Journal of Economics and Development Studies
March 2017, Vol. 5, No. 1, pp. 11-19
ISSN: 2334-2382 (Print), 2334-2390 (Online)

Published by American Research Institute for Policy Development
DOI: 10.15640/jeds.v5n1a2
URL: https://doi.org/10.15640/jeds.v5n1a2

A Contemporary Investigation into the Economic Impacts of RTAs: Case Study of the AFTZ and the TPP

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Abstract

This paper is an attempt to explore the economic impacts of regional trade agreements (RTAs) through the prisms of the recently endorsed African Free Trade Zone (AFTZ) and Trans-Pacific Partnership (TPP). In the process, a methodology involving a 3SLS and 50 Monte Carlo-type simulations is used to assess the long-term behaviors of three key macroeconomic variables, namely, the unemployment rate, net trade, and the manufacturing base, for a total of 31 countries – 20 from the AFTZ along with 11 from the TPP. With a broad dataset spanning from 1980 to 2015, results show that economic impacts vary as some countries sustain losses, when some others experience gains. In the AFTZ, most countries (13) observe a worsening of the unemployment rate with various degrees, but the bulk of them boast an expansion in both net trade (12) and the manufacturing base (15).In the TPP, the unemployment rate modestly ticks up for most economies (seven) except for Malaysia and Peru where these increases are roughly 2.4 and 2 percentage points, respectively, higher compared to their long-term values. Net trade, on the other hand, shrinks in most economies (seven) with Singapore being the hardest hit, while Mexico and Japan secure the largest improvements. Likewise, the manufacturing base as a share of output grows in most economies (eight) with Mexico, and to some extent Vietnam, leading the way. Most importantly, in the world's largest economy – the United States –the unemployment rate falls by 1.1 percentage points during the simulation period, whereas net trade dips marginally by 0.05 percentage points with the manufacturing base contracting moderately by roughly 1.4 percentage points. In sum, this paper reveals no strong evidence of momentous economic impacts of the TPP on unemployment, net trade, and the manufacturing base in this major country.

Keywords: RTA, AFTZ, TPP, simulation, 3SLS, economic impact, economic growth, unemployment, net trade.

JEL Classification Codes: F62, F47, O51, O53, O55.

I. Introduction

In 2015, the world witnessed the signing of two major regional trade agreements (RTAs) involving dozens of countries, both developing and advanced. The first agreement, the African Free Trade Zone (AFTZ), was endorsed by 26[2]African countries in June of that year, while the second, the Trans-Pacific Partnership (TPP), was launched in October of the same year by 12[3]countries bordering the Pacific Ocean, including, among others, the US, Chile and Australia.

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[2]The agreement was inked on June 10, 2015 with these signatory countries: Angola, Botswana, Burundi, Comoros, Djibouti, Democratic Republic of Congo, Egypt, Eritrea, Ethiopia, Kenya, Lesotho, Libya, Madagascar, Malawi, Mauritius, Mozambique, Namibia, Rwanda, Seychelles, Swaziland, South Africa, Sudan, Tanzania, Uganda, Zambia, and Zimbabwe.

[3]It was signed on October 5, 2015 by the following countries: Australia, Brunei, Canada, Chile, Japan, Malaysia, Mexico, New Zealand, Peru, Singapore, United States, and Vietnam.

These agreements – which are meant to ultimately create free trade areas (FTAs) among their respective members – have reignited the debate about the relevance of FTAs in an international environment marked by two stylized facts. On the one hand, the main engines driving global economic growth, namely the BRICS – acronym representing the 5 most prominent emerging economies, which are Brazil, Russia, India, China and South Africa – and the USA, are experiencing persistently low or slow growth. On the other hand, countries across continents are looking for other avenues of growth beyond their traditional niches through new markets and trading partners.

