SAI

LAW & ECONOMICS

NAFTA @ 15: PREPARING FOR THE FUTURE

Jaime Serra

March 2009

THE ELLIOTT SCHOOL OF INTERNATIONAL AFFAIRS

THE GEORGE WASHINGTON UNIVERSITY
WASHINGTON DC

Agenda

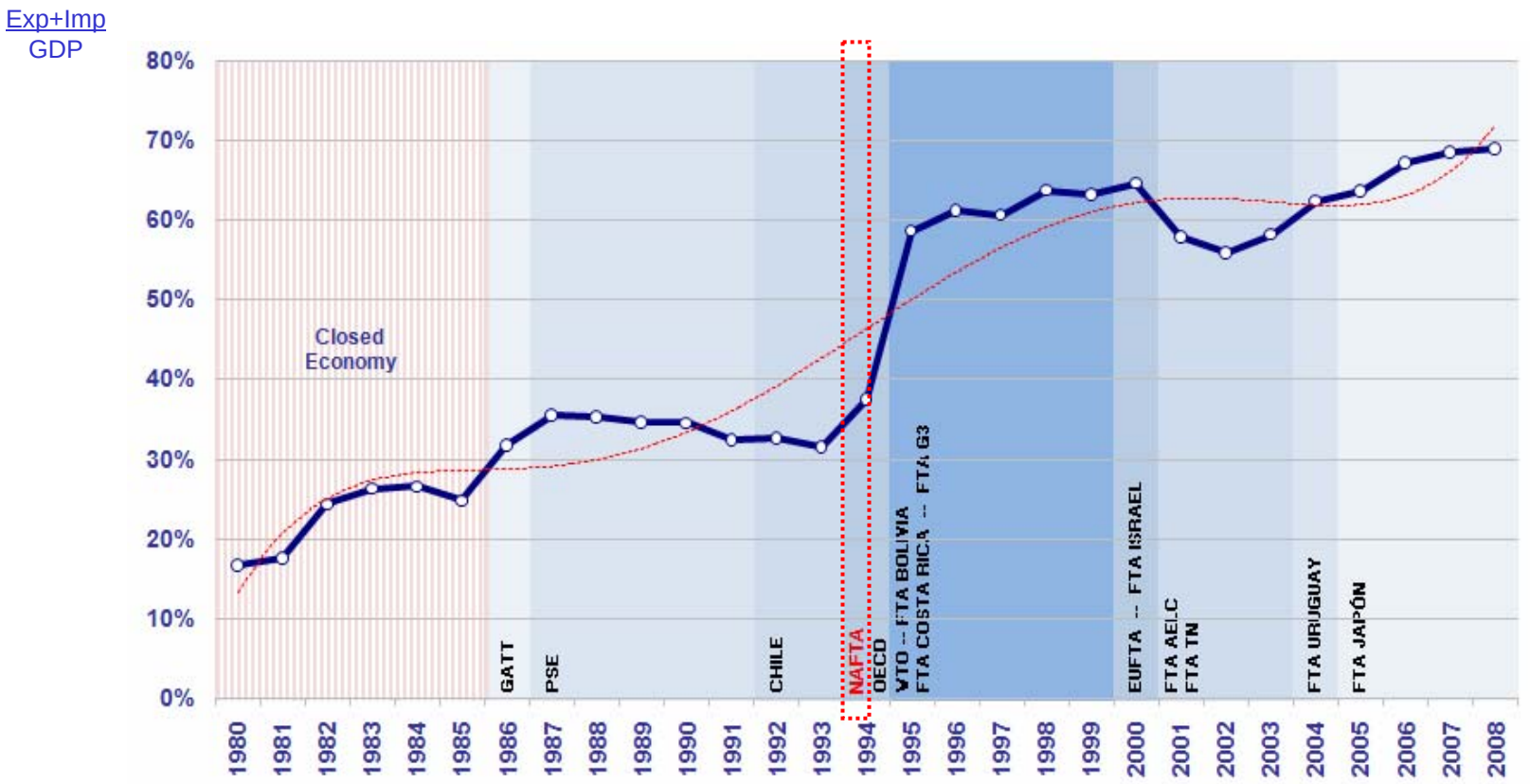
1. NAFTA: Mexican Structural Change
2. The future of NAFTA
3. Final remarks

NAFTA: MEXICAN STRUCTURAL CHANGE

NAFTA: Mexican Structural Change

OPENNESS

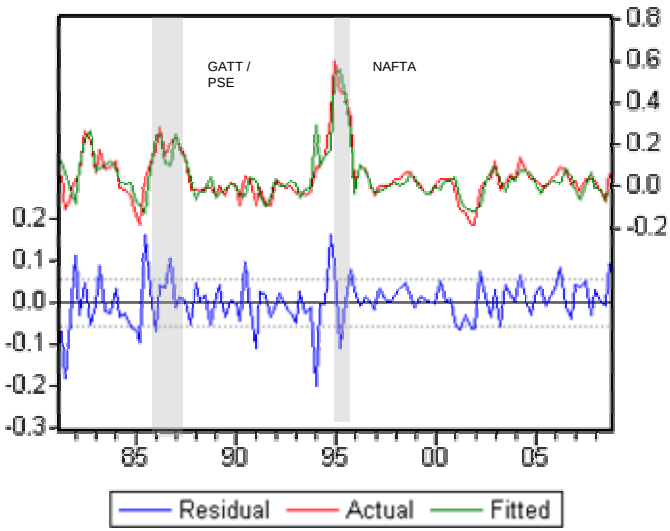
DEGREE OF OPENNESS (% GDP)



Source: SAI Consultores based on information of Banco de México.

