

# NAFTA Country Impacts: 25 Years After Implementation

Samuel D. Barrows<sup>1</sup>

<sup>1</sup> KIMEP University, Almaty, Kazakhstan

Correspondence: Samuel D. Barrows. E-mail: sam\_barrows@yahoo.com

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## Abstract

This study reviews research on various aspects of trade, free trade agreements, and NAFTA specifically. With the twenty-fifth anniversary of the NAFTA enactment in January of 2019 between Canada, Mexico and the U.S., it is an opportune time to review some of the history and expectations leading up to the agreement. The economic performances of the three countries are also evaluated over the twenty-five year study time frame. Eleven metrics are used to make a general assessment as to whether the actual country performances matched the expectations. Based on the data, NAFTA was a positive influence on the three countries. Tariffs were reduced; FDI was increased; trade grew between the three countries especially intermediate trade related to supply chains; savings rates increased; inflation was reduced; unemployment also fell for two of the three countries while GDP per person soared for those same two countries. In summary, NAFTA was a success.

**Keywords:** NAFTA, Canada, Mexico, U.S., imports, exports, free trade

## 1. Introduction

In 1988, the Canada – U.S. Free Trade Agreement (FTA) was signed by both countries (Krueger, 1999). The agreement which commenced on 1 January 1989, was noteworthy in that it “was the most comprehensive bilateral FTA negotiated” at that point in time and eliminated all tariffs between Canada and the U.S. within ten years (Villarreal & Fergusson, 2017). Its intent was to substantially reduce any barriers to trade between Canada and the U.S. (Kouparitsas, 1997). This was significant because the two countries were at the time and currently are the biggest trading partners of each other (Villarreal & Fergusson, 2014).

In efforts to open up its economy, in the mid-1980s, Mexico joined the General Agreement on Tariffs and Trade then began removing barriers to trade and investment (Villarreal & Fergusson, 2017). By the late 1980s, Mexico’s manufacturing sector was responding well to this new “trade liberalization” (Tornell & Hernandez, 1995). In 1990, when negotiations began on the North American Free Trade Agreement (NAFTA), Mexico had made tangible measures to open up its markets (Villarreal & Fergusson, 2014). Specifically, by 1990, “Mexico had removed virtually all-quantitative restrictions on imports” (Krueger, 1999).

The literature review documents broad issues related to NAFTA and its implementation including free trade agreements; trade flows; investments and jobs; tradable and non-tradable sectors; the enactment of the NAFTA agreement; reforms in Mexico; increased Foreign Direct Investment (FDI) as a result of NAFTA; manufacturing and agriculture in NAFTA; and labor issues in Canada, Mexico, and the U.S. as a result of NAFTA. The methodology and results sections include metrics retrieved from two World Bank databases on world development indicators and integrated trade measurements in order to assess NAFTA performance as it relates to the three individual countries.

## 2. Literature Review

### 2.1 Free Trade Agreements

As of 1 January 1994, there were 38 regional trade agreements in force in the world, by 1 January 2019, that number had grown to 309 (WTO, 2019). This was a tremendous increase over the twenty-five year period. The two main goals for countries in FTAs are “to maximize the productive efficiency and economic welfare” of their citizens (Bergsten, 2017). To be successful, a country utilizing an FTA should increase both its exports along with its imports (Gould, 1998). After entering an FTA, a country’s total trade usually increases, not only because of increased exports, but also from increased imports through reductions of trade barriers (Bergsten, 2017). Typically, overall trade volumes increase (Caliendo & Parro, 2015). As a result, the continued implementation of

multiple FTAs would result in a form of increased “global free trade” (Kouparitsas, 1997).

The reduction of trade barriers leads to regional trade growth (Hanson, 2003). Reduced tariffs improve the wealth of trading partners (Kouparitsas, 1997). With an FTA in place, outside competition brings in competitive products, and as further reforms take place, the trade dynamics allow for more freedom in the marketplace (Burfisher et al., 2001). Therefore, “trade policy plays an important role in determining regional economic fortunes” (Hanson, 2003). A majority of studies find that trade increases as a result of the implementation of FTAs (Burfisher et al., 2001). FTAs also may reallocate jobs from sector to sector as the trade dynamics change (Gould, 1998).

Reducing barriers to trade has the effect of increasing exports, especially within a trade region (Hanson, 2003). Therefore, regional FTAs are “better able to deal with a narrow, but very difficult trade liberalization agenda” (Kouparitsas, 1997). However, it would not be realistic to create a trading arrangement which favors one partner over another (Bergsten, 2017). As a result of new trade agreements, a new set of suppliers can now part of the equation “which would reduce prices and improve the selection of goods available” (Hillberry & McDaniel, 2002). As liberalization progresses, the further integration in regions see countries in those regions experiencing more coordinated business cycles (Lederman et al., 2004).

