

How did the U.S. Free Trade Agreements fare? A comparative study of export, import and bilateral growth rates for the twenty countries before and after the FTA's

**A paper submitted to the Academy of International Business' US West Chapter Conference,
Seattle, October, 2015**

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Abstract

As of 2015, the United States has Free Trade Agreements (“FTA’s”) with twenty partner countries. The main purpose of these agreements is to promote bilateral trade in the form of exports and imports. Their success can be gauged by measuring whether the FTA’s boosted trade at a higher rate than that with comparable non-FTA countries. This paper investigates whether the exports and imports between the U.S. and the twenty partner countries showed higher growth rates after the implementation of the FTA’s, and whether the growth rates were individually and collectively higher than compared to a control group consisting of 82 non-FTA trading partners.

The measuring tool is Compound Annual Growth Rates (CAGR). Simpler than an econometric model based on gravity theory, and more accurate than comparing average growth rates, the CAGR is a suitable comparison measure. Older studies investigating international FTA’s have used versions of the gravity model to show significant increases in bilateral trade following the agreements. Unlike this report, none of those studies focused solely on the FTA’s that the U.S. has entered into over the past twenty years.

Compared to the control group, our analysis shows a positive effect of the FTA’s on U.S. exports, but a slightly negative effect on imports. Some of the FTA’s are only a few years old, and a complex global macroeconomic scene over the past ten years makes it harder to generalize. Each country has a different economic story to tell. However, from a trade policy standpoint it may appear that the FTA’s have the intended, incrementally positive effect on U.S. exports. While FTA’s may have significant positive or negative effects on specific sectors and industries, they do not appear to cause dramatic improvements in bilateral trade. In the conclusion of the paper we offer some possible reasons for the FTA’s lackluster performance.

Introduction

The first Free Trade Agreement (“FTA”) entered into by the United States was with Israel in 1985. Nine years went by before the next agreement - the North American Free Trade Agreement (NAFTA) - took effect on January 1, 1994. After that milestone date the U.S. has entered into individual FTA’s with another eleven countries plus the multi-lateral agreement with six Central American and Caribbean nations dubbed CAFTA-DR (Central American Free Trade Agreement – Dominican Republic). As of 2015, the U.S. maintains FTA’s with twenty nations. The latest agreement was with Panama, effective October 31, 2012.

FTA’s are truly bilateral in nature, stipulating rights and obligations to both the selling and buying nations. Because cross-border trade is not an inherent human right, governments have for centuries been involved in both restricting and benefiting from such trade, mostly for macroeconomic reasons, but for the past few decades also based on safety and security arguments. The macroeconomic arguments for strict trading rules are gradually being eroded, with most nations realizing that the overall output from free trade is greater than the potential

(and hopefully short-term) losses to local communities and revenues from customs tariffs. The emergence of international trade rules setters such as the World Trade Organization and the regional European Union is a testament to a more liberalized view of global trade. This liberalization is also congruent with formal international trade theories that promulgate the argument that total output will increase because of specialization and comparative advantages. Although protectionist and mercantilist arguments will even today surface with some regularity (mostly from political voices on the left or special interest groups in the case of mercantilism), the prevailing public and political view seems to be that free trade and its cousin globalization are welcome and inevitable forces for the 21st century.

Nevertheless, conceiving, negotiating and implementing FTA's are hard, time consuming and expensive work. The pains currently experienced by the eleven nations trying to piece together the ambitious multilateral FTA called the Trans Pacific Partnership (TPP) is an example of this. These newer agreements are about a lot more than reducing tariff rates; they get into intellectual property protection, labor and environmental policies, and the reduction of protectionist barriers such as quotas, buy-local requirements, dubious safety regulations and local distribution laws. Because tariff rates are already quite low, often as a result of prior WTO commitments, the focus is now on lowering non-tariff and supply chain barriers when new FTA's are being hammered out.

But for the United States, have the existing FTA's really worked? Has the political and economic pain of developing and launching these agreements paid off in terms of incremental export and import quantities? Does the country actually do more trade with the twenty partners than it would have done anyway, without these complex agreements? If the FTA's really worked as intended, the U.S. would see higher export and import growth rates with these countries than with all the others where the country does not have specific agreements. This paper will perform a comparative, mostly non-parametric study to assess whether FTA countries really have been performing better than non-FTA countries since the inceptions of the various FTA's.

Literature review

This paper is purely judging the success of FTA's by calculating and comparing growth rates of exports, imports, and bilateral trade. This is a straight-forward measure and a starting point for discussing possible other benefits of FTA's. As pointed out by several, FTA's raise policy issues pertaining to broader national interests, selection criteria, WTO integration issues and long term trade policies (Cooper, 2014).

Economists debate whether FTA's might be damaging or distorting in a big picture, systems sense. Agreements might skew trade from efficient to low tariff producers, or from domestic to foreign sources, often called *trade diversion* and *trade creation* (Lawrence, 1996). Others believe the creation of bilateral FTA's damages the multilateral trading system and distorts efforts by the WTO to unify more fair and globalized rules (Bhagwati, 2000).