NAFTA: Mexican Structural Change

STRUCTURAL CHANGE



Structural Change Test (1st Quarter 1981- 4th Quarter 2008)

Dependent Variable: Annual Variation in Openess Rate

Variable	Coefficient	Std. Error	t-Statistic	Prob.
Dummy 1986,1987* **GATT/PSE**	0.0802023	0.0396119	2.0246999	0.0454124
Dummy 1994,1995** **NAFTA**	**0.2759821**	0.0314019	**8.7887128**	**0.0000000**
Dummy 2000,2001*** **EUFTA**	0.0186134	0.0314871	0.5911437	0.5556826
AR(1)	0.8518354	0.0592698	14.3721561	0.0000000
MA(4)	-0.9469394	0.0184449	-51.3386874	0.0000000

AR(1), MA(1) and MA(4) are smoothing regressing variables used to capture the short term dynamics and to correct for autocorrelation.

* Dummy variable for 1986,1987 is one for those years and zero for all others. → The statistical significance of this value suggests that Mexico's entry into the GATT as well as the "Pacto de Solidaridad Económica" delivered a structural change in Mexico's trade volume.

** Dummy variable for 1994,1995 is one for those years and zero for all others. → This value being significant suggests a structural change in Mexico's trade volume, due to Mexico's entry into NAFTA (its impact is higher than Mexico's entry into the GATT and PSE).

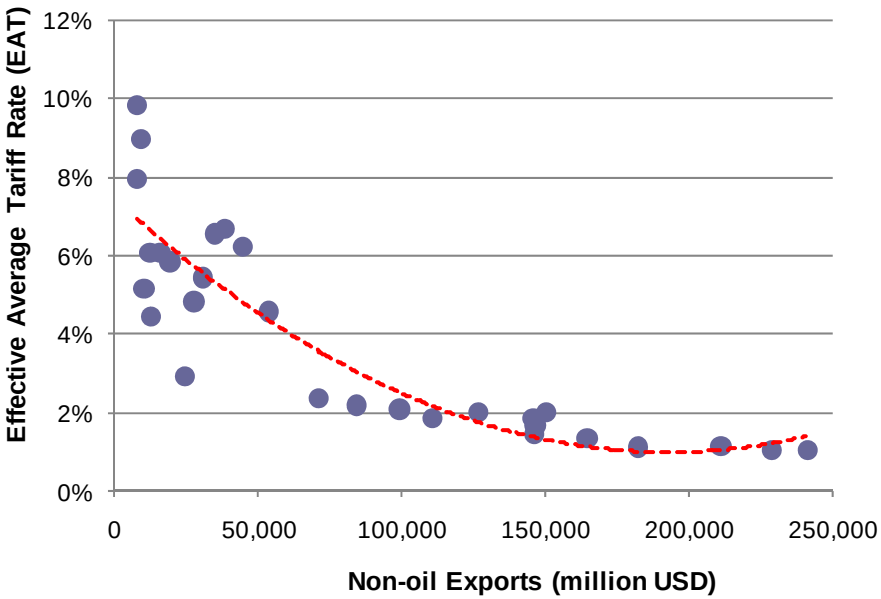
** Dummy variable for 2000,2001 is one for those years and zero for all others. → Since this value is not significant, there is no evidence for a structural change in Mexico's trade volume due to Mexico's Free Trade Agreement with the EU (TLCEUM).

Source: SAI Consultores.

Relative Price Correction for Importable and Exportable Goods

- Exports have been increasing as tariff rates taxes have been reduced.

IMPACT OF TARIFF RATES ON NON-OIL EXPORTS, 1980-2008



Estimation by OLS to explain non-oil exports, (1980-2008)

Dependent Variable: Non-oil exports annual variation

Variable	Coefficient	Std. Error	t-Statistic	Prob.
US GDP annual variation	**1.868373**	0.330060	**5.660716**	0.000007
EAT* annual variation	**-0.144472**	0.070790	-2.040847	**0.051958**
Exchange Rate (peso / dollar) annual rate	0.017465	0.058300	0.299580	**0.766974**

The impact of the EAT* on non-oil exports is negative and significant.

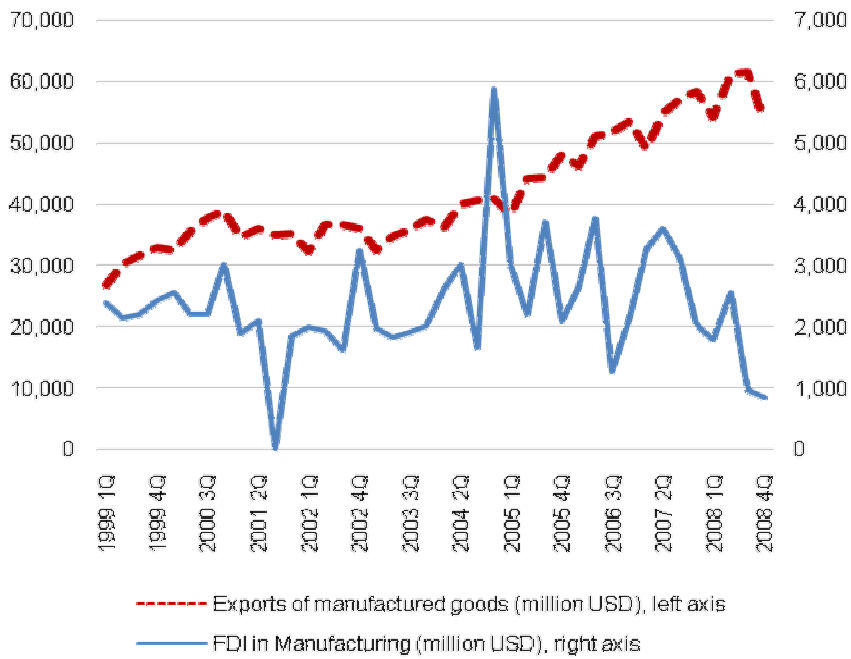
The exchange rate variation is not significant in the evolution of non-oil exports.

