

Inclusive Growth and Structural Reforms in APEC

Moonsung Kang
(Korea University)

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Introduction: General Backgrounds

- ◆ APEC members have been putting their own efforts in reforming their trade and financial sectors.
- ◆ Simultaneously, APEC itself has been interested in inclusive growth.
 - The main theme of APEC 2019: Connecting People, Building Future
 - Four Agenda
 - Improving connectivity and deepening regional economic integration
 - Sustainable growth
 - Digital society
 - Strengthen inclusive growth through structural reform and by increasing opportunities for women and SMEs

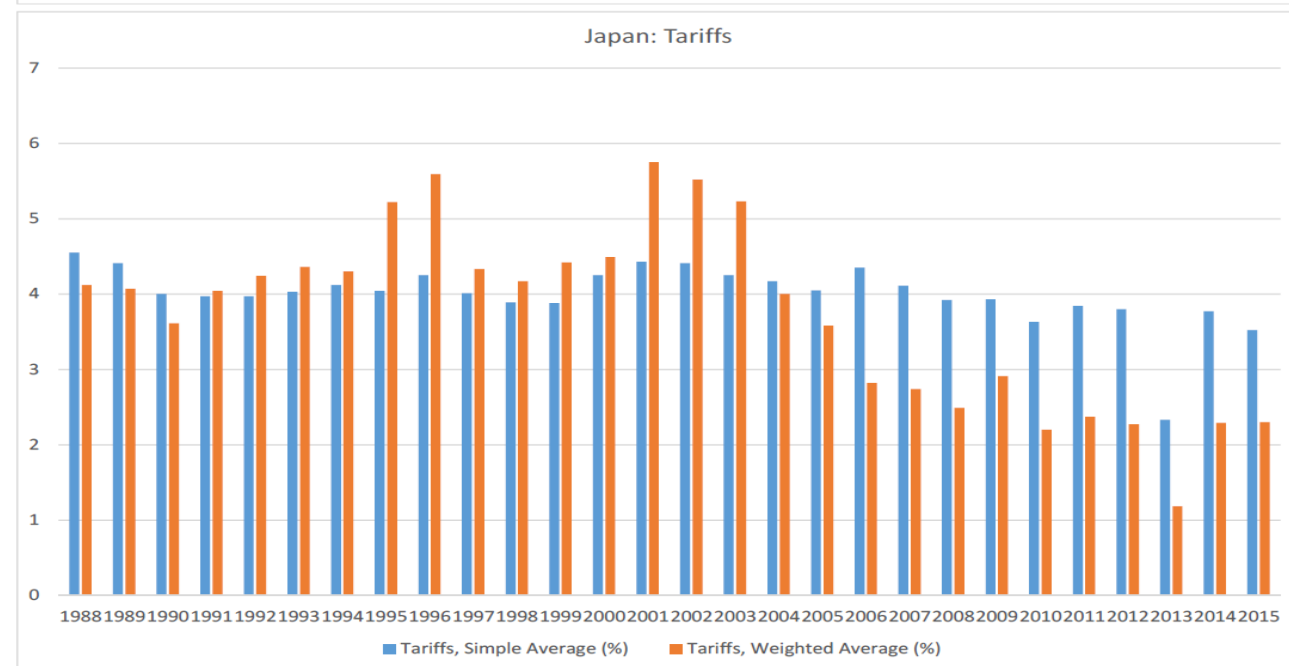
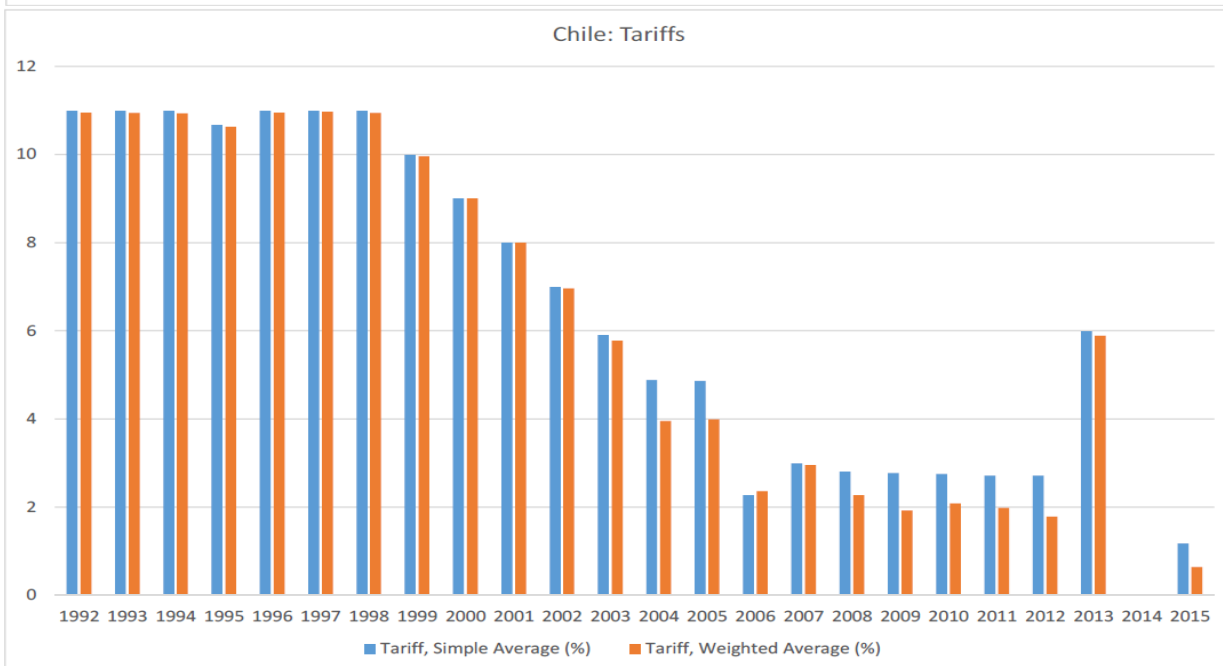
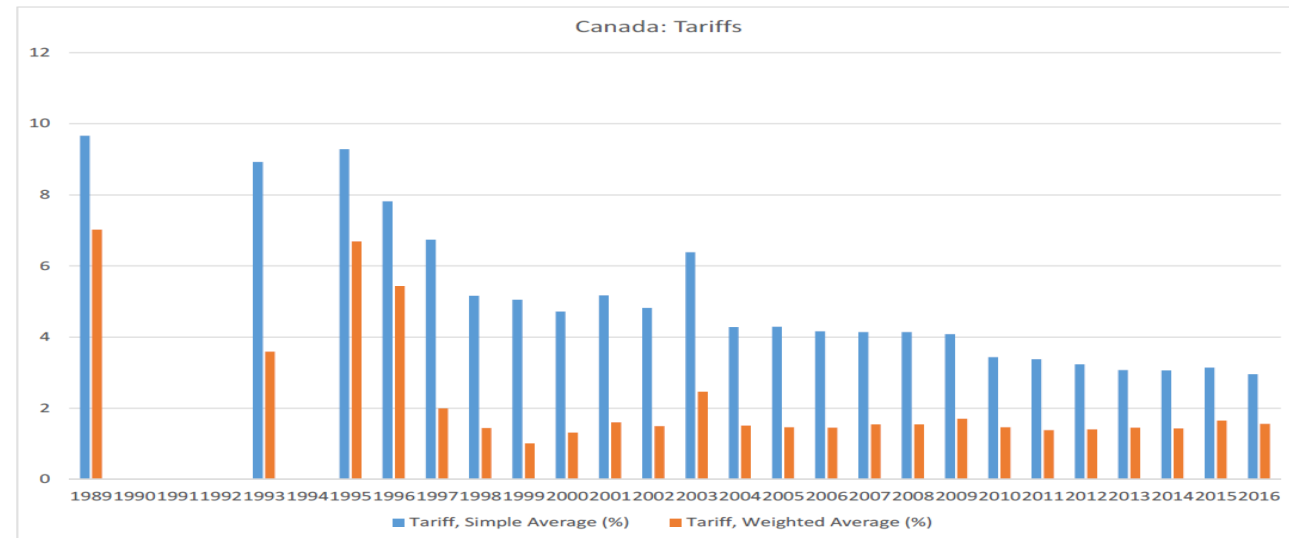
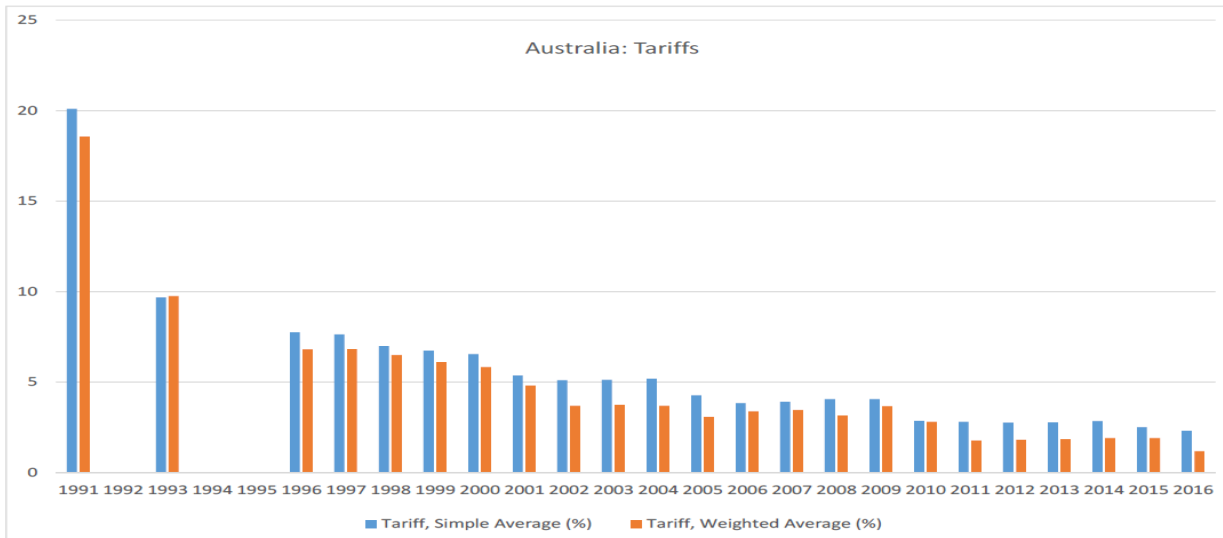
Introduction: Objectives

- ◆ Discuss recent developments in trade and financial liberalization in APEC member economies, and
- ◆ Empirically analyze impacts of their reforms of trade and financial liberalization on inclusive growth in APEC