Since the end of World War II, the world has noted a flourishing of RTAs. According to Yang and Gupta (2005), virtually all countries in the world are members of at least one RTA, and the total tally of these arrangements currently in force stands in the 300s. This situation appears as a testament to their economic virtues, that is, their potential or direct benefits for countries involved. The economic impacts of RTAs are diversely appreciated both in the literature and in public opinion. In the literature, evidence showing both positive and negative impacts on the economy is found. In public opinion, positions, oftentimes dashed by political affiliations, are more polarizing regarding the benefits to the economy and society as a whole. This paper endeavours to empirically assess the effects of these recent RTAs on key macroeconomic variables in the countries of interest over time. In other words, it attempts to provide answers to the following question: How will key macroeconomic variables, in the countries of interest, behave over time as these RTAs are implemented? This study focuses on three macroeconomic variables to explore the following central aspects of each country's economy, namely, economic growth, unemployment, and manufacturing.

The significance of this work is one-fold and straightforward. It will enrich the literature by providing some actual empirical assessments to elucidate the economic impacts of these agreements for people in academia, Main Street and other stakeholders, such as decision-makers in these countries and international institutions. Once determined, these figures will contribute to the ongoing debate and help settle any controversy. Although the new Administration under President Trump withdrew the United States from the TPP as of February 2017, this exercise still remains relevant for this country as it provides empirical elements to understand the impacts of this arrangement in the eventuality that it had not rescinded its membership. Moreover, it is not uncommon that countries withdraw and rejoin an arrangement over time as changing conditions prevail, and adjustments or revisions are made to original charters. Towards its goal, this paper is organized as follows. Section 2 conducts the review of literature to discuss relevant studies pertaining to the economic impacts of RTAs. The third section presents the methodology, while the fourth section elaborates and interprets the results of the empirical assessment. Section 5 makes concluding remarks.

II- Literature Review

Regional trade agreements (RTAs) have been amply covered in the literature since the post-World War II era from a variety of angles, both empirically and theoretically. Interrogations addressed through those academic and professional research works range from the reasons for joining one or more RTAs to their impacts on growth and development in member countries and the world. Porche (2004) investigates the effects of RTAs on economic development using a panel sample of 81 countries drawn from a grand total of 165 countries considered in the study. The methodological approach used exhibits two main features. On the one hand, a ratio of real RTA GDP to global real GDP is constructed to capture the magnitude of RTAs. On the other hand, to isolate both institutional and non-institutional effects, she introduces separate measures of two distinct kinds of RTAs, namely, free trade agreements (FTAs) and customs unions. Focusing on the relationships between RTAs and 5-year average economic growth rates, overall results reveal that RTAs significantly generate a boosting effect on economic growth rates in member countries regardless of the type of arrangements.

In what constitutes a contrast, Yang & Gupta (2005) find that RTAs on the African continent have been ineffective in promoting trade and foreign direct investment (FDI). They identify two main reasons for these findings. First, the vast amounts of external trade barriers including, among others, small market sizes and poor conditions, or non-existence, in some cases, of trade enhancing infrastructures such as transportation facilities. As a consequence of these conditions, high costs of trade are observed. Second, there is a low-resource complementarity between member countries. Altogether, these two reasons weigh negatively on the development of both intra- and extra-regional trade. Chala& Lee (2015) and Hur (2003) probe the economic impacts of RTAs by focusing on Greenfield investment and industrial structure, respectively. The methodology used by Chala & Lee (2015) considers data on bilateral flows for 25 major Organization for Economic Cooperation and Development (OECD) countries with 140 countries, including both high- non-high incomes countries, over the period 2003-2012.

Empirical estimations are performed using a Poisson Pseudo-Maximum-Likelihood (PPML) estimator with bilateral and country-time fixed effects. Results establish that a membership in an RTA does not guarantee a boost in Greenfield investment. Indeed, among other things, it is found that memberships in RTAs limit these kinds of investment in OECD-high income country pairs, while enhancing them in OECD-non-high income country pairs. Similar findings are noted when effects of RTAs are considered. Hur (2003), on the other hand, extends the Krugman's (1991) economic geography model to analyze the stability of an industrial structure resulting from the shift-in effect of an RTA. Through this model with labor mobility, it appears that non-higher external trade costs may be needed in an RTA for the industrial structure to remain stable. The economic impacts of RTAs can as well be figured out by looking at their effects on world and regional trade patterns. MacPhee & Sattayanuwat (2014) have endeavored to address this matter in a paper utilizing data on 12 RTAs in the developing world. Like inChala& Lee (2015), the empirical work is based upon a PPML technique applied to both RTAs and non-RTAs members. Two major outcomes are notable. First, it is found that the agreements have led to import diversion in seven out of the 12 RTAs of interest. Second, three out of the five African RTAs considered did experience an expansion in intra-bloc trade, which prompted the authors to argue that the performances of RTAs depend on implementation policies adopted by members.