There is also a large body of literature on what is called *gravity theory* and various versions of it. This theory is built on econometrics, or more specifically multiple regression, to try to explain why nations trade with each other. A few determinants such as geographic proximity and the size of the national economies are claimed to explain most of the established trade patterns. More recently the existence of FTA's is introduced into some models (usually as a dummy variable) in an attempt to detect if it has any positive effect on trade volumes. Gravity models, with an appropriate set of independent variables, can be useful in sorting out and summarizing what it is that causes growth, but as a "one-size-fits-all" device can be problematic in accounting for the inherent diversity of underlying factors. The models might become overly complex, yet miss certain peculiarities that are the basis for close trade relations (Ossa, Undated).

While numerous authors debate the general wisdom of pursuing FTA's, it is more difficult to find empirical research on the actual outcomes of FTA's already in place. Baier and Bergstrand use an advanced econometric model to claim that the effect of FTA's on trade flows is quintupled. They make the point that the presence or absence of an FTA is not exogenous, and should not be purely represented as a 0 or 1 dummy variable in any regression or econometric analysis. In other words, they try to address the dilemma of causality, or at least covariance. For example, did the U.S. enter into an FTA with a certain nation because bilateral trade was going so well already (e.g. pre-FTA), or did the bilateral trade – post-FTA – go so well because of the presence of an FTA? Our paper grapples a bit with this problem, as most of the U.S. FTA partners showed above average trade growth even before the establishment of the FTA's. Success breeds success? (Baier & Bergstrand, 2005, 2009)

Only two of the American FTA's were included in Baier and Bergstrand's study published in 2005, the one with Israel (1985) and the original one with Canada (1989). Their interesting finding is that "an FTA will on average increase two member countries' trade about 86 percent after 15 years". This represents an incremental compound annual growth rate (CAGR) of 4.22%, which is much higher than the results found in this paper, as we will see. Perhaps the 20 FTA's that the U.S. has established are experiencing different outcomes than the fifty or so FTA's researched in their paper. It could also mean that their advanced econometrics model would produce different results than our compound growth rate analysis. It would be extremely interesting to plug the U.S. "FTA-20" figures into their model to see if the results differ from or verify the more one-dimensional assessment in this paper.

Caporale et al. explore many of the same issues (e.g., endogeneity) when studying FTA's between the European Union and former Eastern European countries before the EU enlargement. Using an econometric gravity model, they found that FTA's had a positive and significant impact on trade flows (Caporale, Rault, Sova, & Sova, 2009). Sung Eun Jung found a more modest effect (positive, but not statistically significant) in his 2012 thesis. His data also consisted of a variety of international FTA's, most of them not involving the U.S. (Jung, 2012).

An older study by Frankel, Stein & Wei did not find any boost in trade from the European and EFTA constellations, adding skepticism to whether newly formed FTA's in the America would have any effect (Frankel, Stein, & Wei, 1995).

Trade associations and chambers are mostly loyal cheerleaders of FTA's, but they represent specific agendas and the information they send out must be taken with grains of salt. For example, the U.S. Chamber of Commerce writes on its website¹ that "taken as a group, the United States ran a trade surplus with its FTA partner countries in 2012 and 2013", while the truth is the opposite: the deficits in the merchandise trade with the FTA-20 were \$80 billion in 2012 and \$68 billion in 2013. The services exports may have helped reduce this by a bit, but there were still significant deficits.

In connection with the 20th anniversary of NAFTA in 2014, the Washington International Trade Association summarized an interview with three scholars from the affiliated Woodrow Wilson International Center for Scholars. They pointed out the large increases in bilateral trade between the U.S., Canada and Mexico since 1994, correctly noting that the bilateral trade with Mexico has grown more than 500%, and that the trade with Canada almost tripled. (Benka, 2014). Their statements can be supported by the merchandise trade figures shown in Table 1. Note that the growth in trade with Canada was lower than the comparable group of 82 countries, something we will come back to later in this paper.

TABLE 1: TWENTY YEARS OF NAFTA: U.S. BILATERAL TRADE WITH CANADA, MEXICO, AND 82 NON-FTA COUNTRIES

(in millions of US\$)	Year 1993	Year 2014	Growth 1993-2014
CANADA			
Imports from	\$111,216	\$347,798	213%
Exports to	<u>\$100,444</u>	<u>\$312,421</u>	<u>211%</u>
Bilateral	\$211,661	\$660,219	212%
MEXICO			
Imports	\$ 39,318	\$294,074	637%
Exports	<u>\$ 41,581</u>	<u>\$240,249</u>	<u>478%</u>
Bilateral	\$ 81,498	\$534,323	556%
NAFTA			
Imports	\$151,134	\$641,872	325%
Exports	<u>\$142,025</u>	<u>\$552,670</u>	<u>289%</u>
Bilateral	\$293,159	\$1,194,542	307%
82 non-FTA's			
Imports	\$375,407	\$1,510,583	302%
Exports	<u>\$261,100</u>	<u>\$ 838,471</u>	<u>221%</u>
Bilateral	\$636,507	\$2,349,054	269%

¹ <https://www.uschamber.com/international/international-policy/benefits-international-trade-0>

This paper is unique in that it considers the more recent experience with the U.S. FTA's exclusively. Previous studies of FTA performance are either older or mostly cover FTA's to which the U.S. is not a party, or they originate from trade associations with various forms of agendas or interested constituencies. This paper contributes valuable and unbiased insight into the area of macroeconomic studies of the global business environment by highlighting the potential importance of FTA's for private and governmental actors operating and attempting to succeed within this environment. If it is found that FTA's do not substantially boost trade, then other macroeconomic and country-specific factors may carry more importance for companies planning and prioritizing their global marketing strategies. If it is revealed that FTA's indeed do boost trade, then companies need to pay attention to these for incremental marketing and supply chain success.