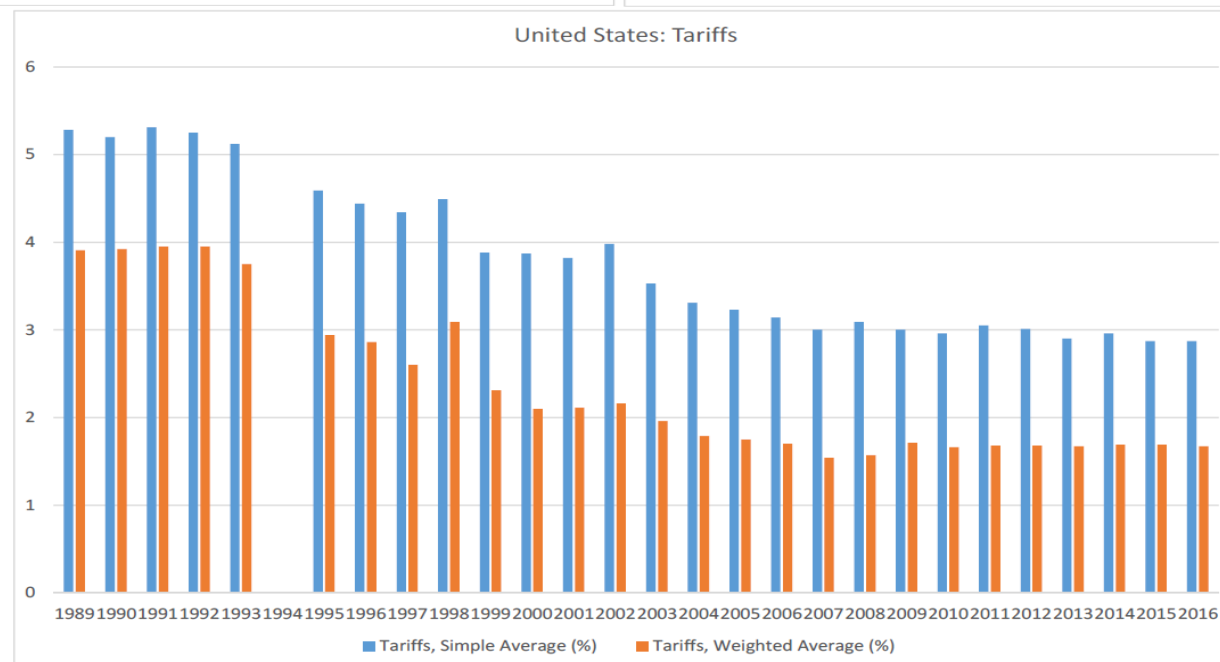
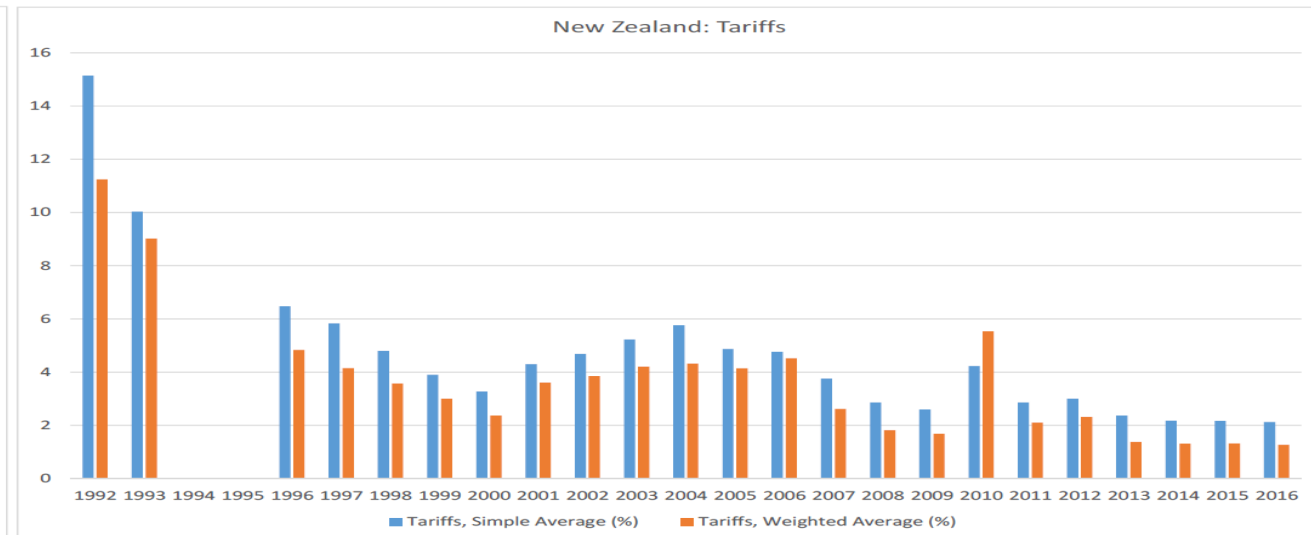
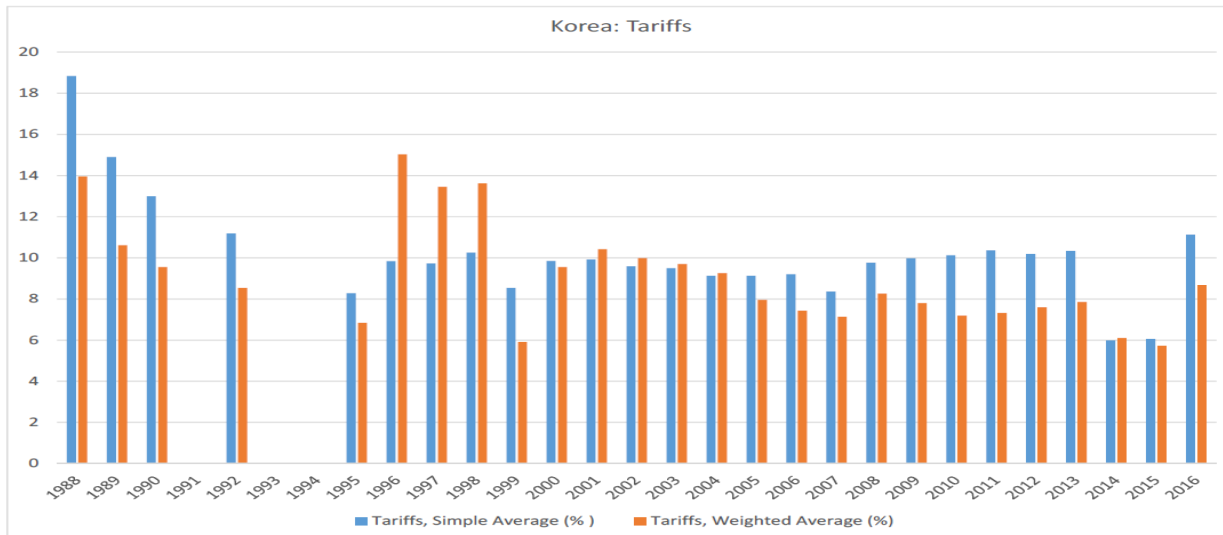
Structural Reforms in APEC: Trade Liberalization