At the microeconomic level, it has been established that the formation and implementation of RTAs do affect firms in every aspect of their operations. As a matter of fact, the global orientation of multinational corporationsin particular undergoes transformations under such arrangements. However, these transformations vary depending on whether the multinational corporations are from emerging market or developed economies. In the former countries, impacts of the characteristics of RTAs – namely, RTA diversity, potential market size and experience – are important in determining the global orientation of firms. To the contrary, in the latter countries, the importance of these characteristics remains marginal (Banalieva & Sarathy, 2010). Certain authors in the literature have investigated the economic impacts of RTAs within a narrower scope. Sen, Srivastava & Pacheco (2010), among others, focus on the early effects of preferential trade agreements (PTAs) in a group of 16 countries including the ten members of the Association of Southeast Asian Nations (ASEAN) and six other nations – Australia, New Zealand, China, India, Japan and Korea. Using an augmented gravity model over the 1994-2006 period, the impacts of bilateral PTAs and multilateral PTAs on intra-regional trade are studied. The main finding of this paper is that multilateral PTAs constitute bigger drivers of intra-regional trade than bilateral PTAs.

III- Methodology

This investigation into the economic impacts of RTAs is accomplished using a two-pronged methodological demarche. First, a three-stage least squares model (3SLS) is introduced to assess the long-term impacts of RTAs on unemployment, net exports, and the manufacturing base. Second, a Monte Carlo-inspired simulation framework is developed based upon the prior long-term patterns of impacts established along with a series of in-sample tests. The latter serves as a potent tool for calibration and selection of the most accurate and realistic forecasting model as 50 Monte Carlo simulations are performed.

III-1- Three-Stage Least Squares (3SLS) Model

Since their introduction by Zellner (1962) and Zellner & Theil (1962), both the two- and three-stage least squares models have proven their reliability in a variety of economic situations and analysis, especially when endogeneity is detected. The literature bears testament to this fact through a variety of studies from Switzer (1984) and Betancourt & Robles (1989) to Quinn (2009), Drakos & Bekiris (2010), and Hakro & Ghumro (2011). Towards our objective of understanding the economic impacts of the recent RTAs in Africa and across the Pacific, a special scrutiny is placed upon job creation – through unemployment –net exports, and the manufacturing base. These three macroeconomic variables are the linchpins of the debate surrounding these agreements, which are rightly or wrongly endorsed. Thus, unemployment, net exports, and manufacturing base are endogenized, and the general form of the structural model for aneconomy i is as follows:

$$Q_i = X_i ß_i + \varepsilon_i \quad (1)$$

The model outlined in equation (1) is a system of n equations with k exogenous variables. Q is a vector of n endogenous variables; X is a vector of k exogenous variables; ß is a vector of k coefficients, and ε is a vector of n disturbances. The orders of vectors Q, X, ß, and ε are (nx1), (nxk), (kx1) and (nx1), respectively. The estimation of the model using a three-stage least squares approach is warranted when X contains variables that are correlated with ε. In this case, there is a problem of endogeneity which violates a basic tenet of classical linear, or least squares, regression models. To remedy this situation and move towards more consistent estimates, the introduction of instrumental variables (IVs) are necessary as explained by Zellner (1962).

Let's define R, a vector of (nxs) instrumental variables that possesses the following two properties:

i) IVs are not correlated with ε, and
ii) The rank of $\prod$, the matrix of correlations between the variables in X and the variables in R, is k.