Methodology

The paper performs a comparative analysis of the growth rates experienced in imports, exports and total bilateral trade between the United States and the twenty countries with which it has FTA's and countries without such FTA's. Countries without FTA's can be categorized as a control group for statistical purposes. Of the 233 countries for which there are trade statistics, 20 are party to FTA's and as such collectively and individually the target of our analysis, and 131 had bilateral trade with the U.S. in 2014 of less than one billion dollars, thus excluding them from the eventual "control group" of 82 countries used in this study. Because of the very high annual swings in trade figures among the 131 smaller trading partners, and because all the current FTA partners show bilateral trade in excess of 1 billion dollars, the remaining 82 countries serve as a solid comparison group to the 20 FTA countries. For convenience, the comparison summaries for each country, shown at the end of this paper, report the growth rates for the entire world (233 countries), the control group of 82 countries, the FTA member group of 20 countries, and each of the 20 individually.

We assume that annual growth rates represent a fair gauge of how the FTA's perform. Despite several political and socio-economic benefits of FTA's, their main goal is to boost bilateral trade, whether exports or imports. If the bilateral trade happens to grow just as fast without formal FTA's, it raises questions of whether they are effective or necessary in a world where internationally trade is now experiencing relatively open markets and low barriers anyway. Although this is a non-parametric analysis, it is fair to state that our thesis at the outset is that the U.S. trade with FTA countries should show higher post FTA-implementation growth rates than comparative trade with non-FTA countries.

There are two main reasons why we refrain from using parametric statistics on this study: 1) Many of the agreements are so young that we only have a few years' worth of data (in the case of Panama, for example, the implementation was not until the fall of 2012), and 2) Compound annual growth rates ("CAGR") are experiencing the profound power of compounding, meaning that the emergent long-term result of small differences in CAGR's can be dramatic. For

example, with only ten to twenty years' worth of data, the difference between CAGR's (or average growth rates, for that matter) may not be statistically significant (at, say, the 95% level), but turn out to produce very different aggregate outcomes after 20 years².

Therefore, compound growth rates will be our sole determinant of the relative performance and success of the FTA's the U.S. has with trading partners. We are looking at whether the growth rates show that imports, exports and the resulting bilateral trade overperformed or underperformed vis-à-vis the control group of non-FTA countries.

The study looks at the international trade in goods (merchandise), as opposed to services. The government has over the past few years started tracking and estimating the services trade, but there is as of yet no comprehensive, country-by-country listing that goes back long enough. The U.S. is a strong exporter of services³, and in 2014 such exports were estimated at \$709 billion, or 30.4% of the total recorded export volume of \$2,330 billion. The services trade, therefore, is nothing to laugh at, and is likely to continue gaining importance globally. Although we were not able to monitor the services trade properly in this study, we did find that the U.S. growth in services exports from 2010 through 2014 (27.2%) was almost identical to the growth in merchandise exports over the same period (26.8%). However, over that four year period, the U.S. services exports to Canada, South Korea and Mexico (the three FTA countries for which there is data available, but representing more than 82% of the FTA volume) grew by only 16.4%, 12.5% and 22.1%, respectively. It is evident that the recent growth in services exports has mostly taken place with other countries than the FTA partners.

Using compound growth rates instead of average growth rates helps to stabilize the trend and make comparisons more realistic⁴. Over several years, the average growth rates are always higher than the compound rates (a linear versus convex trajectory). However, we did use average annual growth rates to take a look at the average annual variability in exports, imports and bilateral trade, as represented by the standard deviation of average growth. High variability could be a symptom of several factors, but seems to be more prevalent with smaller trading partners and with countries heavily dependent on trade in commodities.

The main source used for this study is the "U.S. Trade in Goods by Country" database publicly available through the U.S. Department of Commerce's Census Bureau⁵. Consistent and reliable data are available there for the period 1993 through 2015, a 21-year time perspective. In three

² With a small sample, comparative compound growth rates of 6% and 7% may not be found statistically different, but one billion dollars invested at those rates over 20 years will produce \$3.207 billion and \$3.870 billion in future value, respectively.

³ Classified by the Census Bureau as Maintenance & Repair Services, Transport, Travel, Insurance, Financial Services, Royalties, Telecommunications, Computer & Information Services, Other Business Services, and Government Goods and Services.

⁴ An extreme example is a two-year scenario where the growth is +100% the first year and -50% the second year. After two years we are, therefore, back to zero overall growth, or a CAGR of 0%, while the average growth rate would be recorded as $(100 - 50)/2 = 25\%$.