- ◆ APEC Members have been successful in reducing tariffs over time.
 - High-income members have pretty low tariffs:
 - Hong Kong: 0.0% (2016); Singapore: 0.1% (2016); Chile: 0.6%; Australia: 1.2% (2016); New Zealand: 1.3% (2016); Canada: 1.6% (2016); The United States: 1.7% (2016); Japan: 2.3% (2015); Korea: 8.7% (2016)
 - Non-high-income members have been aggressive in reducing tariffs:
 - Peru: 1.8% (2015); Philippines: 2.3% (2015); Indonesia: 2.6% (2016); Vietnam: 2.9% (2016); Thailand: 3.5% (2015); Russia: 3.6% (2016); Malaysia: 4.0%; Mexico: 4.4% (2016); China: 4.5% (2015)
 - This trend is based on the process of the multilateral trade liberalization and unilateral trade reforms of individual members.

Structural Reforms in APEC: Trade Liberalization (cont.)

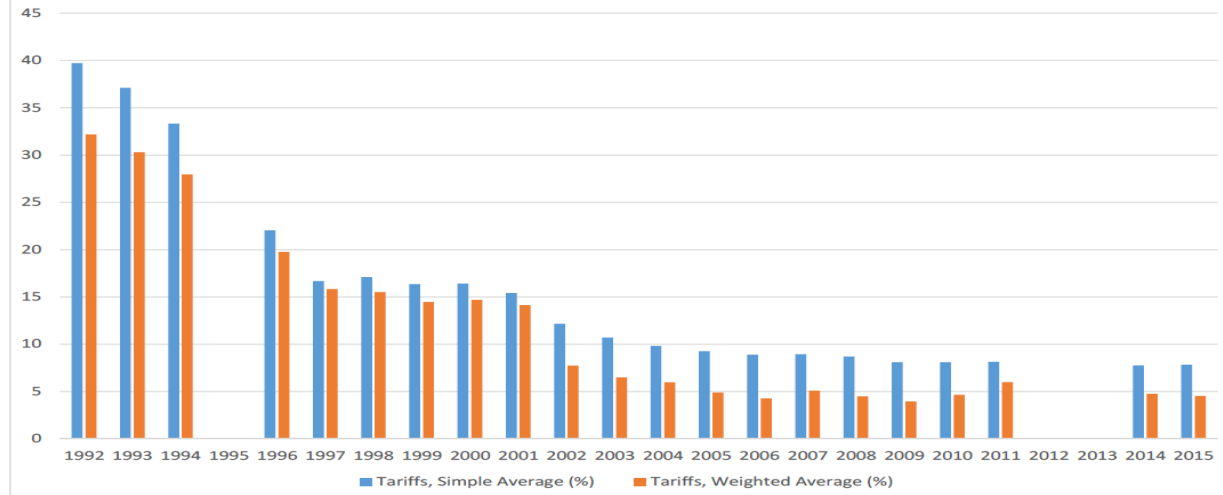


Structural Reforms in APEC: Trade Liberalization (cont.)