Specifically, this study considers the following full-system estimation including three equations and three endogenous variables:

$$U_{it} = ß_{0it} + ß_{1it}Y_t + ß_{2it}NX_t + ß_{3it}Dum_t + \mu_{it} \quad (2)$$
$$NX_{it} = ß4_{it} + ß_{5it}Y_t + ß_{6it}MB_t + ß_{7it}TOT_t + ø_{it} \quad (3)$$
$$MB_{it} = ß_{8it} + ß_{9it}Tech_{t-1} + ß_{10it}Open_t + ß_{11it}MB_{t-1} + ß_{12it}MB_{t-1}Tech_{t-1} + \xi_{it} \quad (4)$$

Where i captures a country, i = 1, 2, …, n, and t represents the time period. U is the level of unemployment; Y is output; NX is net exports; Dum is the RTA dummy, which takes on the value 1 when country i holds membership to a particular RTA at time t, and the value 0 otherwise; MB measures the size of the manufacturing base; TOT accounts for the terms of trade, while μ, ø, and ξ respectively designate error terms in equations (2), (3), and (4). As far as the first prong of the methodology is concerned, two steps are adopted to derive all the 3SLS results. First and foremost, the identification problem is addressed to ensure the solvability of the structural system and the unicity of outcomes. To that end, both the order and rank conditions are examined. The former is a necessary condition, while the latter is sufficient. Then, a Hausman (1976) test of simultaneity is conducted to detect the presence of endogeneity in the system. The two steps are paramount and need to be completed to substantiate the relevance and validity of the three-stage least squares (3SLS) estimation technique in this investigation.

III-2- Monte Carlo Simulations

In the previous section, the long-term relationships between endogenous and exogenous variables are established. These relationships serve as the template for conducting the 50 Monte Carlo simulations to observe the patterns of behaviour of unemployment, net exports and the manufacturing base in member countries of the AFTZ and TPP.

IV- Data

Two main databases are used as sources for all series – (i) *World Development Indicators (WDI)* from the World Bank Group, and (ii) *ILOSTAT* compiled by the International Labour Organization (ILO). Series span from 1980 to 2015 for all 31 countries considered. When dealing with countries exhibiting notable differences in size, discrepancies in scales of measurement may be a cause for concern. Thus, variables are computed as a percentage of GDP at constant price, as appropriate. This study utilizes two balanced data panels for both the AFTZ and TPP. After accounting for all adjustments due to lags, there are 827 observations left in the former panel and 395 in the latter.

V- Results and Implications

Tables 1 and 2 display the solutions to the identification problem. The necessary condition for identification – order condition – and the sufficient condition – rank condition – concurrently indicate that each equation of the structural system is over identified, not just identified[4] . In addition, endogeneity is established by Hausman tests performed and reported in Table 3 and Table 4. These outcomes assure that the use of the 3SLS estimation method is compelling as it will yield both consistent and efficient estimates.

[4] For the rank condition, at least one non-zero determinant of order (2x2) can be extracted from each matrix A, which points out over identification for each equation. The system is hence over identified. For further discussions, see Gujarati & Porter (2009).

The Monte Carlo simulations have provided an insight in the pattern of behaviour of unemployment, net trade, and manufacturing base in member countries of both RTAs over the 15 years[5]of simulations. These simulations are completed using the results of the 3SLS estimations that assess the long-term relationship between variables (tables 5 and 6). According to Table 7, unemployment rates in the AFTZ countries[6] vary modestly over the period of estimations among the 20 countries of interest. South Africa registers the lowest fluctuations, and rates remain between 9 and 10 percent. It is suitable at this point to put these numbers into perspective to fully understand their scope. The long-term average of unemployment rates in South Africa pre-simulation period, or pre-AFTZ, was about 25%. That is, unemployment rate in this country is more than halved over the simulation period, which certainly suggests a positive impact on this economy as far as employment is concerned. To the contrary, Swaziland experiences rates that hover between 20 and 22 percent, with an average of 21 percent, which is comparable to their long-term average of about 22 percent. Another group of countries, namely, Ethiopia, Egypt, and Kenya record relatively high rates averaging 15.3, 13.5, and 13.2 percent, respectively. Compared to their long-term averages of 5.2, 13, and 9.2 percent, respectively, it appears that job market performances are worsened, particularly in Ethiopia and Kenya. For other countries, fluctuations are mild, and averages swing between 11 and 12 percent. Lesotho, Mozambique, Botswana, and Namibia come out as the countries with the largest decreases in unemployment rates, while Tanzania, Uganda, Madagascar, Zimbabwe, Angola, Comoros, and Burundi suffer relatively marked increases in their rates.