⁵ Available at <http://www.census.gov/foreign-trade/balance/index.html>

instances (for the earliest FTA’s with Israel, Canada and Mexico) we have relied on trade data going back to 1985.

Findings

NAFTA is still the 600 pound gorilla among the U.S. free trade agreements, with the bilateral trade with Canada and Mexico amounting to 75% of the 2014 FTA volume with the 20 countries. The other multilateral agreement, CAFTA-DR with the six developing countries of Costa Rica, Dominican Republic, Honduras, Guatemala, El Salvador and Nicaragua, represents only 3.74% of the total. The U.S. FTA partner attribute is still very much a Western Hemisphere phenomenon: 85% of the bilateral trade in 2014 was with countries within the Americas. Before the 2012 FTA with South Korea, the Americas portion was more than 90%.

In 2014, the U.S. bilateral trade in goods almost reached four trillion dollars (\$3,968 billion), of which 40% (\$1,593 billion) was with FTA partners. The services trade would be in addition to this. The U.S. bilateral trade in goods with the 82 control group countries (with bilateral trade exceeding one billion dollars in 2014) amounted to \$2,349 billion, leaving only 26 billion dollars (0.65%) in bilateral trade with the 131 countries constituting the rest of the world. The Pareto principle is very much on display here.

Old-fashioned, mercantilist attitudes and government policies customarily make a bit of a villain out of imports. “Export growth” has a good ring to it, and it would be hard to find countries that enter into FTA negotiations hoping to boost their imports (never mind that imports are a crucial and productive element of any country’s industrial and private consumption scene). When Government and Chamber of Commerce officials praise FTA’s, it is mostly for their perceived ability to boost exports. Consequently, we will consider the export sector first.

TABLE 2: EXPORT GROWTH PRE- AND POST-FTA’S COMPARED TO CONTROL GROUP:

Country	Whole period 1993-2014	Pre-FTA	FTA Year	Post-FTA	CAGR post-FTA
Australia	Identical	Better	2005	Worse	Increased
Bahrain	Worse	Worse	2006	Better	Increased
Canada	Worse	Worse	1994	Worse	Decreased
Chile	Better	Worse	2004	Better	Increased
Colombia	Better	Better	2012	Better	Increased
Costa Rica	Better	Better	2009	Better	Decreased
Dominican Republic	Better	Better	2007	Worse	Decreased
El Salvador	Better	Better	2006	Worse	Increased
Guatemala	Better	Better	2006	Better	Increased
Honduras	Better	Better	2006	Worse	Decreased
Israel	Better	NA	1985	NA	NA

Jordan	Better	Worse	2001	Better	Increased
Mexico	Better	Better	1994	Better	Decreased
Morocco	Better	Worse	2006	Better	Increased
Nicaragua	Better	Better	2006	Worse	Decreased
Oman	Better	Better	2009	Better	Decreased
Panama	Better	Better	2012	Better	Decreased
Peru	Better	Better	2009	Better	Decreased
Singapore	Worse	Worse	2004	Worse	Increased
South Korea	Worse	Worse	2012	Worse	Decreased
ALL 20	Better				

The “Successful” countries are bold faced (see Table 2)

TABLE 3: HOW U.S. EXPORTS FARED POST-FTA

- | |
|---|
| <p>1. The Successful Category (Post-FTA growth both better than control group <u>and</u> increased):</p> <p style="padding-left: 40px;">Bahrain, Chile, Colombia, Guatemala, Jordan, Morocco; 6.3% of FTA exports</p> <p>2. The Questionable Category (Post-FTA growth either better than control group <u>or</u> increased):</p> <p style="padding-left: 40px;">Australia, Costa Rica, El Salvador, Israel, Mexico, Oman, Panama, Peru, Singapore; 45.1% of FTA exports</p> <p>3. The Disappointing Category (Post-FTA growth both worse than control group <u>and</u> decreased):</p> <p style="padding-left: 40px;">Canada, Dominican Republic, Honduras, Nicaragua, South Korea; 48.6% of FTA exports</p> |
|---|

This somewhat non-scientific categorization into successful, questionable and disappointing countries is based on relative export growth compared to the control group post-FTA, as well as whether the country’s growth rate increased or not after the implementation of the FTA. So the comparison is two ways: against the average of the non-FTA control group and against the country’s pre-FTA CAGR. A successful country using this scheme would have to have both a higher than control group CAGR and an increased individual growth after the FTA took place. Such a strict grading system produces only six “successful” FTA partners with a combined share of only 6.3% of U.S. exports under FTA’s. The heavy-weights Canada and Mexico find themselves in the disappointing and questionable categories.

However, as a group (the 20 countries), the average export CAGR for was higher than the combined CAGR of the 82-country control group. For the entire 21-year period from 1993 to

2014, the CAGR⁶ for the FTA group was 6.51% for exports (6.84% for imports and 6.69% combined bilateral), versus 5.71% for the control group. This measure indicates that on the whole, the countries with which the U.S. has FTA's are producing better exports growth than other countries. However, as Table 2 shows, the majority of individual FTA partners produced better than control group growth even before the enactment of their respective FTA's, making it difficult, if not impossible in many cases to credit incremental growth to the FTA's. It may well be that FTA's are entered into with countries that already are showing promising and perhaps growth above par. Nevertheless, the evidence indicates that the American FTA's have sustained export growth above and beyond the aggregate performance of non-FTA countries.