### *2.2 Trade Flows*

Country trade flows respond to supply and demand of products which is influenced by income levels of the trading countries along with tariffs and other barriers plus the price levels of products being traded and alternatives if they exist (Gould, 1998). More simply put, free trade leads to less divergence in prices between countries, all other things being equal (Hanson, 2003). Assuming trading partners implement similar reductions of trading barriers, “multilateral trade liberalization leads to welfare gains” for both trading partners (Kouparitsas, 1997). Absent an FTA, trade benefits would be reduced (Gould, 1998). With the liberalizing country tending to lower its consumption and raise its exports to deal with a widening trade deficit (Kouparitsas, 1997).

Currently, most countries see both trade surpluses and trade deficits with their various trading partners, depending on what products are being traded (Bergsten, 2017). Changes in trade flows as a result of an FTA influence job creation and the level of living standards for those trading partners (Gould, 1998). Tariffs and currency exchange rates have the biggest impact on trade imbalances (Bergsten, 2017). Trade flows are also influenced in a positive manner by the economic cycle (Villarreal and Fergusson, 2017). However, any trade imbalance for a country primarily “is determined by the fundamentals of its own economy and their interaction with the rest of the world” (Bergsten, 2017).

The size of the country also influences the outcome. Larger countries trade more products and have more trading partners than smaller countries and richer countries charge higher prices because they can produce higher quality products than poorer countries (Hummels & Klenow, 2005). Richer countries also tend to import intermediate goods from poorer countries (Bergsten, 2017). Larger economies usually have a higher demand for intermediate goods whereas smaller economies may have no demand at all for some of these intermediate goods due to the reduced manufacturing scope they may have (Hummels & Klenow, 2005). Worldwide, “most goods traded are intermediate goods” (Caliendo & Parro, 2015).

### *2.3 Investments and Jobs*

The effect of increased trade through FTAs is expected to reduce the divergence of capital returns and labor wages for trading partners over time (Lederman et al., 2004). This is because the “international capital flows allow for more rapid adjustment” under liberalized trading regimes (Kouparitsas, 1997). Perceived investment risk is also reduced because of expected further liberalizations resulting from an FTA membership (Lederman et al., 2004). As a result of the FTA, the efficiency of capital utilization increases (Kouparitsas, 1997). Further liberalizations involving the institutional framework are seen as necessary to secure further progress (Lederman et al., 2004).

With regard to investments, the greater the level of FDI as opposed to bank loans the better because of potential currency issues associated with bank loans which can lead to some “financial fragility” (Tornell et al., 2004). More open trading arrangements also provide for more stable investments (Gould, 1998). This results in “a more efficient allocation of resources across countries” (Kouparitsas, 1997). As the investments increase so does the demand for skilled workers (Hanson, 2003). Hence, investments in infrastructure tend to influence the migration of labor to those locations where the investments are being made (Arends-Kuenning et al., 2018).

These investments can change the game for developing economies because utilizing “vastly different cost structures and capabilities, low cost manufacturing in economies staffed by younger, less-expensive workers has

benefits that are hard to match” (Barrows, 2018). As a result, the need for skilled workers contributes to different wage scales within a country based on various levels of work skills with migrating workers among the winners from the increased trade (Arends-Kuenning et al., 2018).

More complex economies tend to have higher turnover rates, but are more resilient in terms of opportunities for firms and for workers (Lederman et al., 2004). During the trade liberalization process, less-skilled workers are hurt the most, both in terms of wages and employment opportunities (Hanson, 2003). However, increased trade reduces poverty because it leads to higher employment (Lederman et al., 2004). At least to a point, as achieving “full employment is the concern of monetary and fiscal policy, not of trade policy” (Stiglitz, 2004).

#### *2.4 Tradable and Non-Tradable Sectors*

In general, trade liberalization benefits the tradable sector of the economy (Arends-Kuenning et al., 2018). There are various definitions used for the tradable sector. For this study, it includes manufacturing, mining and agriculture, where the non-tradable sector includes construction, commerce, restaurants, hotels, transportation, storage, communications and communal services, as used in another NAFTA study (Tornell et al., 2004). The tradable sector and non-tradable sector relate to each other and impact each other as well as the relative performance of the overall economy, hence, “a tariff reduction affects prices in non-tradable sectors that are using inputs from tradable sectors” (Caliendo & Parro, 2015). Sustainable GDP expansion requires more than just tradable sector growth, it also requires non-tradable sector growth as well (Tornell et al., 2004).