* EAT (Effective Average Tariff Rate)

Source: SAI Consultores based on information of Banco de Mexico and U. S. Bureau of Economic Analysis.

Distinctive Features of NAFTA
Foreign Direct Investment Treatment

FDI IN MANUFACTURING AND MANUFACTURED EXPORTS



Granger's Causality Test (1Q 1999-2Q 2008)

Null Hypothesis (delay of 18 months)	Obs	F-Statistic	Probability	
IEDM* does not (Granger) causes ExpM**	25	1.052796	0.440142	→ Hypothesis rejection.
ExpM** does not (Granger) IEDM*	25	5.495214	0.006024	→ Hypothesis acceptance.

*Annual moving average of FDI directed to manufacturing with a 1.5 years delay.
**Annual moving average of exports coming from manufacturing.
Source: SAI Consultores based on information of Banco de México.

THE FUTURE OF NAFTA

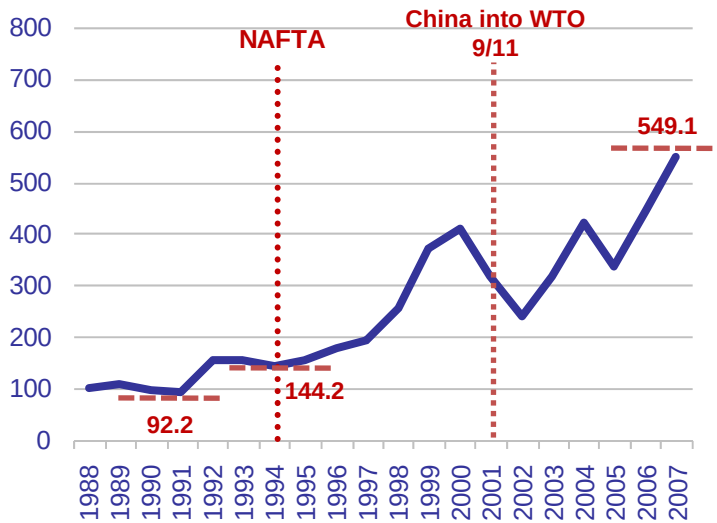
Premise 1. Integration and Macroeconomic Convergence

Premise 1

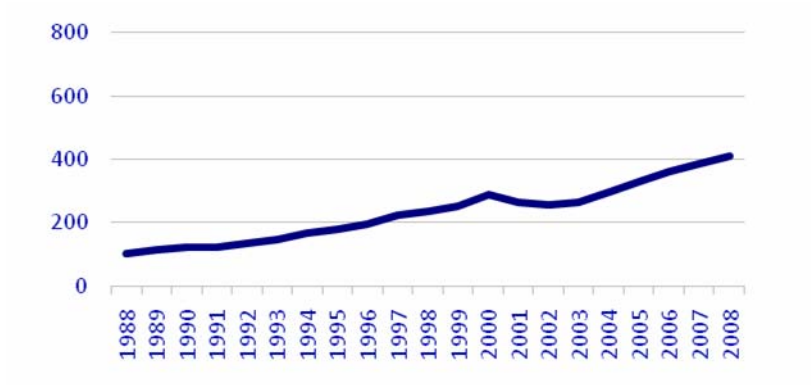
- Since Nafta's inception, intraregional trade and investment, macroeconomic convergence and economic cycle synchronization have increased.

Premise 1. Integration

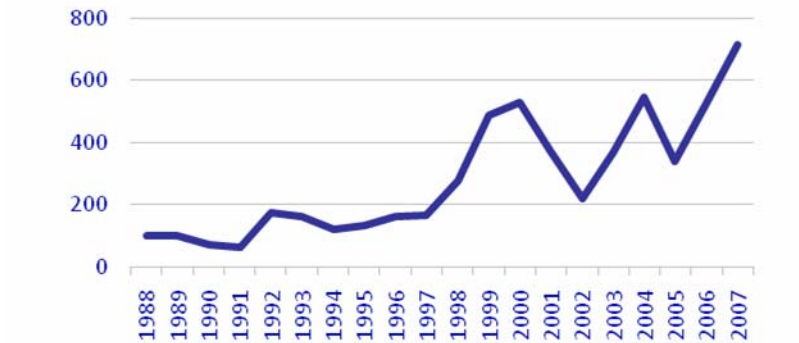
INTRA NAFTA TRADE & INVESTMENT INDEX[1/ 2/] (1988=100)



NAFTA TRADE INDEX[1/] (BASE = 1988)