TABLE 4: IMPORT GROWTH PRE- AND POST-FTA'S COMPARED TO CONTROL GROUP:

Country	Whole period 1993-2014	Pre-FTA	FTA Year	Post-FTA	CAGR post-FTA
Australia	Lower	Lower	2005	Lower	Decreased
Bahrain	Higher	Higher	2006	Higher	Decreased
Canada	Lower	Lower	1994	Lower	Decreased
Chile	Higher	Higher	2004	Higher	Decreased
Colombia	Higher	Higher	2012	Lower	Decreased
Costa Rica	Higher	Lower	2009	Higher	Increased
Dominican Republic	Lower	Lower	2007	Lower	Decreased
El Salvador	Higher	Higher	2006	Lower	Decreased
Guatemala	Lower	Lower	2006	Lower	Decreased
Honduras	Higher	Higher	2006	Lower	Decreased
Israel	Higher	NA	1985	NA	NA
Jordan	Higher	Higher	2001	Higher	Decreased
Mexico	Higher	Higher	1994	Higher	Increased
Morocco	Higher	Lower	2006	Higher	Increased
Nicaragua	Higher	Higher	2006	Higher	Decreased
Oman	Lower	Lower	2009	Higher	Decreased
Panama	Lower	Lower	2012	Lower	Decreased
Peru	Higher	Higher	2009	Lower	Decreased
Singapore	Lower	Lower	2004	Lower	Decreased
South Korea	Higher	Lower	2012	Higher	Increased
ALL 20	Lower				

The "FTA-20" export performance was relatively better than the import performance, as least in terms of CAGR (see Table 4). Imports experienced a CAGR of 6.84%, compared to the

⁶ The calculation of the average CAGR's for the "FTA-20" was both time staggered and trade-weighted. Calculating them without staggering and weighing still produced CAGR's of similar magnitude (6.64% for exports, 6.96% for imports and 6.80% combined).

combined control group at 6.85%, and even the entire world (233 countries, including the FTA’s and control group) at 6.88%. Fifteen of the twenty countries experienced decreased import growth post-FTA. It is probably not surprising that the imports from the mostly North and South American FTA countries did not keep up with the flood of consumer goods from Asia and Europe over the past 21 years. It has been hard for the FTA partners to compete with inexpensive Asian electronics and apparel, as well as fashionable European cars.

Because of the relatively strong export performance, the total bilateral 21-year growth rate was higher than the control group’s (6.69% for the “FTA-20” versus 6.42% for the “Control Group-82”).

As a whole it appears that the U.S. free trade agreements have been effective mechanisms to sustain and possibly improve the nation’s exports. Exports to FTA partners have grown faster than exports to other countries. In addition, during 1993 to 2014, imports from FTA partners actually grew a bit less than imports from other countries. The FTA’s did not seem to pry open the flood gates to imports as many had feared.

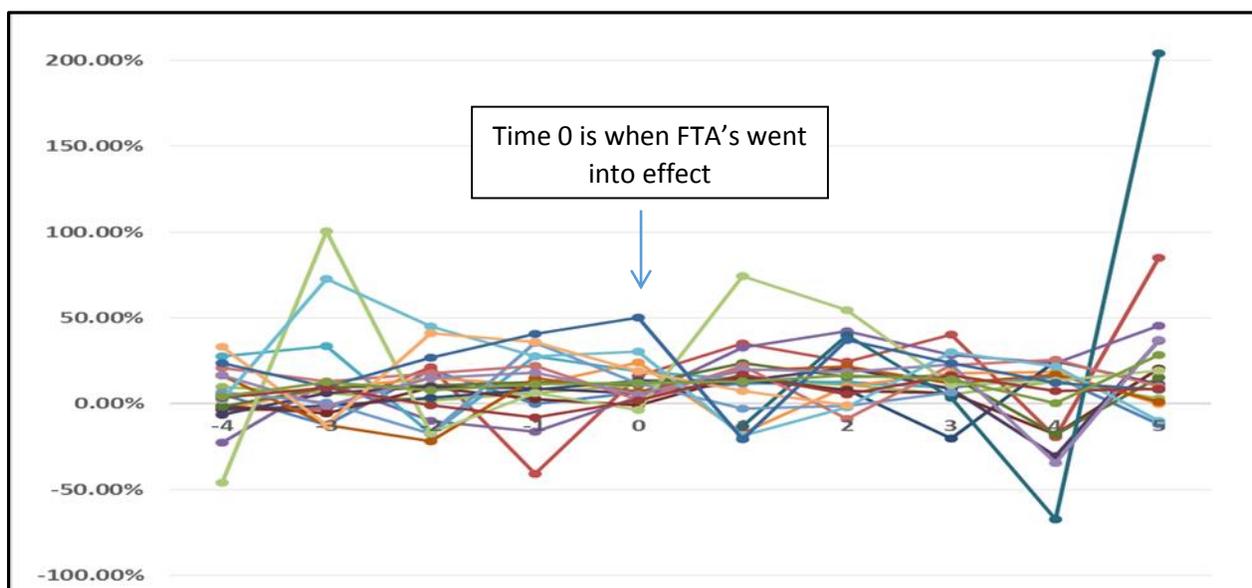
The Appendix has detailed information and comparison sheets for Canada and Mexico, with growth rates experienced before and after the FTA effective dates. The same data on the remaining eighteen countries is available upon request.