Investments in the non-tradable sector lead to cost reductions in the tradable sector (Caliendo & Parro, 2015). Since the tradable sector depends on certain non-tradable sector inputs, non-tradable sector growth is required to support tradable sector growth and without the non-tradable sector growth, “bottlenecks” can appear which could lead to a slowing of exports (Tornell et al., 2004). This is one explanation for rising export prices from a developing country (Hummels & Klenow, 2005). Unequal growth occurs as the sectors compete for funding (Arends-Kuenning et al., 2018). Investments in the non-tradable sector see “benefits spread to the rest of the economy” (Caliendo & Parro, 2015). However, in Mexico, tradable sector firms are typically larger and have access to international financing more than the smaller non-tradable sector firms which are mostly utilizing local bank financing (Tornell et al., 2004).

#### *2.5 NAFTA Enactment*

NAFTA commenced on 1 January 1994 (Bankhead, 2018). By opening up the three individual markets to each other, NAFTA created one large open market (Villarreal & Fergusson, 2017). Before NAFTA, U.S. exports to Mexico were hit with an average 10% tariff while imports from Mexico received an average U.S. tariff of just above 2%. (EOP, 1997). Through NAFTA, the elimination of tariffs were phased in stages within a fifteen year period (Villarreal & Fergusson, 2017). Since Canada and the U.S. already had their FTA, the NAFTA incremental impacts expected on them were less than those impacts expected on Mexico (Gould, 1998).

NAFTA mandated “reciprocal access” for all three markets (Hanson, 2003). As important as this was, NAFTA was also noteworthy for another reason, it was the first FTA between developed economies and a developing country (Bankhead, 2018). According to at least one author, “potential geopolitical benefits were far more important than the economic benefits” (Stiglitz, 2004). The implementation of NAFTA set Mexico on a course for further liberalizations (Tornell et al., 2004). However, the impact on trade with the rest of the world through NAFTA was largely null (Caliendo & Parro, 2015).

NAFTA instituted minimum North American content for certain sectors (Villarreal & Fergusson, 2017). Automobiles, light trucks, and associated parts were established at 60% to 62.5% depending on the classification (Villarreal & Fergusson, 2014). NAFTA also substantially reduced other non-tariff barriers related to quotas and licensing (Gould, 1998). Intellectual property rights protection, procurement, and dispute resolution mechanisms were implemented as well as labor and environmental protections which were included through NAFTA side agreements (Villarreal & Fergusson, 2014). However, NAFTA does not include labor mobility permissions or steps to coordinate environmental standards (Tornell & Hernandez, 1995).

NAFTA reduced the “perceived risk from investing in member countries” because of market access and trade policy implementation through the agreement (Lederman et al., 2004). For Mexico, NAFTA was seen as a way to lock in reforms already made and to make it more likely further reforms would be made, and then potentially to narrow the income disparities which exist between the three countries (Villarreal & Fergusson, 2017). Studies on NAFTA have generally concluded that all three countries would benefit by increased trading, with Mexico expected to benefit the most (Burfisher et al., 2001).

Since Canada and the U.S. already had the Canada – U.S. FTA, the expectation was that there would not be

issues between Canada and the U.S. The biggest question was how the trade between Mexico and the U.S. would impact their economies, including investments and labor. Manufacturing and agriculture were areas that were “highly contentious during the NAFTA debate” (Burfisher et al., 2001).

### *2.6 Implementation Impacts*

Even after NAFTA implementation, Mexico still has problems related to contract enforcement, especially related to “defaulting debtors” (Tornell et al., 2004). Also, the expectations were that Mexico would utilize new technologies from its northern neighbors in a quicker manner (Kouparitsas, 1997). With regard to NAFTA impacts, most studies found beneficial influences on the Mexican economy (Villarreal & Fergusson, 2017). One study found that both economic and social impacts of NAFTA were positive on Mexico and without NAFTA, “Mexico’s global exports would have been about 25% lower” (Lederman et al., 2004).

One of the NAFTA goals, at least for the U.S., was to solidify economic and political reforms in Mexico and continue the process of moving forward on more reforms (Kouparitsas, 1997). One reason for this was that U.S. exporters could utilize the new market power of Mexico and sell more products there (Burfisher et al., 2001). Because of Mexico’s reforms in place, businesses already had more assurances moving forward (Gould, 1998). However, not all of Mexico’s economy was reformed, with energy as the main sector not included (Tornell et al., 2004). Nevertheless, Mexico was still looking to continue its reforms and was considering attracting more FDI in order to make those happen (Villarreal & Fergusson, 2017).