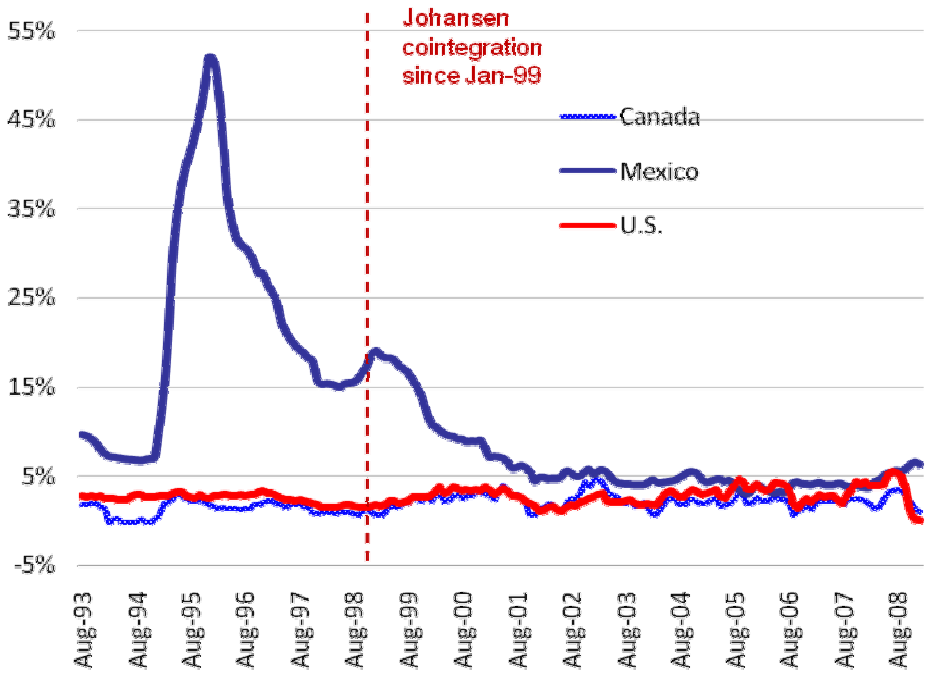
NAFTA FDI INDEX[1/ 2/] (BASE = 1988)



1/ Trade Index: Index of the weighted average of trade (exports+imports) between Canada , Mexico and the U.S.
FDI Index: Index of the weighted average of FDI in Mexico ,Canada and the U.S., from a NAFTA country.
Integration Index: Average of trade index and FDI index, where Trade Index is the index of the weighted average of trade (exports+imports) between Canada, Mexico and the U.S., and FDI Index is the index of the weighted average of FDI in Mexico, Canada and the U.S., from a NAFTA country.
2/ Updated to 2007 using the latest information on FDI available.
Source: SAI Consultores with data from INEGI, Banco de México, Secretaría de Economía, US Census Bureau, US BEA and Statistics Canada.

Premise 1. Macroeconomic Convergence

ANNUAL INFLATION RATE



Johansen's Co-integration Test

Jan-1980 – Dec-1998

Series: Inflation in Mexico, Canada and the United States.

Eigenvalue	LikeliHood Ratio	5% Critical Value	1% Critical Value	No. of Cointegrating Coefficients
0.085738	27.98231	29.68	35.65	**None**
0.042787	11.21996	15.41	20.04	**At most 1**
0.016139	3.042664	3.76	6.65	**At most 2**

Jan-1999 – Dec-2008

Series: Inflation in Mexico, Canada and the United States.

Eigenvalue	LikeliHood Ratio	5% Critical Value	1% Critical Value	No. of Cointegrating Coefficients
0.202799192	48.69601878	29.68	35.65	**None ****
0.126095153	21.49817758	15.41	20.04	**At most 1 ****
0.043397849	5.324123948	3.76	6.65	**At most 2 ***

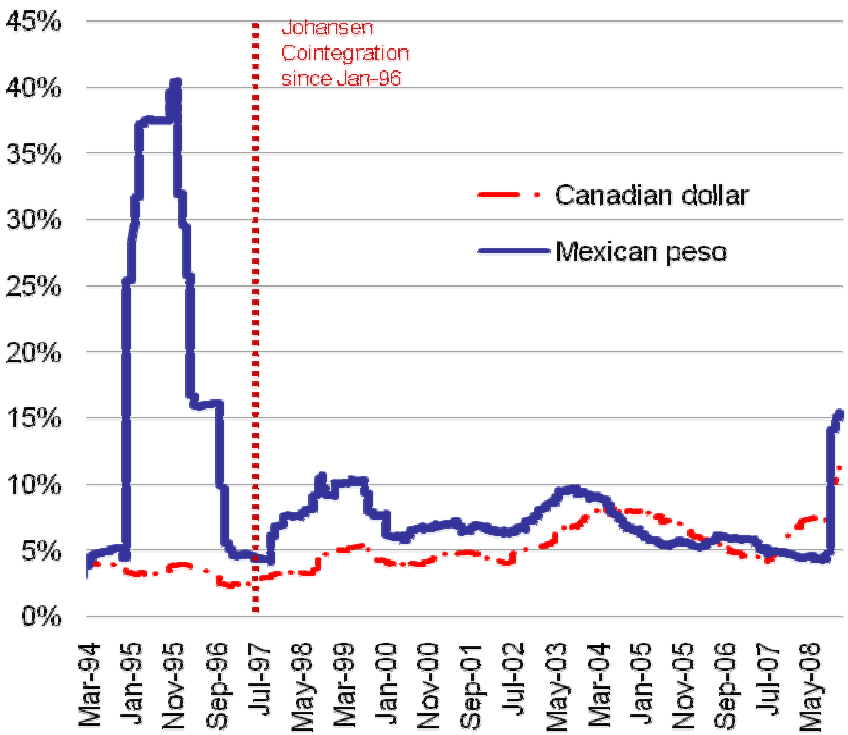
*Indicates rejection of null hypothesis with 5% significance
** Indicates rejection of null hypothesis with 1% significance

The econometric analysis shows that co-integration in terms of inflation from Mexico, U.S.A. and Canada does exist since 1999. There is a long term relationship.

*Johansen test for cointegration determines the existence of one or more stable linear combinations among different time series. This existence means a long-run relationship between series.
Source: SAI Consultores with INEGI's information.

Premise 1. Macroeconomic Convergence

EXCHANGE RATE VOLATILITY VS USD



Johansen Cointegration Test

Jan-1994 – Dec-1997

Series: Exchange Rate (canadian dollars/USD and mexican peso/USD) volatility series.