It is reasonable to think that upcoming FTA’s would be met with anticipation and a surge in trade volumes. We checked if the implementation of FTA’s caused a spike in trade in the immediate period after they went into effect. The data show no spike in years 1 and 2, although the average five-year post growth is higher than the pre-growth for U.S. exports. It is actually slightly lower for imports. Table 5 shows this, and Figure 1 gives a graphical representation of the individual and average *export* rates for that 10-year period. No immediate FTA spike is discernable.

TABLE 5: AVERAGE FTA GROWTH RATES FIVE YEARS BEFORE AND AFTER IMPLEMENTATION:

Average	Years pre and post FTA:									
	-4	-3	-2	-1	0	1	2	3	4	5
All 20:										
Exports	4.15 %	12.42 %	8.01%	11.26 %	12.39 %	13.16 %	16.49 %	14.24 %	0.31%	28.54 %
Avg. pre					9.65%					
Avg. post										14.55 %
Imports	5.96 %	5.80%	9.38%	17.25 %	19.00 %	12.61 %	12.17 %	23.13 %	-6.36%	12.17 %
Avg. pre					11.48 %					
Avg. post										10.74 %

FIGURE 1: EXPORT GROWTH RATES 5 YEARS BEFORE AND AFTER THE FTA'S (all 20 countries)



Individual Countries

One possible drawback with lumping all the twenty FTA partners (the “FTA-20”) into one group is that this hides many individual differences. Each country has a different trade story to tell, so to speak. A country’s export and import performance is influenced heavily by both controllable and uncontrollable factors such as commodities prices, currency exchange rates, business cycles and geographic location. Canada, for example, a country that we placed in the “disappointing” category, is a mature, highly developed nation with an old and well established trading relationship with the U.S. Restrictions on trade with Canada were already low and waning before the implementation of NAFTA, and trade figures are highly susceptible to swings in commodities prices, such as petroleum products, lumber and agriculture.

Oman is almost as far away from the U.S. as you can travel, and the existence of an FTA might seem a bit mysterious. It is unlikely that U.S. policy makers and trade negotiators perceived Oman to be the solution to the nation’s economic woes; it is rather likely that geopolitics was behind the push.

It seems evident that FTA’s came about somewhat haphazardly, and not necessarily as a result of a formal process of identifying countries and trading partners that would be strategically and economically impactful. “Nice-to-have” was never quite replaced by “must-have” in terms of whom to seek partnerships with. Now we are left with a motley portfolio of 20 small and large trading partners, most of them with very different economic and industrial trajectories.

Table 6 illustrates the diversity of the twenty countries.

TABLE 6: RANKING OF FTA PARTNERS BY BILATERAL TRADE; TOP IMPORTS AND EXPORTS

COUNTRY	IMPORTS (millions)	EXPORTS (millions)	BILATERAL (millions)	SHARE	TOP IMPORTS TO THE U.S.	TOP EXPORTS FROM THE U.S.
Canada	\$347,798	\$312,421	\$660,219	41.45%	1. Crude oil 2. Passenger cars	1. Vehicle parts & accessories 2. Trucks, buses, specialty vehicles
Mexico	294,074	240,249	534,323	33.54%	1. Vehicle parts & accessories 2. Crude oil	1. Vehicle parts & accessories 2. Electric apparatus
South Korea	69,518	44,471	113,990	7.16%	1. Passenger cars 2. Cell phones & other household goods	1. Industrial machines 2. Semiconductors
Singapore	16,426	30,237	46,663	2.93%	1. Pharmaceutical preparations 2. Organic chemicals	1. Civilian aircraft 2. Fuel oil
Colombia	18,300	20,107	38,406	2.41%	1. Crude oil 2. Nonmonetary gold	1. Fuel oil 2. Other petroleum products
Israel	22,962	15,083	38,045	2.39%	1. Gem diamonds 2. Pharmaceutical preparations	1. Gem diamonds 2. Semiconductors
Australia	10,672	26,582	37,253	2.34%	1. Meat products 2. Medicinal equipment	1. Passenger cars 2. Civilian aircraft
Chile	9,476	16,515	25,990	1.63%	1. Copper 2. Fruits & frozen juices	1. Fuel oil 2. Civilian aircraft
Costa Rica	9,500	6,964	16,464	1.03%	1. Semiconductors 2. Fruits & frozen juices	1. Fuel oil 2. Other petroleum products
Peru	6,077	10,054	16,140	1.01%	1. Nonmonetary gold 2. Other petroleum products	1. Fuel oil 2. Other petroleum products
Dominican Republic	4,520	7,922	12,442	0.78%	1. Medicinal equipment 2. Other consumer durables	1. Fuel oil 2. Natural gas liquids