As far as net trades are concerned, the impacts on AFTZ countries feature some notable contrasts. Case in point, net trades in 12 countries wind up being affected positively by the RTA, while in the remaining eight countries, negative effects are observed in light of their pre-AFTZ long-term averages. In the former group of countries, Swaziland stands out with a net trade reaching dramatic thresholds of 950 to 1000 percent of GDP. In comparison, Ethiopia and Angola, with the second and third highest rates settle between 360 and 300, and 110 to 130 percent of GDP, respectively. These surges in net trades in these three countries illustrate the capabilities of these economies to take great advantage of this arrangement. Manufacturing bases in Swaziland, and both the Democratic Republic of Congo (DRC) and Mauritius register the most important expansions with averages respectively topping 17.5 and 37.5 percent of GDP over the period of simulation. These performances are closely followed by Egypt, Namibia, and Kenya whose manufacturing bases growth to 16.5, 13.5, and 13 percent of GDP, respectively. Contrarily, Ethiopia emerges as the country with the smallest progression in the manufacturing base at four percent. Angola and Botswana fare relatively better with 7.5 percent, while the Comoros Islands reach an average progression of 8.5 percent.

Overall, the manufacturing base as a percentage of GDP expands in 15 countries, whereas a modest contraction of less than two percentage points, as compared to respective long-term averages, is perceptible in just five countries – namely, the DRC, Ethiopia, Madagascar, Swaziland, and South Africa. Table 8 documents the findings regarding TPP member countries. The simulations cover 11 of the 12 member countries[7]. First, results expose that unemployment rates, over the 15-year simulation period, stand in the single digit for all but two countries– Malaysia and Vietnam. In both countries, unemployment rates peak at 10 percent, while averaging 5 and 8 percent over the simulation period, respectively. Moreover, it comes across that the latter countries observe a modest uptick in unemployment, relatively to their long-term averages, by about 1 to 2.5 percentage points at most[8]. For other countries – Australia, Canada, Chile, Japan, Mexico, New Zealand, Singapore, United States, and Vietnam – the rates do not depart significantly, say within 0 to 1.5 percentage points, from their long-term averages suggesting this RTA does not notably affect unemployment in most TPP countries. In Peru especially, the change in rates settles within about 2.4 percentage points of its pre-TPP long-term average. In the United States, where the TPP has generated considerable amount of scrutiny in public debates, unemployment is only marginally impacted.

[5] 50 trials are conducted in the Monte Carlo simulations. The beginning period for all simulations is 2018.

[6] Only 20 countries are considered in this study. Due to data reliability concerns, Djibouti, Eritrea, Libya, Rwanda, Seychelles, and Sudan are excluded from the final pool.

[7] Limited data availability led to the exclusion of Brunei.

[8] Long-term averages are computed using 5-year periods in the relevant country for each variable of actual data.

Second, as far as net trade is concerned, Singapore sustains by far the most adverse effects with its long-term average dropping by about 20.5 percentage points over the simulation period. Indeed, net trade shrunk from its long-term average of about 24 percent to 3.5 percent of GDP. It is followed by New Zealand, Australia, Malaysia, and Chile which respectively displayed 4.8, 4.7, 4.2, and 3.6 percentage point drops in net trade. To the contrary, Mexico and Japan score the most gains with net trades respectively showing 6.9 and 5.3 percentage point rises from their long-term averages. Regarding the remaining four countries, namely, Canada, Peru, United States, and Vietnam, impacts are minor. For Canada and Peru, there are slight increases of 0.8 and 0.2percentage points, respectively, while the United States and Vietnam bear a modest degradation of their net trade by 0.05 and 1.7 percentage points, respectively. Third, all but three countries experience an expansion of their manufacturing base. The largest of these expansions are noted in Mexico and Vietnam where manufacturing progresses by 5.3 and 2.6 percentage points from their long-term averages. In Australia, Canada, Chile, Japan, Malaysia, and Peru, these growths in the manufacturing base are by less than 2 percentage points. Only in New Zealand, the United States, and Singapore are there relatively small contractions in the manufacturing base, which shrinks by about 1.4, 1.3, and 0.6 percentage points, respectively.