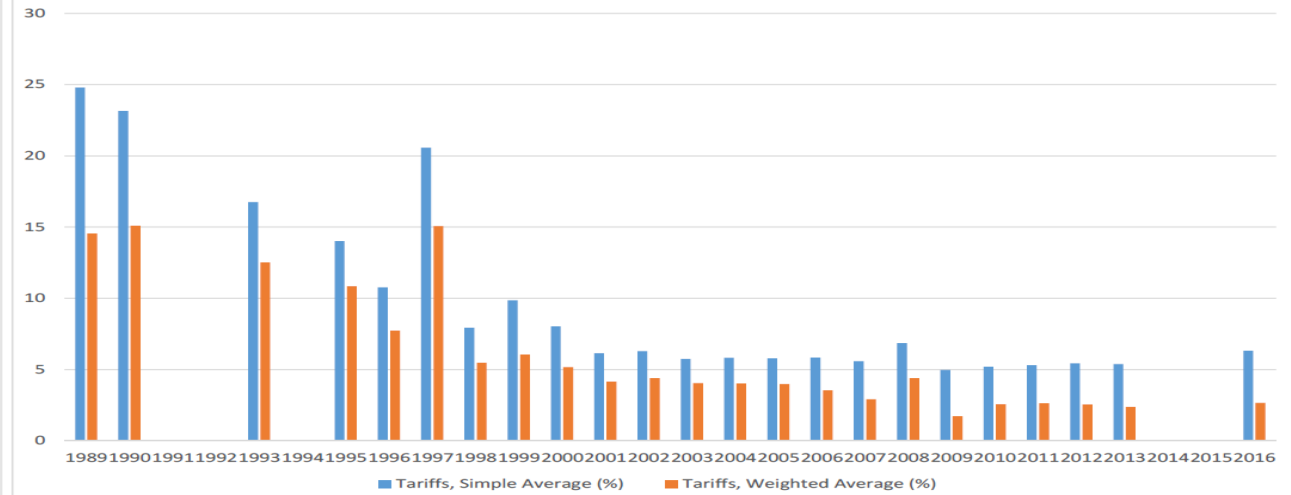


Structural Reforms in APEC: Trade Liberalization (cont.)