Eigenvalue	LikeliHood Ratio	5% Critical Value	1% Critical Value	No. of Cointegrating Coefficients
0.002846	4.764715	15.41	20.04	**None**
0.000416	0.606961	3.76	6.65	**At most 1**

Jan-1996– Dec-2008

Series: Exchange Rate (canadian dollars/USD and mexican peso/USD) volatility series.

Eigenvalue	LikeliHood Ratio	5% Critical Value	1% Critical Value	No. of Cointegrating Coefficients
0.011059941	44.24307839	15.41	20.04	**None ****
0.000319581	1.236017612	3.76	6.65	At most 1

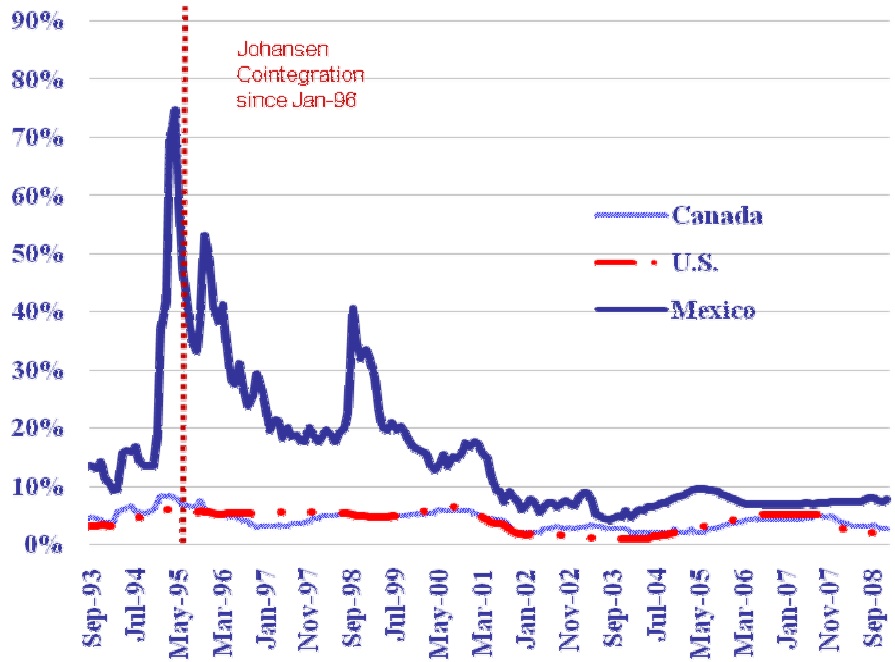
* Indicates rejection of null hypothesis with 5% significance
** Indicates rejection of null hypothesis with 1% significance

The econometric analysis shows that co-integration of the exchange rate volatility of Mexico and Canada with respect to the US does exist since 1997. There is a long term relationship.

Source: SAI Consultores with information from *www.oanda.com*

Premise 1. Macroeconomic Convergence

SHORT-TERM INTEREST RATES



Johansen Cointegration Test

Jan-1994 -Jan-1997

Series: Interest Rates in Mexico, Canada and the United States.

Eigenvalue	LikeliHood Ratio	5% Critical Value	1% Critical Value	No. of Cointegrating Coefficients
0.402027878	26.2980348	29.68	35.65	**None**
0.169915145	7.272222457	15.41	20.04	**At most 1**
0.010266144	0.381810569	3.76	6.65	**At most 2**

Jan-1996-Dec-2008

Series: Interest Rates in Mexico, Canada and the United States.

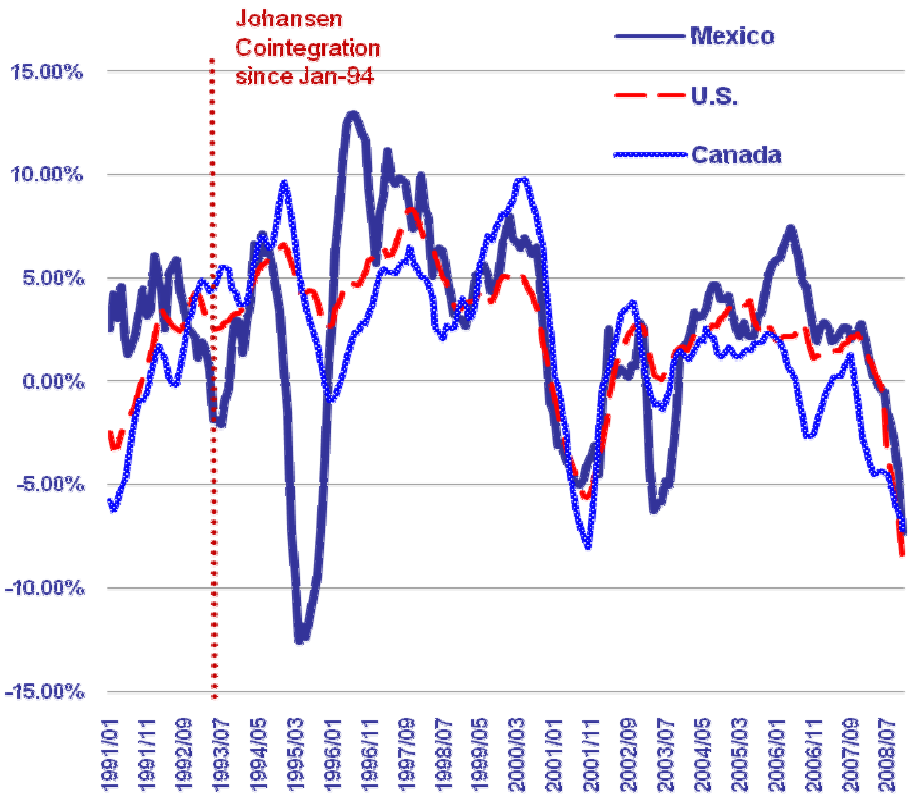
Eigenvalue	LikeliHood Ratio	5% Critical Value	1% Critical Value	No. of Cointegrating Coefficients
0.128128846	37.00863431	29.68	35.65	**None ****
0.072141931	16.44159046	15.41	20.04	**At most 1 ***
0.034137798	5.210115377	3.76	6.65	**At most 2 ***

The econometric analysis shows that co-integration of short-term interest rates of Mexico, U.S. and Canada does exist since 1996. There is a long term relationship.