VI- Conclusion

This work has attempted to lead a contemporary investigation into the economic impacts of regional trade agreements (RTAs) through the prisms of the recently endorsed African Free Trade Zone (AFTZ) and the Trans-Pacific Partnership (TPP). In the process, a methodology involving a 3SLS and Monte-Carlo simulations is used to look at the long-term behaviors of unemployment, net trade, and the manufacturing base for a total of 31 countries – 20 from the AFTZ and 11 from the TPP. Regarding these three macroeconomic variables, impacts vary and some countries suffer losses as some others experience gains. In the AFTZ, most countries observe a worsening of their unemployment rates at various degrees, but most of them boast an expansion in both net trade and manufacturing base. In the TPP, the unemployment rate ticks up for most economies, although modestly except for Malaysia and Peru where these increases are respectively about 2.4 and 2 percent. Net trade, on the other hand, shrinks in most economies with Singapore being the hardest hit, while Mexico and Japan secure the largest improvement. At last, the manufacturing base as a share of GDP grows in most economies with Mexico, and to some extent Vietnam, leading the way. Most importantly, in the world's largest economy – the United States –the unemployment rate falls by 1.1 percentage points during its TPP membership, while net trade dips marginally by 0.05 percentage points with the manufacturing base contracting moderately by roughly 1.4 percentage points. In fine, this paper shows no strong evidence of momentous economic impacts of the TPP on unemployment, net trade, and the manufacturing base in this major country. Going forward, a major caveat could be addressed to explore the microeconomic underpinnings of this work's findings, especially regarding the manufacturing base. Indeed, a breakdown of the manufacturing base into sectors could provide a wealth of additional information in understanding its behavior following a country's membership in the AFTZ or the TPP.

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Appendix

Table 1 - Order Condition of Identification

Method 1

	Number of variables excluded	Number of equations in the system minus 1	Identification status
Equation (2)	6	2	Overidentified
Equation (3)	6	2	Overidentified
Equation (4)	5	2	Overidentified

Method 2

	Number of predetermined variab	Number of endogenous variables minus 1	Identification status
Equation (2)	5	1	Overidentified
Equation (3)	6	1	Overidentified
Equation (4)	4	0	Overidentified

Table 2 - Rank Condition of Identification

Coefficients of variables

	1	U	NXMB	Y	Dum	MB_{t-1}	TOT	Tech	Open	MB_{t-1}.Tech
Equation (2)	$-ß_0$	1	$-ß_2$	0	$-ß_1$	$-ß_3$	0	0	0	0	0
Equation (3)	$-ß_4$	0	1	$-ß_6$	$-ß_5$	0	0	$-ß_7$	0	0	0
Equation (4)	$-ß_8$	0	0	1	0	0	$-ß_{11}$	0	$-ß_9$	$-ß_{10}$	$-ß_{12}$

$$A_{Equation(2)}=\begin{bmatrix} -\beta_6 & 0 & -\beta_7 & 0 & 0 & 0 \\ 1 & -\beta_{11} & 0 & -\beta_9 & -\beta_{10} & -\beta_{12} \end{bmatrix}$$

$$A_{Equation(3)}=\begin{bmatrix} 1 & -\beta_3 & 0 & 0 & 0 & 0 & 0 \\ 0 & 0 & -\beta_{11} & 0 & -\beta_9 & -\beta_{10} & -\beta_{12} \end{bmatrix}$$

$$A_{Equation(4)}=\begin{bmatrix} 1 & -\beta_2 & -\beta_1 & -\beta_3 & 0 \\ 0 & 1 & -\beta_5 & 0 & -\beta_7 \end{bmatrix}$$

Table 3 - Hausman Test of Endogeneity in the AFTZ

H_o	F-Statistic	p-value	Decision
Nonexistence of endogeneity	21.9	0.0	Reject[#]

[#]: At the 1, 5, and 10 percent significance levels.