Capital flows between Canada and the U.S. have historically been high because of less regulatory constraints and a more common business vision (Gould, 1998). After NAFTA and the removal of barriers between Mexico and the U.S., “two-way investment increased rapidly after the agreement went into effect” (Villarreal & Fergusson, 2017). Both sides substantially increased investments into the other partner’s economy. U.S. FDI in Mexico increased more than 500% from \$15.2 billion in 1993 to more than \$100 billion in 2012, while Mexico’s FDI in the U.S. rose more than 1000% from \$1.2 billion in 1993 to almost \$15 billion in 2012 (Villarreal and Fergusson, 2014). These were tremendous increases. According to one study, Mexico’s FDI “would have been about 40% less without NAFTA” (Lederman et al., 2004). Regarding the overall FDI amounts in Mexico, “the tradable sector received most of these funds” (Tornell et al., 2004). Specifically, nearly half of the Mexico FDI went to the manufacturing industry (Villarreal & Fergusson, 2014).

NAFTA further cemented the trade occurring between the three countries as more goods were traded between Mexico and the other two countries, with Mexico increasingly in the role “as a supplier of intermediate goods to NAFTA members” (Caliendo & Parro, 2015). Removing trade barriers in Mexico initially hurt Mexico as cheap imports from Asia hurt local production (Hanson, 2003). In response, Mexico increased its focus on large manufacturing plants in order to combat this dynamic (Villarreal & Fergusson, 2017).

The primary export markets for the U.S. small and medium-size enterprises are Canada and Mexico as tariffs still exist in many developing countries which negatively impact the U.S. export businesses (USCOC, 2017). Through NAFTA, Mexico had reduced “almost all-quantitative restrictions” in addition to tariff reductions prior to NAFTA implementation (Krueger, 1999).

Before NAFTA implementation, agricultural imports to Mexico had the highest tariffs on them (USCOC, 2017). After NAFTA implementation, the expectation was that U.S. exports to Mexico would increase substantially (Villarreal & Fergusson, 2017). Agricultural trade saw corn imports from the U.S. to Mexico increase while exports of fruits and vegetables from Mexico to the U.S. also grew (Dyer et al., 2018). This helped U.S. corn farmers (Hakobyan & McLaren, 2016). But did not necessarily hurt Mexican farmers (Lederman et al., 2004). The Mexican farmers adjusted their crops to take advantage of the new NAFTA markets for their fruits and vegetables (Dyer et al., 2018).

### *2.7 Labor Impacts*

Due to NAFTA reforms, the Mexican labor pool has evolved into two segments: higher skilled, higher paid, manufacturing-related workers benefiting from export enabling investments near the U.S. border and lower skilled, lower paid workers in interior areas, mainly in farming (Hanson, 2003). Because of these dynamics, migration in Mexico from rural areas to U.S. border areas has occurred (Arends-Kuenning et al., 2018). Reasons for the migration include higher wages, but also more formalized work environments with higher levels of training (Lederman et al., 2004).

In the privatization of state-owned entities, Mexico utilized wage restrictions to combat inflation (Hanson, 2003). With new NAFTA grain imports from the U.S., some of Mexico’s rural labor migrated to the U.S. to take advantage of other opportunities (Burfisher et al., 2001). So, while rural to urban migration slowed in Mexico

after NAFTA, migration from Mexico to the U.S. initially increased after NAFTA (Arends-Kuenning et al., 2018).

Mexico has a higher percentage of lower-skilled workers in comparison to the U.S. and thus there remains a wage gap between the two countries (Hanson, 2003). Hence, “Mexican wage rates were never close to the U.S. wage rates” (Truett & Truett, 2007). However, Mexico has changed itself from an assembler of simple products to a manufacturing partner (Hanson, 2003). As a result, one study found that the NAFTA impacts on the Mexican economy were “positive and large” (Burfisher et al., 2001).

Since there was the previous FTA between Canada and the U.S., few issues were expected with Canadian trade and labor (Burfisher et al., 2001). One study on Canadian workers found that during the Canada – U.S. FTA, employment fell in certain sectors, but overall there was productivity growth with no wage reductions (Trefler, 2004). With regard to NAFTA, potentially one area could be the improvement in Canadian worker productivity (Villarreal and Fergusson, 2014).

With regard to U.S. labor impacts, many studies have reached similar conclusions, that “NAFTA had no discernible effects on aggregate employment” (Burfisher et al., 2001). U.S. job losses due to NAFTA have not materialized overall as some have expected (Villarreal & Fergusson, 2017). As U.S. exports increase, there are employment gains, and the economic growth in Mexico reduces incentives for workers to migrate to the U.S. (Burfisher et al., 2001). A study in 2017 found that 14 million U.S. jobs were the result of trade with Canada and Mexico with almost 5 million as a direct result of NAFTA (USCOC, 2017). Overall for the U.S., the impact “on the average worker is likely close to zero” (Hakobyan & McLaren, 2016). The general effect of U.S. economic growth has meant that jobs have been created overall, regardless of minor setbacks (Burfisher et al., 2001).