Source: SAI Consultores with information from INEGI, Federal Reserve System, Bank of Canada.

Premise 1. Economic Cycle Synchronization

INDUSTRIAL PRODUCTION (ANNUAL CHANGE, 3M M.A.)



Johansen's Co-integration Test

Jan-1980 – Dec-1993

Series: Log(U.S. Industrial Production Index) and Log(Mexican Industrial Production Index)

Eigenvalue	LikeliHood Ratio	5% Critical Value	1% Critical Value	No. of Cointegrating Coefficients
0.025110645	4.239760518	15.41	20.04	**None**
0.000579336	0.094459202	3.76	6.65	**At most 1**

Jan-1994 – Dec-2008

Series: Log(U.S. Industrial Production Index) and Log(Mexican Industrial Production Index)

Eigenvalue	LikeliHood Ratio	5% Critical Value	1% Critical Value	No. of Cointegrating Coefficients
0.078007605	21.4226189	15.41	20.04	**None ****
0.037090882	6.80332412	3.76	6.65	**At most 1 ****

* Indicates rejection of null hypothesis with 5% significance
** Indicates rejection of null hypothesis with 1% significance

The econometric analysis shows that co-integration of the industrial production indexes of Mexico and the U.S. does exist since 1994. There is a long term relationship.

Source: SAI Consultores with information from INEGI, OCDE

Premise 2. Proliferation of trade agreements

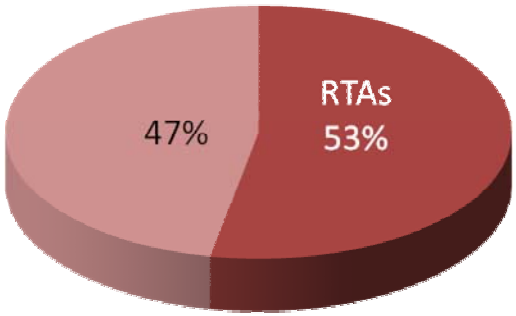
Premise 2

- The proliferation of Regional Trade Agreements, the increase in transportation cost, the introduction of import and export restrictions and the failure of the Doha Round are giving raise to a regional autarky, favoring regional trade flows over global ones.

Premise 2. Proliferation of trade agreements

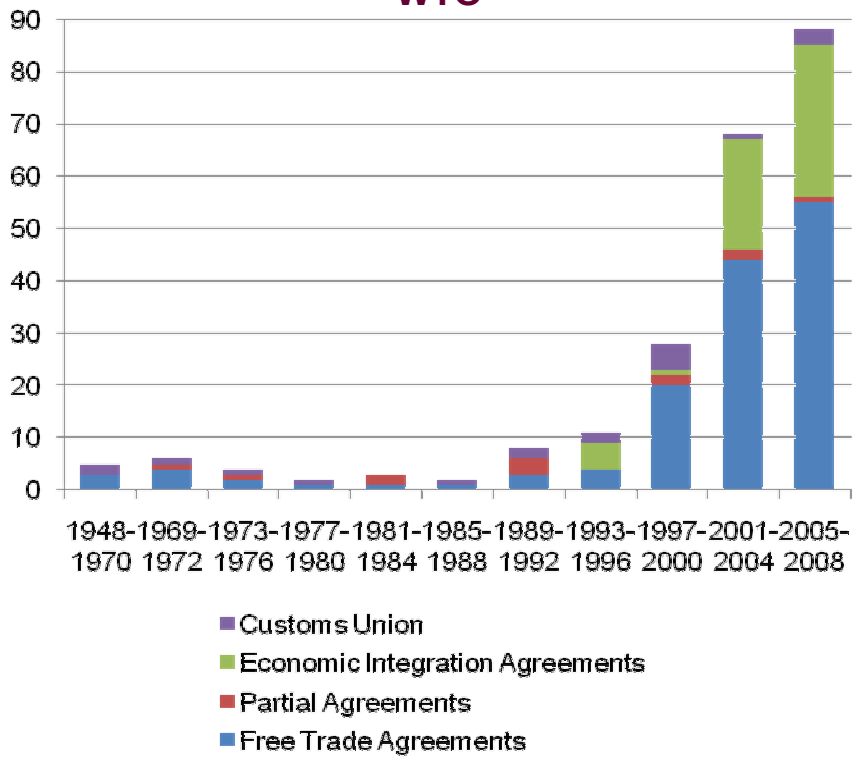
WORLD TRADE

A ROUGH ESTIMATE OF WORLD TRADE WITHIN REGIONAL TRADE AGREEMENTS (RTAS*)



*As of today, 88 RTAs have been notified to the WTO.

