Mexico (Gilpin 2000: 242).

Krugman also offers similar views on Mexico and its reasons for joining NAFTA. He paints it as a move by the then President of Mexico, Carlos Salinas, in order to secure his own popularity and lock in economic and political reforms (Krugman 1999).

Canadians were not that happy about the CUSFTA, and they were certainly not that happy about NAFTA either. CUSFTA became the dominant issue in the Canadian general election of 1988. Canadians were afraid that, with the free trade agreement now in force, they would have to give up certain aspects of their welfare state, for example state-funded universal health care. Canada's economic policy had begun to change in the 1980s with the new Conservative administration of Brian Mulroney. It promoted

> the end of an economic policy based on resource wealth exploitation. The new policy goal was to increase Canadian competitiveness in manufacturing and services, and for that, to enhance market access to the US was necessary, as well as the elimination of domestic non-tariff barriers in order to attract foreign investments. (Morales 2008: 34)

Being the realists they are, Canadians knew that there was no alternative to NAFTA. However, Hufbauer and Schoot again made an interesting comment on the Canadian position:

> Canadian unions felt that Mexico's low wages would undercut Canada's competitive advantage in the US market, possibly diverting US FDI away from Canada. Trade between Canada and Mexico was small, the prospective deal seemed unlikely to redress CUSFTA shortcomings on trade remedies, and Canadians were less worried about migration flows than their US counterparts. (Hufbauer, Schoot 2005: 3–4)

But Canadians were also worried that if they stayed out of it the USA and Mexico would go ahead and advance economic integration without them so they decided to join NAFTA. Gilpin points out the following:

> The Canadian decision to initiate discussions on NAFTA was part of a general change in the economic ideology that included retrenchment of the general welfare state and reduction of

> the high tariffs and other restrictions on foreign (i.e. American) direct investment. Having become a major industrial power in its own right, Canada became confident enough to join regional arrangement. It had also become very concerned over the rise of the protectionist sentiment in the United States and over the European Community`s decision to accelerate creation of a single market (Gilpin 2000: 241).

Canada joined NAFTA under an explicit promise from the USA that "nothing that was agreed upon in the CUSFTA would be revised" (Morales 2008: 35). Within the NAFTA context, Canada is the northernmost member of NAFTA and itself represents the North for the USA and Mexico.

The impact of NAFTA on the Canadian economy

The number one trading partner of Canada through most of its history has been the USA. With CUSFTA and NAFTA, trade and investment between these two countries have significantly increased, since many barriers to these activities between these countries have been removed thanks to NAFTA.

Canada increased its competitiveness by "gaining secure access to a huge American market and thereby providing Canadian firms with economies of scale" (Gilpin 2000: 241). According to Litan and Hakim

> Total trade between the United States and Canada amounts to about $450 billion per year, nearly two-and-one half times what it was in the early 1990s. Canada buys some 70 percent of its imports from US suppliers and sends more than 85 percent of its exports to the US market. Nearly two thirds of all foreign investment comes from the United States. (Hakim, Litan 2002: 4)

Finally, the economic and trade relations between Canada and Mexico as the result of NAFTA should not be neglected; according to Hakim and Litan

> Although it does not come anywhere close to the amount of either country's bilateral commerce with the United States, trade between Canada and Mexico increased nearly fivefold in the past ten years. The two countries are now each other's third largest trading partner - trailing only the United States and the EU. The amount they sell to and buy from each other amounts to some $9 billion, nearly as much as the trade between Brazil and Argentina. (Hakim, Litan 2002: 5)

One of the biggest problems of Canadian-Mexican trade is the lack of adequate infrastructure, as there are no good North-South railway networks, because the US railway network was built on an East-West axis. The naval infrastructure is a bit better with the Canadian port of Vancouver serving as the biggest import/export port for Canadian-Mexican trade.

As a free trade area NAFTA has been a huge success, since trade between its members has risen. One of the more ambitious goals of NAFTA that has been overlooked by many economists is that NAFTA served to bring the Mexican political and economic system closer in line with that of its northern neighbor. As Hufbauer and Schoot put it:

> Overall, the three economies of North America have grown significantly during the first decade of NAFTA. Average annual real GDP growth over 1994–2003 was 3.6 percent for Canada, 3.3 percent for the United States, and 2.7 percent for Mexico (despite the sharp recession in 1995). While all three countries grew faster than the OECD average during this period, Mexico's progress was insufficient to address its long-run development challenges and well below its estimated potential growth rate. (Hufbauer, Schoot 2005: 2)

Regarding Canada-US trade Morales points out that

> Primary and primary-based products represent roughly 40 per cent of overall Canadian products entering the US (agriculture, food, cement, mineral fuels, wood, and footwear), while the rest is manufacturing, encompassing all gradients of technological sophistication (from low- to high-tech branches). (Morales 2008: 82)

At the same time in "the composition of US exports to Canada, primary and resource-based products take a minor share (roughly 18 per cent) while mid- to high-tech manufactures account for 65 per cent of overall exports" (Morales 2008: 83). Canada managed to transform itself into the major producer of energy thanks to its development of bitumen and synthetic oil industries, which are mainly powered by the Western provinces.