In certain industries, blue-collar workers have been hit with job losses and wage reductions with married female workers the hardest hit, possibly because male blue-collar workers may be more mobile than their married counter-parts (Hakobyan & McLaren, 2017). College-educated workers have not been effected in the same way, as they are more apt to find jobs by “switching industries” (Hakobyan & McLaren, 2016). Looking at the U.S. in its entirety, “NAFTA supports tens of thousands of jobs in each of the 50 states—and more than 100,000 jobs in each of 17 states” (USCOC, 2017). One study has California exports to Mexico supporting more than 175,000 jobs (Doti, 2016). Another study found that in 2016, “forty-three U.S. states exported at least \$1 billion in goods to Mexico and Canada” (USCOC, 2017). While another study found that economic impacts in the U.S. would be marginal, but in Mexico “there would be an expanding market for U.S. exports” (Burfisher et al., 2001).

### 3. Methodology

The intent of this article is to make a general assessment of country impacts related to the NAFTA agreement. Eleven metrics are selected which provide a view into the impacts on the three NAFTA countries. The eleven metrics are: Average Tariff on All Products; FDI (% of GDP); Total Trade (% of GDP); Imports (% of GDP); Exports (% of GDP); NAFTA Exports (% of All Exports); Gross Savings Rate (% of GDP); Current Account Balance (% of GDP); Unemployment Rate; GDP Per Capita; and Consumer Price Inflation. Individual country readings are included with a world reading where applicable and where data supports the metric.

The data collected for this article is quantitative in nature and includes annual economic and trade-related readings for the three countries and for the world. There are two specific data feeds used for this article. The main feed used for ten out of the eleven metrics is the World Bank Data Bank site (World Bank, 2019). Aggregating the NAFTA related exports mandated using the World Integrated Trade Solution site (WITS, 2019) which provides imports and exports by country and product group.

The study time frame is from 1993 through 2017. 1993 is the base year, the year before NAFTA was implemented. 2017 is the most recent year of data available at the time of article submission. Five readings are taken during the study time frame, each separated by six years to show how the measurements evolve over time. By selecting a gap of six years, measurements during the 2008-2009 financial crisis are averted. The readings are taken for 1993, 1999, 2005, 2011, and 2017. The percent change referenced in the tables is based on the 2017 readings and its relationship to the 1993 base year.

### 4. Results

A summary of the results is included in Table 1. The other tables utilized in this study are included in the Appendix and referenced in the individual sections below.

Table 1.

Description	2017 Measurements				Change 1993 to 2017			
	Can	Mex	U.S.	World	Can	Mex	U.S.	World
Tariff rate, simple mean, all prod (%)	1.99	2.97	3.36	5.17	-78%	-78%	-34%	-61%
FDI, net inflows (% of GDP)	1.67	2.79	1.83	2.35	102%	218%	145%	181%
Trade=Imports+Exports (% of GDP)	64.06	77.54	27.04	71.70	10%	179%	35%	78%
Imports, goods/services (% of GDP)	33.17	39.67	15.03	34.75	14%	155%	44%	73%
Exports, goods/services (% of GDP)	30.89	37.87	12.01	36.95	6%	208%	26%	84%
NAFTA Exports (% of All Exports)	77.29	82.73	34.00	50.07*	-5%	-4%	11%	9% *
Gross savings (% of GDP)	19.93	22.86	18.07	24.48	34%	15%	6%	8%
Current account balance (% of GDP)	-2.95	-1.69	-2.32	NA	-24%	-64%	88%	NA
Unemployment (% of labor force)	6.34	3.42	4.36	NA	-44%	6%	-37%	NA
GDP per capita (current, K, US\$)	45.03	8.91	59.53	10.72	125%	61%	125%	130%
Inflation, consumer price (annual %)	1.60	6.04	2.13	2.19	-14%	-38%	-28%	-73%

\* = represents all three NAFTA country exports as percentage of their total exports

#### 4.1 Tariff Rate and FDI

The first group of metrics includes Tariff Rate and FDI, and are included in Tables 2 and 3, respectively, in the Appendix. The average tariff on all products was reduced not only for all three NAFTA countries, but for the World as well. The average tariffs in Canada and Mexico both declined from 1993 levels by 78%, while the U.S. declined by 34% and the World declined by 61%. In 2017, the average import tariff for Canada is at 1.99% while Mexico is at 2.97%, with the U.S. at 3.36% and the World at 5.17%. It is interesting to note that the 2017 average tariff for the U.S. is higher than both Canada and Mexico.

The readings for FDI, net inflows as a percent of GDP, increased for all three countries and for the World during the study time frame. Mexico increased its FDI inflows by 218% compared to 1993, followed by the World at 181% then the U.S. at 145% with Canada at 102%. Mexico has the highest reading as a percent of GDP in 2017 at 2.79% followed by the World at 2.35% then the U.S. at 1.83% with Canada in last place at 1.67%.