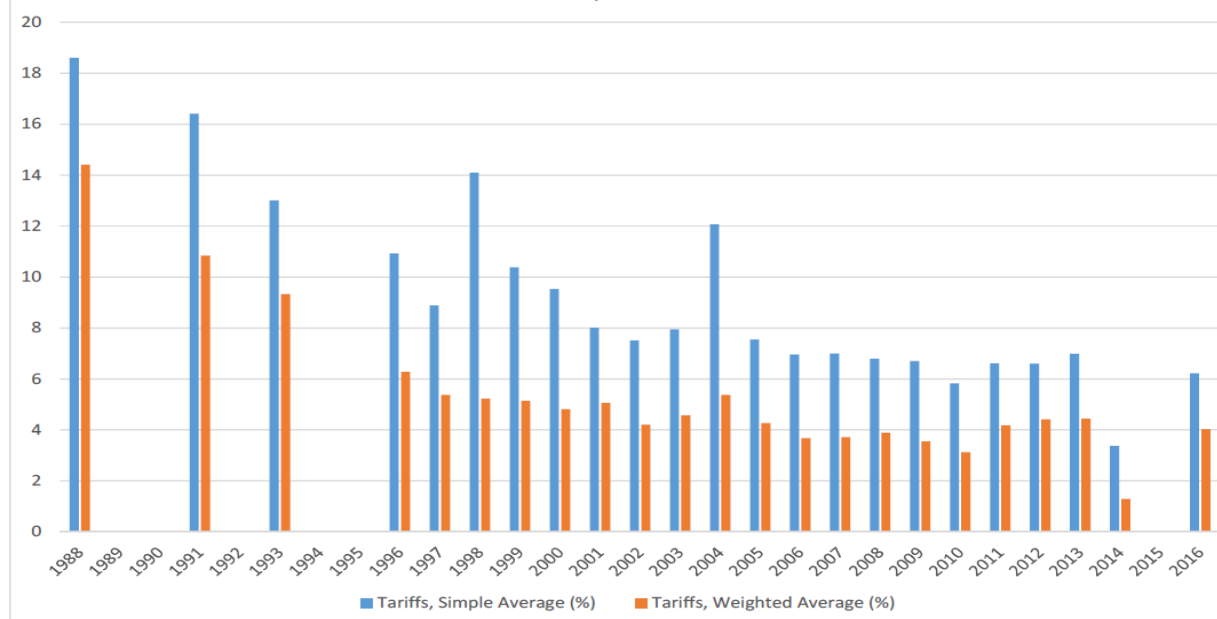
China: Tariffs



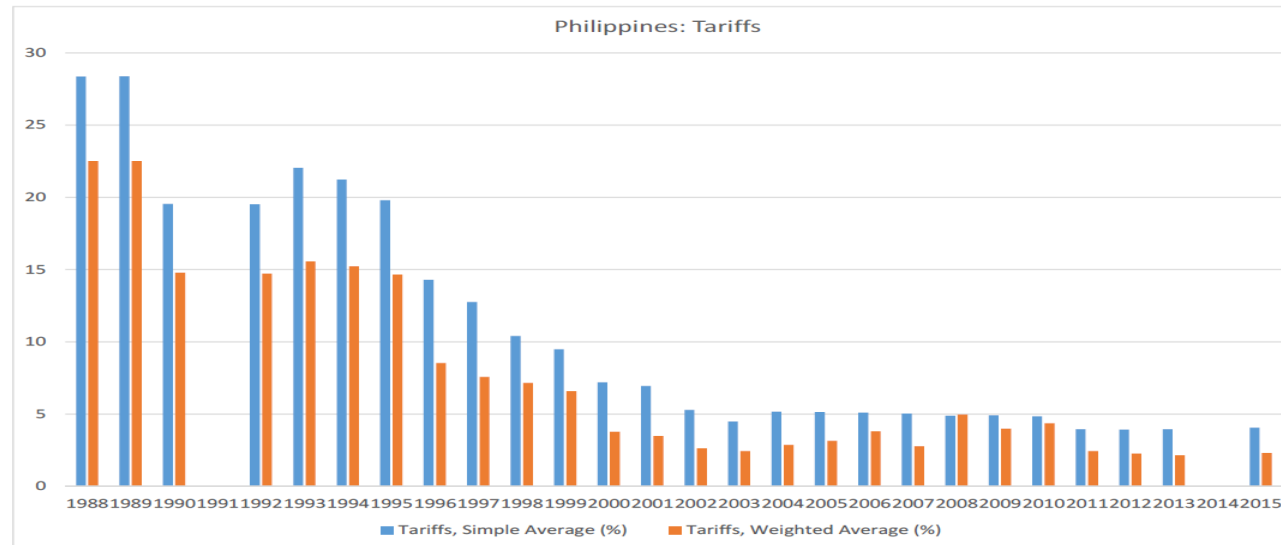
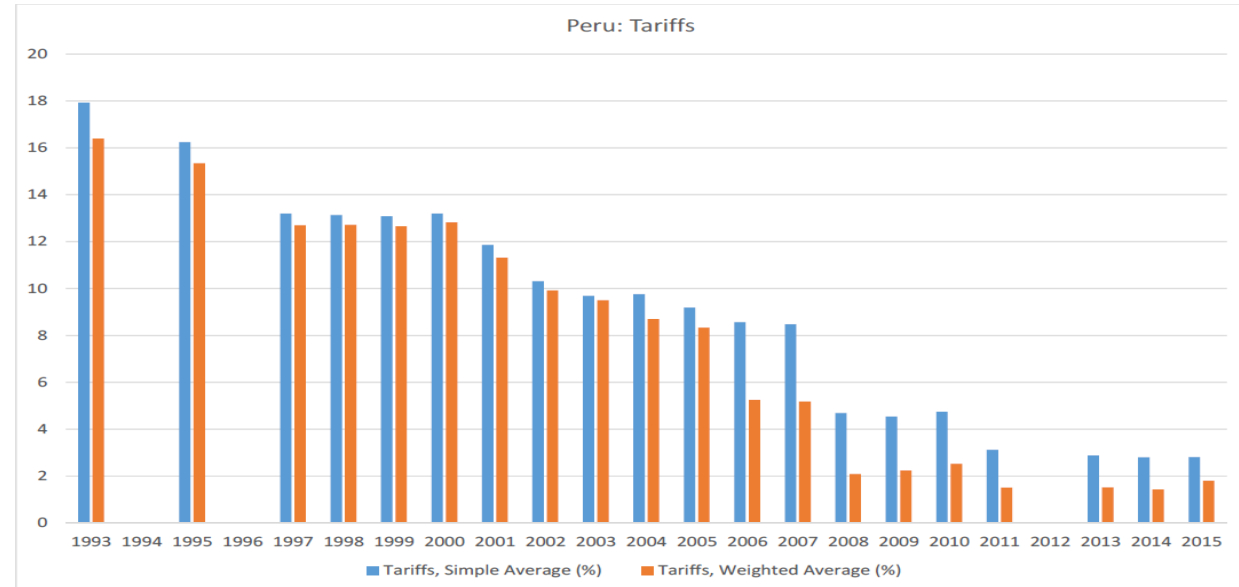
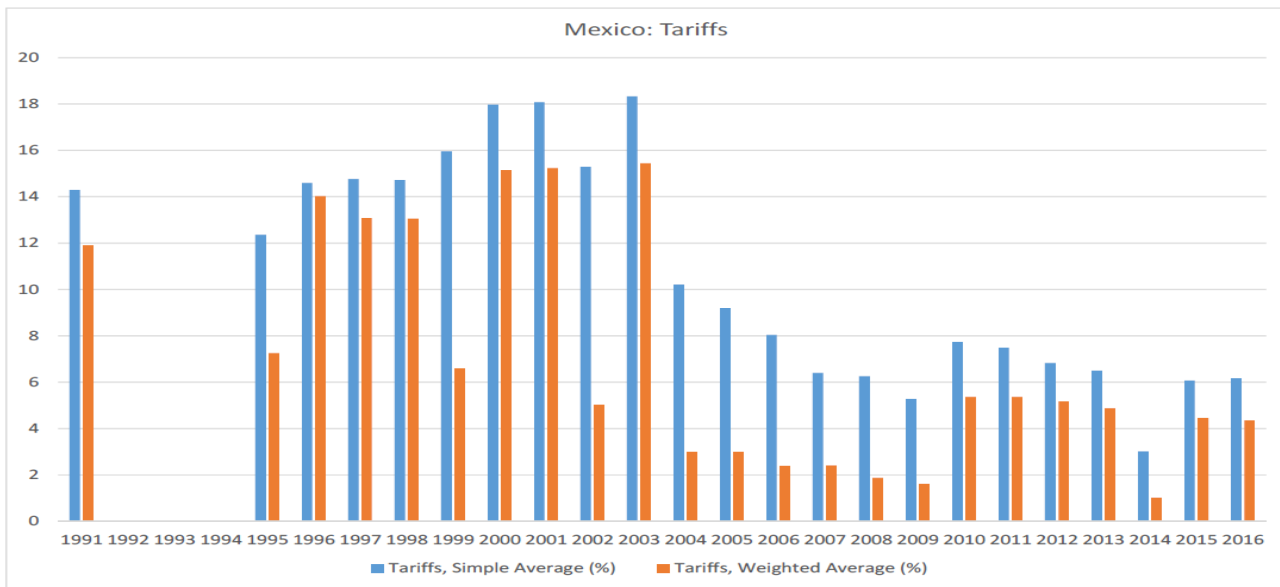
Indonesia: Tariffs