TRADE AGREEMENTS NOTIFIED BEFORE THE WTO

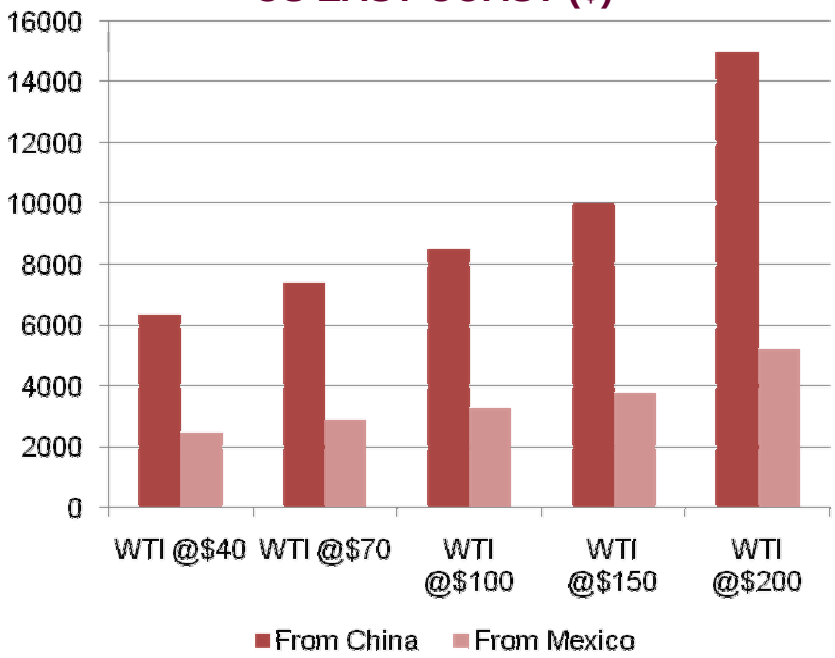


Source: SAI Consultores based on WTO.

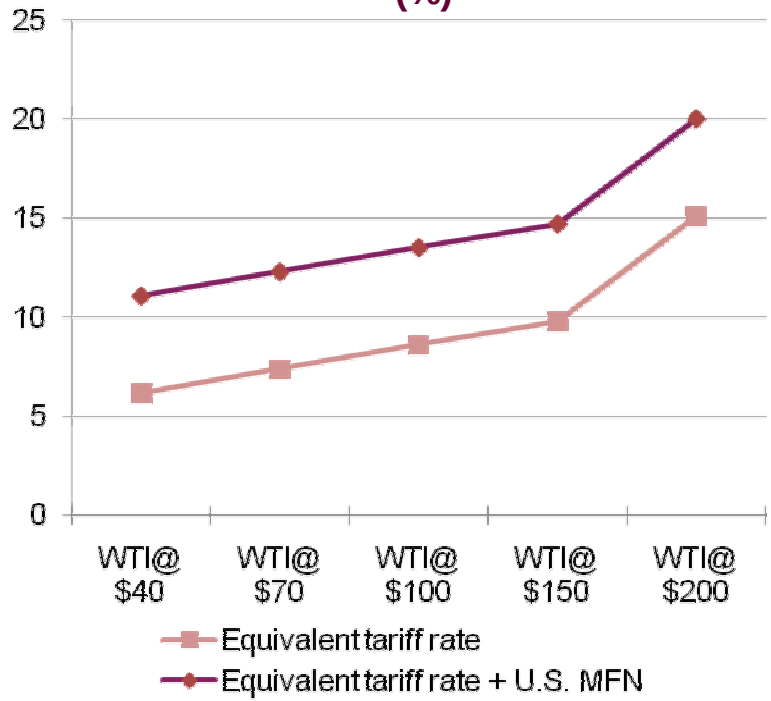
Premise 2. Transportation Costs

IMPACT OF TRANSPORTATION COSTS

COST OF SHIPPING A 40' CONTAINER TO US EAST COAST ($)



EQUIVALENT TARIFF RATE (%)



The difference between costs is translated into equivalent tariff rates

Source: SAI Consultores based on Rubin and Tal, Will Soaring Transport Costs Reverse Globalization?, CIBC World Markets Inc., May 27, 2008

Premise 2. Import Restrictions

IMPORT RESTRICTIONS
(SELECTED EXAMPLES)

Country	Restriction
Argentina	Imposed a large number of new non-automatic licenses and set more than 1,000 new criterion values that lead into an increase of 35% in entrance price for the products imported.
Brazil	Set non-tax restrictions on 60% of total imports.
United States	US Government set a time line for all 2009 in which a large variety of goods will be subject to more control, among these are: paper, oilseeds, tools, weapons, toys, pencils and even products containing cork. The "Buy American" provision, set in the **American Recovery and Reinvestment Act of 2009**, prohibits the use of public funds for a project for the construction, alteration, maintenance, or repair of a public building or public work unless all of the iron, steel, and manufactured goods used in the project are produced in the United States; this provision shall be applied in a manner consistent with United States obligations under international agreements. The US set a labeling rule (cool) establishing that only agricultural products that are fully produced in the US at all production stages can be labeled as American.
Ecuador	Ecuador raised import taxes from 5 % to 20% for a 940 products list since November 2008, the product list covers products from lard to mobile phones, including spectacles and transport equipment.
Some Asian countries	Since middle 2008, China, India, Indonesia and other Asian countries apply restrictions to steel, footwear, textile, toys, home appliances and agro-food products.

Import Restrictions
+
Other measures

Source: SAI Consultores based on international sources.

Premise 2. Export Restrictions

EXPORT RESTRICTIONS (SELECTED EXAMPLES)

Country	Restriction imposed
Argentina	Imposed new tariffs on soy bean exports and wheat and set a quota on meat exports (2008).
Bangladesh	Banned rice exports (2008) for 6 months starting on May 2008.
China	Imposed tariffs on several exports: Rice, some grains, coke, steel (2007).
Ecuador	Banned rice exports (2008).
Egypt	Banned rice exports (2008).
Guinea	Banned the export of all agricultural commodities, forestry and livestock as well as oil and timber (2008).
India	Banned “non-basmati” rice and corn exports until October 15, 2008.
Indonesia	Imposed quantitative restrictions on the export of medium-grade rice (2008).
Kazakhstan	Imposed taxes on wheat and on oil exports (2008).
Malawi	Banned corn exports (2008).
Russia	Imposed tariffs on wheat exports (2007).