#### 4.2 Trade Flows

There are four tables included in the Trade Flows section: Total Trade (% of GDP) in Table 4; Imports (% of GDP) in Table 5; Exports (% of GDP) in Table 6; NAFTA Exports (% of All Exports) in Table 7; and all are included in the Appendix. Total Trade as a percent of GDP for Mexico increased from 1993 by 179% followed by the World at 78% then the U.S. at 35% with Canada increasing only 10%. Trade as a percent of GDP in 2017 has Mexico at the top at 77.54% followed by the World at 71.70% then Canada at 64.06% with the U.S. at only 27.04%. Imports as a percent of GDP increased the most for Mexico since 1993 at 155% followed by the World at 73% then the U.S. at 44% with Canada at 14%. The import reading for 2017 has Mexico at 39.67% followed by the World at 34.75% then Canada at 33.17% with the U.S. at only 15.03%.

Exports as a percent of GDP also increased the most for Mexico since 1993 at 208% followed by the World at 84% then the U.S. at 26% with Canada at only 6%. The 2017 reading for exports has Mexico at 37.87% followed by the World at 36.95% then Canada at 30.89% with the U.S. at 12.01%. Exports within NAFTA as a percent of all exports increased for the combined three countries by 9% with the U.S. increasing the most at 11% with Mexico declining by 4% and Canada declining by 5%. Overall, 2017 Mexico NAFTA exports are at 82.73% of its exports while 2017 Canada NAFTA exports are at 77.29% of its exports with the 2017 U.S. NAFTA exports at only 34% of its exports. Overall, in 2017 the three countries exported 50.07% of their exports to NAFTA countries, up from 45.91% in 1993, but down from 55.91% in 2005.

#### 4.3 Gross Savings and Current Account Balance

This section includes measurements on Gross Savings (% of GDP) and the Current Account Balance (% of GDP). These are located in Tables 8 and 9, respectively in the Appendix. The largest increase in gross savings as a percentage of GDP since 1993 is Canada with a 34% increase followed by Mexico with a 15% increase then the World with an 8% increase and the U.S. at a 6% increase. The 2017 readings have the World with a gross savings

rate of 24.48% of GDP followed by Mexico with a gross savings rate of 22.86% then Canada with a gross savings rate of 19.93% and the U.S. with a gross savings rate of 18.07%.

The current account balance as a percent of GDP decreased 64% for Mexico compared to 1993 while Canada declined by 24% over the same time period. Meanwhile, the U.S. current account balance increased 88% since 1993. In 2017, Mexico has the smallest current account balance at negative 1.69% of GDP followed by the U.S. with a negative 2.32% then Canada with the largest at a negative 2.95%.

#### *4.4 Unemployment Rate, GDP Per Capita, and Consumer Price Inflation*

This section includes readings in the Unemployment Rate, GDP Per Capita, and Consumer Price Inflation. These are located in Tables 10, 11, and 12, respectively, in the Appendix. Canada saw a 44% decrease in its unemployment rate compared to 1993 while the U.S. saw a decline of 37% over the same time frame. Meanwhile, Mexico saw a 6% increase in its unemployment rate compared to 1993. In 2017, Mexico has a 3.42% unemployment rate while the U.S. is at 4.36% and Canada is at 6.34%.

GDP per capita increased for all four participants with the World increasing the most at 130% followed by Canada and the U.S. both increasing 125% with Mexico increasing 61%. In 2017, the U.S. has the highest GDP per capita at \$59,532 followed by Canada at \$45,032 then the World at \$10,722 with Mexico at \$8,910.

Consumer price inflation decreased for all four participants with the World decreasing the most with a decline of 73% compared to 1993. Mexico is second with a decline of 38% followed by the U.S. with a decline of 28% then Canada with a decline of 14%. The 2017 readings for consumer price inflation are as follows: Canada with lowest inflation rate at 1.60%, followed by the U.S. at 2.13% then the World at 2.19% with Mexico at 6.04%.

### **5. Discussion**

The study time frame saw tariffs decrease for all four participants, including the World reading. FDI amounts also increased as well with Mexico increasing the most. Investments in general have not been an issue with either Canada or the U.S. Therefore, their FDI readings at 1.67% and 1.83%, respectively, are lower than the World reading of 2.35% since both countries can fund investments domestically. However, both Canada and the U.S. increased their FDI by 102% and 145%, respectively, which shows that both places are still attractive to outside investors. FDI in Mexico saw a healthy 218% increase over the study time frame and has a 2017 reading of 2.79% of GDP which is also higher than the World reading. One study found that investments in Mexico related to the trade sector saw the majority of these funds (Tornell et al., 2004). Another study opined that without NAFTA, Mexico's FDI would drop to 40% below these levels (Lederman et al., 2004).