Malaysia: Tariffs

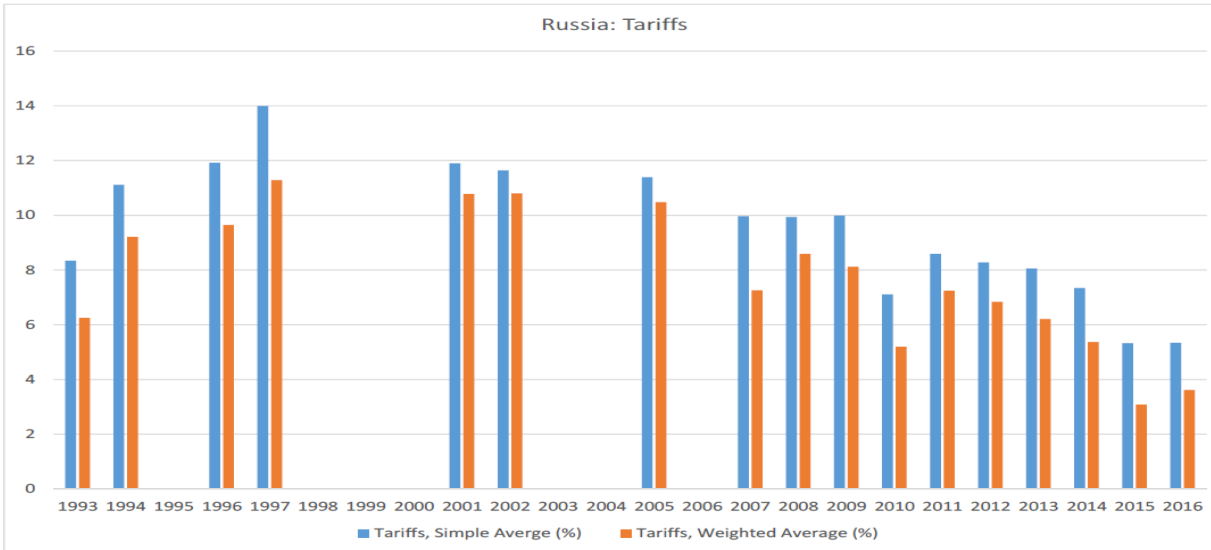


Structural Reforms in APEC: Trade Liberalization (cont.)

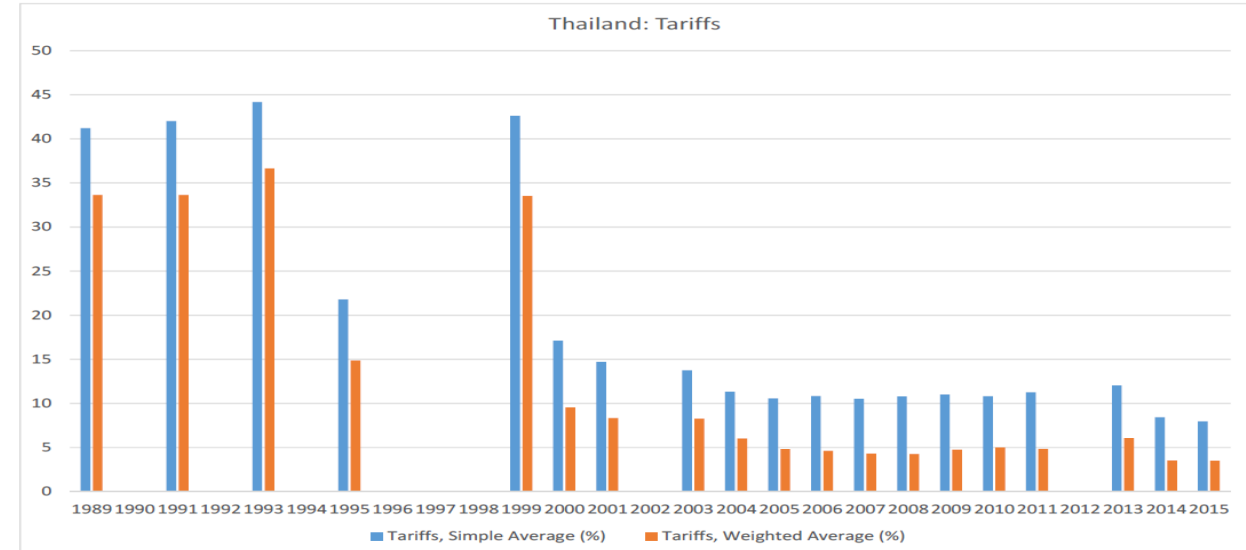


Structural Reforms in APEC: Trade Liberalization (cont.)