Weak WTO disciplines on export restrictions
+
Failure of Doha Round

Source: SAI Consultores based on international sources.

Premise 3 . Complementarities in Factor Endowments

Premise 3

- There is a large degree of complementarity in North American factor endowments (US-Canada capital abundant, Mexico labor abundant) that favors further economic integration of the region.

Premise 3 . Complementarities in Factor Endowments

- NAFTA takes care of capital mobility under Chapter 11.

NAFTA's Chapter 11

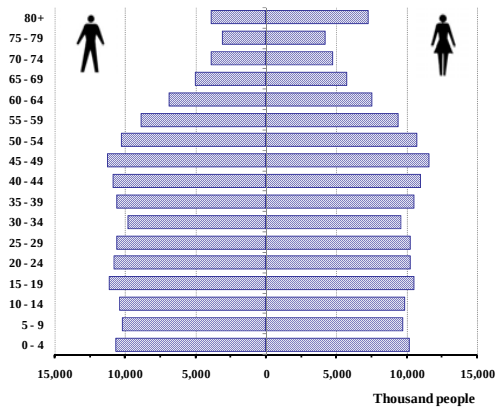
- National treatment
- Most Favored Nation
- Treatment level
- Minimum treatment
- High level direction executives
- Performance Requirements
- Transfers
- Expropriation
- Environmental considerations
- Special formalities and information requirements
- State-owned Enterprises.

However, it does not have any rules for labor mobility.

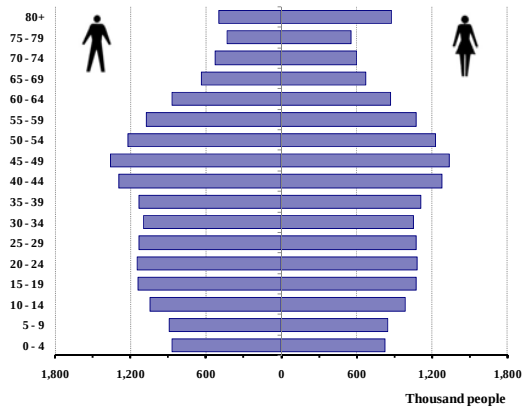
Premise 3 . Complementarities in Factor Endowments

LABOR COMPLEMENTARITY

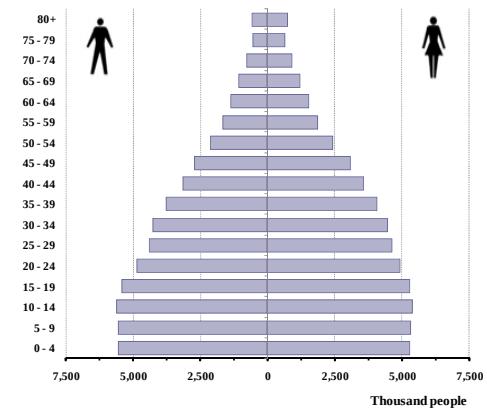
UNITED STATES



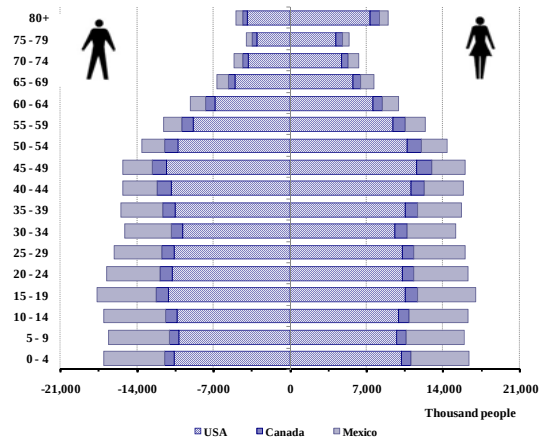
CANADA



MEXICO



NAFTA



DEPENDENCY RATIO 2007

	Young*	Elder**	Total
Mexico	47.03	**9.26**	56.29
USA	30.11	**18.70**	48.81
Canada	24.14	**21.19**	45.32
NAFTA	33.64	**16.67**	50.31

DEPENDENCY RATIO 2025f/

	Young*	Elder**	Total
Mexico	35.53	**14.74**	50.27
USA	32.12	**29.33**	61.45
Canada	24.70	**36.42**	61.12
NAFTA	32.50	**25.96**	58.46

*People under 15 / people between 15-64 years old / ** People over 64 / people between 15-64 years old
f/ Forecast
Source: U.S. Census Bureau, International Data Base

Conjecture

Conjecture

- The momentum in intraregional trade and investment/macroeconomic convergence/cycle synchronization in NAFTA (Premise 1), the regionalization of global trade (Premise 2), and the factor endowment complementarity (Premise 3) point towards further integration of the North American region.

FINAL REMARKS

Final Remarks

Summary

1. Economic integration in North America will naturally continue.
2. The 2008-09 financial crisis will slow it down but not stop it.
3. The welfare gains of this integration will depend fundamentally on the new US government policies.

Final Remarks

There are two opposite scenarios:

Pro-free trade policies (Examples)		Protectionist policies (Examples)
Higher welfare gains		Lower welfare gains
• Comprehensive Migration Agreement	vs	• Border walls and watered-down migration arrangements
• Cooperative labor and environmental programs	vs	• Protectionist (trade sanctions) labor and environmental measures
• Common competition regulations (chapter 15)	vs	• Proliferation of dumping cases
• Agricultural complementarity programs (vegetables vs. grains)	vs	• Protectionist and subsidy driven agricultural policies
• Free mobility of trucks and integration of transportation systems	vs	• Violation of NAFTA rules on truck mobility