COUNTRY	IMPORTS (millions)	EXPORTS (millions)	BILATERAL (millions)	SHARE	TOP IMPORTS TO THE U.S.	TOP EXPORTS FROM THE U.S.
Panama	\$ 431	\$10,467	\$10,898	0.68%	1. Fish & shellfish 2. Nonmonetary gold	1. Fuel oil 2. Other petroleum products
Honduras	4,643	5,961	10,604	0.67%	1. Apparel, household goods, cotton 2. Apparel, textiles, nonwool or cotton	1. Fuel oil 2. Cotton fiber cloth
Guatemala	4,217	5,964	10,180	0.64%	1. Fruit & frozen juices 2. Apparel, household goods, cotton	1. Fuel oil 2. Other petroleum products
El Salvador	2,396	3,304	5,700	0.36%	1. Apparel, household goods, cotton 2. Apparel, textiles, nonwool or cotton	1. Other petroleum products 2. Fuel oil
Nicaragua	3,104	1,009	4,112	0.26%	1. Apparel, household goods, cotton 2. Apparel, textiles, nonwool or cotton	1. Cotton fiber cloth 2. Oilseeds, food oils
Jordan	1,401	2,050	3,451	0.22%	1. Apparel, textiles, nonwool or cotton 2. Apparel, household goods, cotton	1. Civilian aircraft 2. Passenger cars
Morocco	992	2,102	3,094	0.19%	1. Chemicals, fertilizers 2. Sulfur, nonmetallic minerals	1. Fuel oil 2. Natural gas liquids
Oman	976	2,016	2,992	0.19%	1. Industrial supplies 2. Jewelry	1. Passenger cars 2. Civilian aircraft
Bahrain	965	1,060	2,025	0.13%	1. Bauxite & aluminum 2. Other petroleum products	1. Passenger cars 2. Civilian aircraft

Discussion and Conclusion

While the FTA's in the aggregate appear to have had a positive correlation with U.S. exports, the track records with each individual partner country have varied widely. For some countries, which experienced above average growth before the FTA's went into effect, we have trouble detecting any post-FTA incremental growth. This seems especially true for already large and diverse trading partners, such as Canada. South Korea's agreement is yet too fresh to judge, but the first two years have not been too promising. Smaller trading partners such as the six countries characterized as "successful" in Table 3 have shown sustained exports growth since the FTA implementation.

Interestingly, FTA's have not caused an in-flood of imports to the U.S. It is worth keeping in mind that many strong forces have been at play during the past twenty years, some of them possibly cancelling out any positive effects of FTA's. Examples of such forces are the expansion of the World Trade Organization, the rapid industrialization and growth of China, two major global recessions in the 2000's, and very high oil prices experienced over the past ten years. Such macroeconomic forces create crosscurrents that may dampen both positive and negative effects of FTA's.

Based on this report, policy makers can make a case that the U.S. FTA's have tended to have a slight positive effect on the country's exports. Also, imports did not seem to skyrocket. Because the historical track records for the fourteen existing FTA's (20 countries) vary considerably, any potential candidates for future FTA's ought to be evaluated on their own merits. They each have a different story to tell. To predict future winners we might benefit from revisiting concepts such as factor endowments and classic trade theories. The U.S. and its possible partners ought to be quite choosy and specific about what they want out of any new agreements.

So while it appears that FTA's are "nice to have", they do not seem essential for the success of domestic economies or individual companies, at least not in the aggregate. Specific industries facing trade barriers and impediments will benefit from their removal (or protected industries may suffer), but the gradual phase-in of multilateral agreements (e.g., WTO) and diminishing global protectionism have made bilateral FTA's somewhat of a sideshow. For future FTA's it will behoove FTA strategists and negotiators to selectively go after deals where reduction of barriers will have significant effects. Portions of the pending, multilateral Trans-Pacific Partnership (TPP) seem to contain substantial reductions, which unfortunately is a main reason it is held up by stubborn special interest groups (e.g., U.S. pharmaceutical companies, Canadian dairy farmers.)

In summary, for further discussion, and in no particular order, we offer ten possible explanations why the American FTA's have not had a greater effect (the reader may think of other pertinent variables):

- They may have been entered into with friendly countries with already well established records of trade

- They may have been somewhat preempted by global trade liberalization and the WTO
- The trade with the FTA partners may have been dominated by commodities and raw materials, therefore not needing FTA's to be traded (see Table 6 for examples)
- The strong growth in trade with China may have stolen some of the thunder from the FTA's
- Being mostly very large (Canada and Mexico) or very small (half of them have annual bilateral trade of \$12 billion or less), the American FTA partners as a group are not representative of a "typical" or "average" trading partner
- The rationale for entering into many of the FTA's may have been political rather than economic
- The principles behind the Gravity Theory of Trade may be more robust than thought, reaffirming components such as proximity, size and economic strength as dominant
- The currency exchange rate relationships with the FTA partners may have shown different trajectories than with the non-FTA 82's
- For the FTA partners, the lifting of trade barriers may have lowered prices so much that while the quantities of traded goods may have risen, this is not fully reflected by the published dollar values
- It is possible that multinational corporations (MNC's) already found efficient and optimal ways to operate without the introduction of new FTA's

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Thank you to our summer intern, Claire Helmberger, for assistance with the trade database.