Trade overall grew for all four participants as well, including the World reading. It is obvious that both Canada and Mexico are focused on NAFTA trade with their NAFTA exports in relation to their total exports at 77.29% and 82.73%, respectively, while the U.S. NAFTA exports are at only 34% of their total exports. The U.S. reading indicates that it is exporting to non-NAFTA countries (at 66%) approximately double the amount it is exporting to the NAFTA partners (at 34%). Also, in 2017 all three countries have trade deficits (defined as less exports than imports) with Mexico at 1.80% of GDP, Canada at 2.27%, and the U.S. at 3.02%. In addition, all three NAFTA countries have gross savings rates below the World reading. This "shortage of savings generates a net capital inflow that finances a trade deficit" (Bergsten, 2017).

All three NAFTA countries are running negative current account balances. One way to reduce this dynamic is to reduce the annual "budget deficit, which would simultaneously reduce domestic absorption and the demand for foreign capital to finance it—especially with the economy near full employment as is now the case" (Bergsten, 2017). This leads to the 2017 unemployment rates which are at historically low levels for all three NAFTA countries.

GDP per capita has both Canada and the U.S. as the big winners in the NAFTA debate. Both countries saw GDP per capita grow at 125% from 1993 levels while Mexico grew at only 61%. Mexico GDP per capita in 2017 is still below \$9,000 per year which is 83% of the World reading, less than 20% of the Canada reading, and only 15% of the U.S. reading. One obvious comparison is that relative to the U.S., Mexico has a higher proportion of lower-skilled workers (Hanson, 2003). With regard to consumer price inflation, all four participants saw decreases in inflation on a relative basis compared to 1993. However, the 2017 readings still have Mexico with a slightly higher inflation rate at 6.04% compared to 1.60% for Canada, 2.13% for the U.S., and 2.19% for the World.

Comparing the size of the economies of the three NAFTA countries shows that the U.S. economy is much larger than both Canada and Mexico, with the Canadian economy only 8.5% the size of the U.S. economy and the Mexican economy only 5.9% the size of the U.S. economy (World Bank, 2019). Given that the majority,

approximately 80%, of exports from Canada and Mexico, go to NAFTA partners, as opposed to only 34% of U.S. exports going to NAFTA, Canada and Mexico are benefitting from an export market where there are no tariffs and transportation costs are low.

Table 13 in the Appendix shows a count of the 2017 measurements which improved compared to 1993. Out of the eleven metrics, Canada and the U.S. each improved in ten metrics while Mexico improved in nine. Canada failed to improve in NAFTA exports (% of all exports) and the U.S. failed to improve in the current account balance (% of GDP) while Mexico failed to improve in NAFTA exports (% of all exports) and unemployment (% of labor force), although the 2017 unemployment rate for Mexico is below both Canada and the U.S.

## 6. Conclusions

In summary, there have been substantial tariff reductions as a result of NAFTA for all three countries. FDI increased as did trade overall. Half of the exports from the NAFTA countries in 2017 are going to the NAFTA countries themselves, many times as intermediate goods as part of supply chain mechanisms. Gross savings rates increased during the study time frame, but all three NAFTA countries have negative current account balances. This, in the long run, may pose additional fiscal issues on each of the countries (Bergsten, 2017). The unemployment rates have dropped, GDP per capita has risen, and inflation is not an issue for any of the three countries. However, the improvement in Mexico GDP per capita is below what was expected and the inflation rate in Mexico is still higher than the other participants, but well below the 1993 reading.

When the metrics are assessed overall, all three countries showed a high percentage in the number of metrics improved. The fact that the overwhelming number of individual country metrics showed improvement is meaningful. Most of the improvements were substantial improvements and not just incremental in scope. The individual countries have other issues on their own, related to domestic politics or with other outside trading relationships. However, based on a general assessment of the eleven metrics, after twenty five years, the NAFTA experience appears to have been positive for all three countries.

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## Appendix

Table 2.

Tariff rate, applied, simple mean, all products (%)	1993	1999	2005	2011	2017	Change
Canada	8.92	5.05	4.29	3.37	1.99	-78%
Mexico *	13.33	15.96	9.20	7.49	2.97	-78%
U.S.	5.12	3.88	3.23	3.05	3.36	-34%
World	13.36	10.77	8.09	7.31	5.17	-61%

\* = Mexico data not available for 1992, 1993, 1994, average of 1991 and 1995 was used for 1993 entry

Table 3.