Now we will turn on the analysis of NAFTA`s impact on the Canadian economy by measuring the impact of NAFTA membership on Canada`s trade with Mexico and the USA by using empirical evidence, which we will gain by building the gravity econometric model of trade between Canada and the USA and Mexico.

Econometric model of Canadian trade with USA and Mexico

For our analysis of Canadian trade with Mexico and the USA we will use gravity econometric models of international trade. Gravity econometric models are based on Newton`s laws of physics. The first gravity econometric model was used by Jan Tinbergen in 1962. Today gravity models are used not only to explain foreign trade and FDI flows but also money laundering between various countries.

The mathematical equation of the gravity model is as follows:

$$F_{ij} = G\frac{M_i M_j}{D^2}$$

where F is the trade flow, M is the economic mass of each country, D is the distance and G is constant. Trade flow between two countries is proportional to the product of each country`s economic mass (this is generally measured in GDP), divided by the square distance between countries' respective economic counters of gravity, usually their capitals (Štiblar 2007). The variables can be in their absolute or logarithmic forms (Gujarati 2003; Stock, Watson 2012). These baseline factors can be expanded by additional factors that represent specific trade flow determinants in the form of dummy explanatory variables such as being a member of a FTA, sharing a common border, FDI, etc.

Zwinkels and Beugeldsdijk tried to show the utility of gravity models in explaining international trade and FDI. Their conclusion is that if time series and cross-country series are not analyzed properly, gravity models become Trojan horse in explaining international trade and FDI flows (Zwinkels, Beugeldsdijk 2009).

The influence of NAFTA on trade between the USA, Mexico and Canada has been econometrically analyzed by Hufbauer and Schoot in 2005 and Hakim and Litan in 2001. They used a standard gravity model but had a smaller time series than we do and did not have the opportunity to see how a fall in GDP would affect trade between these countries.

The proposed econometric model for the estimation of Canadian trade flows is a standard gravity econometric model and goes as follows:

$$\ln Xij = \alpha 0 + \alpha 1 \ln GDPi + \alpha 2 \ln GDPj - \alpha 3 \ln Dij + \alpha 4 \ln N + e$$

lnXij = Bilateral trade flows from Canada to the USA or Mexico (l_tradeCAN-US for Canada-US trade and l_Canmex for Canada-Mexico trade[1]

1) l_tradeCAN-US for Canada-US trade and l_Canmex for Canada-Mexico trade.

lnGDPi= GDP of Canada

lnGDPj= GDP of Mexico or the USA

Dij= distance between Canada (Yukon, the Northwest Territories, Nunavut, Far North) and economic centers of Mexico and the USA

N = stands for a matrix of dummy variables such as a common border, a shared language, NAFTA membership that impact bilateral trade flows.

We expect to find that the GDPs of Canada, the USA and Mexico have a positive influence on trade between Canada and the USA and Canada and Mexico. This is in line with standard economic theory which states that GDP positively influences trade between countries, especially if it is growing, since then there are more opportunities for both import and export of goods.

On the other hand, the distance between countries' respective centers of gravity has a negative effect on trade between countries. The greater the distance between the countries the greater the barriers for trade between them. Although physical and geographical distance is no longer an issue in international trade, distance plays an important role as a cultural barrier to international trade since it is hard to know consumer preferences half a world away.

Membership in regional economic integrations should have a positive effect on trade between the member countries since both tariff barriers to trade and non-tariff barriers to international trade between the countries have been at least partially removed.

Here is the finding of our econometric model for trade between Canada and the USA. We will use OLS as our estimation for both of our equations.