Table 4 - Hausman Test of Endogeneity in the TPP

H_o	F-Statistic	p-value	Decision
Nonexistence of endogeneity	76.3	0.0	Reject[#]

[#]: At the 1, 5, and 10 percent significance levels.

Table 5 – 3SLS Estimation Results for the AFTZ

	U	NX	MB
Constant	14.1225	-19.408	0.800868
RGDP	0.000351***	0.000346	
Dum	-2.733**		
NX	0.005152		
MB		0.801324*	
TOT		-0.411866	
Open			-0.003415
Tech(-1)			0.064069*
MB(-1)			0.942532***
Tech(-1)*MB(-1)			0.004206**
Overall (system)			
Obs.		827	
Adj. R-Sq.		0.73	
F		913.7	
p-value		0	

*, **, *** Indicate significance at the 10, 5, and 1 percent levels, respectively.

Table 6 - 3SLS Estimation Results for the TPP

	U	NX	MB
Constant	6.848754	-10.34856	1.892599
RGDP	0.000491***	0.0000363***	
Dum	-0.228339		
NX	0.255222***		
MB		0.680853***	
TOT		0.000515	
Open			0.0054***
Tech(-1)			-0.000696
MB(-1)			0.886298***
Tech(-1)*MB(-1)			0.000561
Overall (system)			
Obs.	395		
Adj. R-Sq.	0.84		
F	203		
p-value	0		

*** Indicates significance at the 1 percent level.

Table 7 – Summary of Simulation Outcomes for the AFTZ

	Unemployment (%)																			
	Ang	Bot	Bur	Com	DRC	Egy	Eth	Ken	Les	Mad	Mal	Mau	Moz	Nam	SAf	Swa	Tan	Uga	Zam	Zim
Max	13.4	11.3	11.8	11.3	12	15	15.6	15	11.3	11.6	11.6	11.6	11.7	14.2	10	22	12.1	12.3	11.8	11.8
Min	13	11.1	11.6	11.2	11.9	12	15.1	11.5	11.2	11.5	11.4	11.5	11.5	11.8	9	20	11.8	12	11.7	11.6
	Net trade (% of GDP)																			
	Ang	Bot	Bur	Com	DRC	Egy	Eth	Ken	Les	Mad	Mal	Mau	Moz	Nam	SAf	Swa	Tan	Uga	Zam	Zim
Max	130	-60	-5	-40	8	30	360	55	-25	-23	-28	-15	-5	-25	1000	60	0	35	-40	-10
Min	110	-70	-10	-50	0	15	300	40	-30	-30	-35	-20	-15	-30	950	35	-10	20	-50	-20
	Manufacturing Base (% of GDP)																			
	Ang	Bot	Bur	Com	DRC	Egy	Eth	Ken	Les	Mad	Mal	Mau	Moz	Nam	SAf	Swa	Tan	Uga	Zam	Zim
Max	7.6	10	12	10	20	18	7	14	15	14	14	19	13	15	14	40	10	10	11	15
Min	7.4	5	8	7	15	15	1	12	10	11	12	16	10	12	11	35	7	8	8	12

Table 8 – Summary of Simulation Outcomes for the TPP

	Unemployment (%)										
	Aus	Can	Chi	Jpn	Mal	Mex	NZ	Per	Sin	US	Vtn
Max	8	7	7	5	10	8	7	8	9	2	11
Min	5	4	3	3	0	4	5	4	0	0	5
	Net trade (% of GDP)										
	Aus	Can	Chi	Jpn	Mal	Mex	NZ	Per	Sin	US	Vtn
Max	-4	0	-2	3.5	7	6.5	-2	2	5	-2	1
Min	-6	-2	-4	2	5	5	-5	0	2	-4	-2
	Manufacturing Base (% of GDP)										
	Aus	Can	Chi	Jpn	Mal	Mex	NZ	Per	Sin	US	Vtn
Max	10	14	13.5	20	25	24	13	17	20	13	16
Min	8	12	12	18	22	22	8	15	17	11	14