FDI, net inflows (% of GDP)	1993	1999	2005	2011	2017	Change
Canada	0.82	3.67	2.18	2.14	1.67	102%
Mexico	0.88	2.31	2.97	2.06	2.79	218%
U.S.	0.75	3.00	1.09	1.70	1.83	145%
World	0.84	2.98	3.29	3.03	2.35	181%

Table 4.

Total Trade = Imports + Exports (% of GDP)	1993	1999	2005	2011	2017	Change
Canada	58.24	80.19	69.71	62.33	64.06	10%
Mexico	27.83	50.62	62.36	63.47	77.54	179%
U.S.	19.99	23.19	25.50	30.89	27.04	35%
World	40.24	46.56	56.18	60.51	71.70	78%

Table 5.

Imports of goods and services (% of GDP)	1993	1999	2005	2011	2017	Change
Canada	29.11	38.32	32.91	31.76	33.17	14%
Mexico	15.55	25.99	31.98	32.43	39.67	155%
U.S.	10.47	12.92	15.50	17.31	15.03	44%
World	20.14	22.85	27.56	29.99	34.75	73%

Table 6.

Exports of goods and services (% of GDP)	1993	1999	2005	2011	2017	Change
Canada	29.13	41.88	36.80	30.56	30.89	6%
Mexico	12.28	24.63	30.38	31.04	37.87	208%
U.S.	9.52	10.27	10.00	13.57	12.01	26%
World	20.10	23.72	28.62	30.53	36.95	84%

Table 7.

Exports within NAFTA (% of All Exports)	1993	1999	2005	2011	2017	Change
Canada	81.12	86.32	84.59	74.88	77.29	-5%
Mexico	85.76	90.15	87.80	81.70	82.73	-4%
U.S.	30.51	36.22	36.86	32.36	34.00	11%
Total	45.91	54.31	55.91	48.31	50.07	9%

From <https://wits.worldbank.org/CountryProfile/en/Country/CAN/Year/1993/TradeFlow/EXPIMP>

Table 8.

Gross savings (% of GDP)	1993	1999	2005	2011	2017	Change
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Canada	14.92	21.11	24.44	20.85	19.93	34%
Mexico	19.91	22.43	21.29	23.76	22.86	15%
U.S. *	17.06	20.91	18.04	15.95	18.07	6%
World *	22.62	24.22	25.59	24.93	24.48	8%

\* = 2017 data not available for U.S. and World, 2016 data used for the 2017 entries

Table 9.

Current account balance (% of GDP)	1993	1999	2005	2011	2017	Change
Canada	(3.87)	0.13	1.88	(2.78)	(2.95)	-24%
Mexico	(4.67)	(2.33)	(1.03)	(1.06)	(1.69)	-64%
U.S.	(1.23)	(2.98)	(5.69)	(2.87)	(2.32)	88%
World	NA	NA	NA	NA	NA	NA

Table 10.

Unemployment, total (% of total labor force)	1993	1999	2005	2011	2017	Change
Canada *	11.38	7.58	6.76	7.67	6.34	-44%
Mexico	3.21	2.49	3.56	5.17	3.42	6%
U.S.	6.90	4.22	5.08	8.95	4.36	-37%
World	NA	NA	NA	NA	NA	NA

\* 2011 data not available for Canada, average of 2010 and 2012 used for the 2011 entry

Table 11.

GDP per capita (current US\$)	1993	1999	2005	2011	2017	Change
Canada	20,017	22,167	36,190	52,082	45,032	125%
Mexico	5,527	5,984	8,089	9,913	8,910	61%
U.S.	26,465	34,621	44,308	49,794	59,532	125%
World	4,662	5,386	7,283	10,451	10,722	130%

Table 12.

Inflation, consumer prices (annual %)	1993	1999	2005	2011	2017	Change
Canada	1.9	1.7	2.2	2.9	1.6	-14%
Mexico	9.8	16.6	4.0	3.4	6.0	-38%
U.S.	3.0	2.2	3.4	3.2	2.1	-28%
World	8.0	3.2	4.1	4.8	2.2	-73%

All tables from <https://databank.worldbank.org/data/reports.aspx?source=world-development-indicators#?> except Table 7.

Table 13.

Description	2017 Measurements which improved compared to 1993		
	Canada	Mexico	U.S.
Tariff rate, simple mean, all prod (%)	X	X	X
FDI, net inflows (% of GDP)	X	X	X
Trade=Imports + Exports (% of GDP)	X	X	X
Imports, goods/services (% of GDP)	X	X	X
Exports, goods/services (% of GDP)	X	X	X
NAFTA Exports (% of All Exports)			X
Gross savings (% of GDP)	X	X	X

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Current account balance (% of GDP)	X	X	
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Unemployment (% of labor force)	X		X
GDP per capita (current, K, US\$)	X	X	X
Inflation, consumer price (annual %)	X	X	X

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Total out of 11	10	9	10
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