Model 1: OLS, using observations 1985–2014 (T = 30)
Dependent variable: l_tradeCAN-US

variable	coefficient	std. error	t-ratio	p-value
l_GDPCan	0.0143526	0.125795	0.1141	0.1141
l_GDPUS	1.08589	0.196599	5.5234	<0.0001***
distancewhiteroseseattle	−0.592499	0.129598	5.5234	0.0001 ***
NAFTA	0.182771	0.0728038	2.5105	0.0186 **

Mean dependent var	5.764743	S.D. dependent var	0.549558
Sum squared resid	0.117466	S.E. of regression	0.067216
R-squared	0.986588	Adjusted R-squared	0.985041
F(3, 26)	637.5297	P-value(F)	1.89e-24
Log-likelihood	40.57386	Akaike criterion	−73.14772
Schwarz criterion	−67.54293	Hannan-Quinn	−71.35470
rho	0.172121	Durbin-Watson	1.648724

We can see that in accordance with economic theory the GDP of the USA has a statistically strong impact on trade between Canada and USA while the Canadian GDP is statistically not significant for trade flows between these countries. Why is this so? The probable explanation would be that the US GDP is much larger than that of Canada and in addition Canada runs a significant trade surplus with the USA, which means that the growth of the US GDP has a positive effect on Canadian exports to the USA.

On the other hand. membership in NAFTA has a positive effect on trade flows between Canada and the USA, which is in accordance with economic theory.

The distance between the centers of gravity of the USA and Canada - in our case Whitehorse (Yukon) and Seattle (Washington) - has a negative effect on trade between Canada and the USA. We took these places as centers of gravity for Canada and the USA because Whitehorse is one of the economically most important places in the Yukon territory (northern Canada), while Seattle is one of the most important centers of industry on the USA West Coast, doing a lot more trade with the Yukon territory than the USA East Coast.

Turning to trade between Canada and Mexico, we find the following:
Dependent variable: l_Canmex

variable	coefficient	std. error	t-ratio	p-value
const	11.4887	0.294650	38.99	1.63e-022 ***
l_GDPmex	0.767777	0.0997712	7.695	8.29e-08 ***
l_GDPcan	0.889589	0.0965927	9.210	3.53e-09 ***
NAFTA	0.491602	0.0611676	8.037	3.96e-08 ***

Mean dependent var	5.764743	S.D. dependent var	0.549558
Sum squared resid	0.117466	S.E. of regression	0.067216
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Log-likelihood	40.57386	Akaike criterion	−73.14772
Schwarz criterion	−67.54293	Hannan-Quinn	−71.35470
rho	0.172121	Durbin-Watson	1.648724

Mean dependent var	22.88141	S.D. dependent var	0.936179
Sum squared resid	0.181764	S.E. of regression	0.088898
R-squared	0.992023	Adjusted R-squared	0.990983
F(3, 26)	953.4791	P-value(F)	2.92e-24
Log-likelihood	29.20055	Akaike criterion	−50.40110
Schwarz criterion	−45.21776	Hannan-Quinn	−48.85982
rho	−0.135046	Durbin-Watson	2.268063

Canada and Mexico GDPs have a statistically strong influence on trade flows between Canada and Mexico, which is in accordance with economic theory. Also, membership in NAFTA has a strong positive effect on trade between Mexico and Canada, which is also in accordance with economic theory.

Conclusion

From the econometric analysis we have done in this article we can see that membership in NAFTA had a positive influence on trade flows between Canada and the USA and Canada and Mexico. It should be mentioned here that Canada has a trade surplus with both Mexico and the USA. Membership in NAFTA has certainly been beneficial to the Canadian economy as a whole, since many trade and non- trade barriers have been removed between member states of NAFTA with the result that Canadian exports to these countries rose and with this its GDP also rose. Northern Canada also benefited from NAFTA since it made it easier to export its products - namely minerals and raw materials - to the USA, Canada's main trading partner. NAFTA also made it easier for Northern Canada to import the goods it needed from its main trade partner, the USA. In the same period (from 1970s onwards) the Canadian welfare state was also somewhat reduced, but this was not done because of its NAFTA membership, as left-leaning intellectuals would argue, but because it was needed in order for Canada to remain one of the more competitive nations in the global economy. So what will the future of NAFTA be? Will it remain a free trade area or will it transform itself into something more ambitious like a customs union or a single market alongside the European model? About the future of NAFTA Hussain points out that "North America is neither transforming into a viable regional bloc nor retreating fully to its statist past: it is caught in greater flux, with as many more opportunities as liabilities available" (Hussain eds 2010: 258). Probably NAFTA will remain a free trade area since it is not possible to imagine that USA will part with any part of its sovereignty, be it political or economic in nature, in the near future.

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NB: All the econometric calculations have been done on data obtained from IMF, Statistics Canada and the United States Census Bureau. Any faults in the calculations lie with the author.

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