APPENDIX

The following two pages contain comparative growth data for Canada and Mexico, including performance comparisons. The same data for the remaining eighteen FTA partners are available upon request.

COUNTRY: CANADA

FTA implementation: Jan. 1, 1994

2014 Imports:	\$347.798 B
2014 Exports:	\$312.421 B
2014 Bilateral trade:	\$660.219 B

1) The period 1993 – 2014 (21 years)

		Imports	Exports	Bilateral
World (233 countries)	CAGR	6.88%	6.12%	6.56%
	Average annual growth	7.41%	6.51%	7.00%
	Standard deviation growth	10.00%	8.77%	9.30%
Control group (82 countries)	CAGR	6.85%	5.71%	6.42%
	Average annual growth	7.39%	6.13%	6.87%
	Standard deviation growth	10.04%	9.23%	9.33%
FTA's (20 countries)	CAGR	6.84%	6.51%	6.69%
	Average annual growth	7.69%	7.19%	7.43%
	Standard deviation growth	10.24%	9.14%	9.56%
Canada	CAGR	5.58%	5.55%	5.57%
	Average annual growth	6.28%	5.94%	6.10%
	Standard deviation growth	10.60%	11.22%	10.47%

2) Before the FTA, 1985-1993 (8 years):

		Imports	Exports	Bilateral
World (233 countries)	CAGR	6.99%	10.07%	8.27%
	Average annual growth	7.06%	10.29%	8.33%
	Standard deviation growth	3.55%	7.19%	3.72%
Canada	CAGR	6.15%	9.89%	7.78%
	Average annual growth	6.28%	10.36%	7.96%
	Standard deviation growth	5.31%	10.42%	6.29%

3) After the FTA, 1993–2014 (21 years):

		Imports	Exports	Bilateral
Control group (82 countries)	CAGR	6.57%	5.69%	6.24%
	Average annual growth	7.12%	6.13%	6.71%
	Standard deviation growth	10.22%	9.46%	9.54%
Canada	CAGR	5.58%	5.55%	5.57%
	Average annual growth	6.28%	5.94%	6.10%
	Standard deviation growth	11.17%	8.67%	9.91%

Summary of CAGR: Country performance versus control group:

TIME PERIOD:	IMPORTS:	EXPORTS:	BILATERAL:
Entire period	Underperformed	Underperformed	Underperformed
Before FTA	Underperformed	Underperformed	Underperformed
After FTA	Underperformed	Underperformed	Underperformed
CAGR after FTA	Decreased	Decreased	Decreased

COUNTRY: MEXICO

FTA implementation: Jan. 1, 1994

2014 Imports:	\$ 294.074 B
2014 Exports:	\$ 240.249 B
2014 Bilateral trade:	\$ 534.323 B

1) The period 1993 – 2014 (21 years)

		Imports	Exports	Bilateral
World (233 countries)	CAGR	6.88%	6.12%	6.56%
	Average annual growth	7.41%	6.51%	7.00%
	Standard deviation growth	10.00%	8.77%	9.30%
Control group (82 countries)	CAGR	6.85%	5.71%	6.42%
	Average annual growth	7.39%	6.13%	6.87%
	Standard deviation growth	10.04%	9.23%	9.33%
FTA's (20 countries)	CAGR	6.84%	6.51%	6.69%
	Average annual growth	7.69%	7.19%	7.43%
	Standard deviation growth	10.24%	9.14%	9.56%
Mexico	CAGR	9.98%	8.71%	9.37%
	Average annual growth	10.55%	9.39%	9.90%
	Standard deviation growth	11.00%	12.05%	10.63%

2) Before the FTA, 1985-1993 (8 years):

		Imports	Exports	Bilateral
World (233 countries)	CAGR	6.99%	10.07%	8.27%
	Average annual growth	7.06%	10.29%	8.33%
	Standard deviation growth	3.55%	7.19%	3.72%
Mexico	CAGR	9.63%	14.96%	12.06%
	Average annual growth	9.98%	15.80%	12.53%
	Standard deviation growth	8.44%	13.87%	9.87%

3) After the FTA, 1993–2014 (21 years):

		Imports	Exports	Bilateral
Control group (82 countries)	CAGR	6.57%	5.69%	6.24%
	Average annual growth	7.12%	6.13%	6.71%
	Standard deviation growth	10.22%	9.46%	9.54%
Mexico	CAGR	9.98%	8.71%	9.37%
	Average annual growth	10.55%	9.39%	9.99%
	Standard deviation growth	11.00%	12.05%	10.63%

Summary of CAGR: Country performance versus control group:

TIME PERIOD:	IMPORTS:	EXPORTS:	BILATERAL:
Entire period	Overperformed	Overperformed	Overperformed
Before FTA	Overperformed	Overperformed	Overperformed
After FTA	Overperformed	Overperformed	Overperformed
CAGR after FTA	Increased	Decreased	Decreased