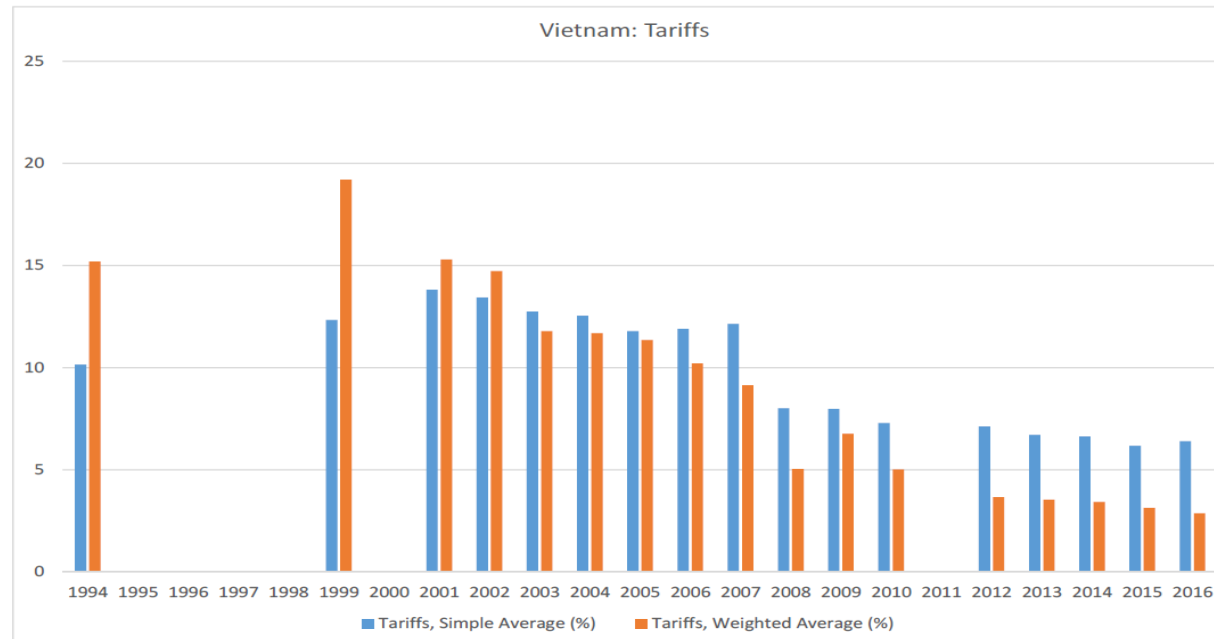
Russia: Tariffs



Thailand: Tariffs



Vietnam: Tariffs

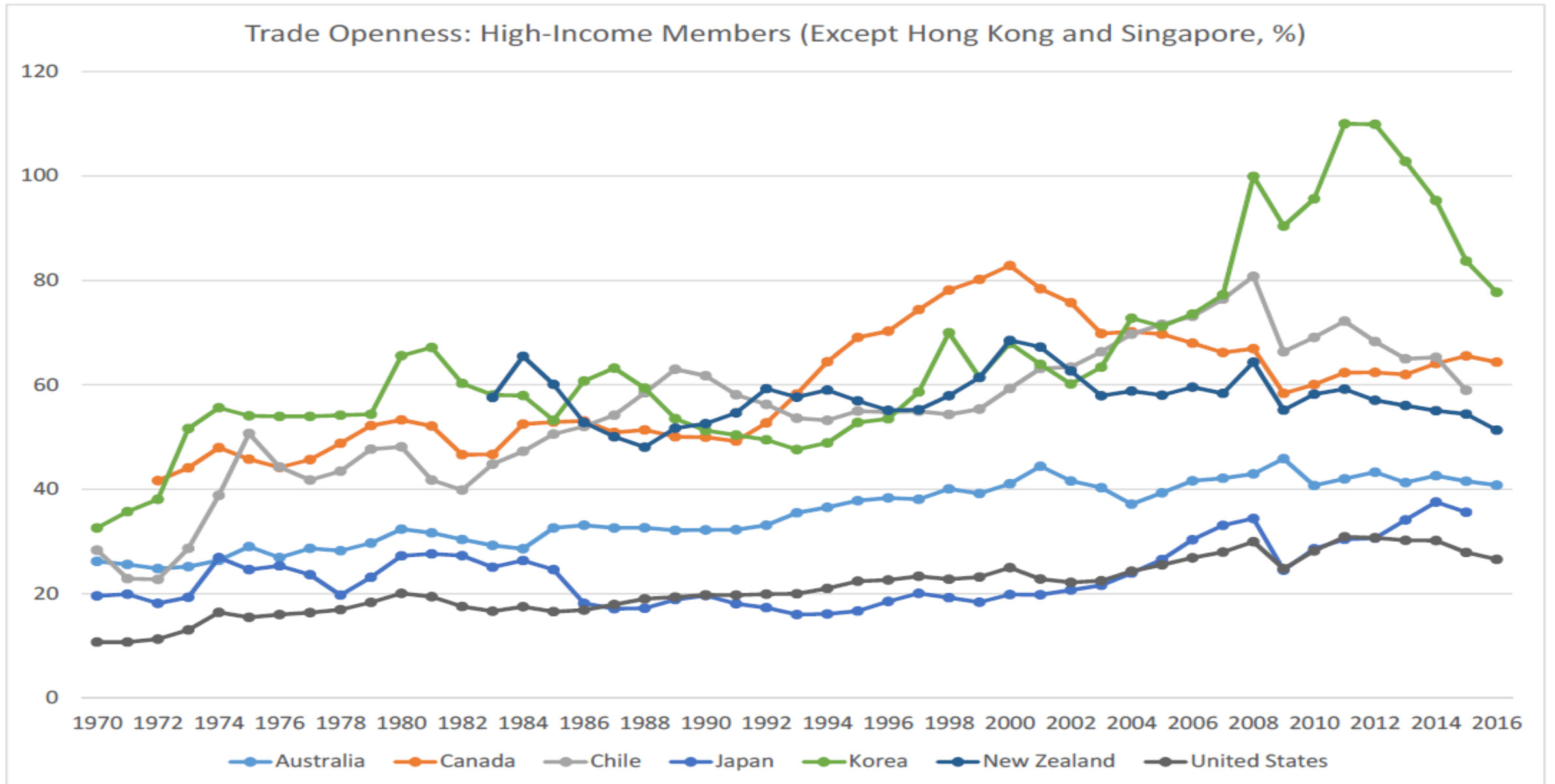


Structural Reforms in APEC: Trade Liberalization (cont.)

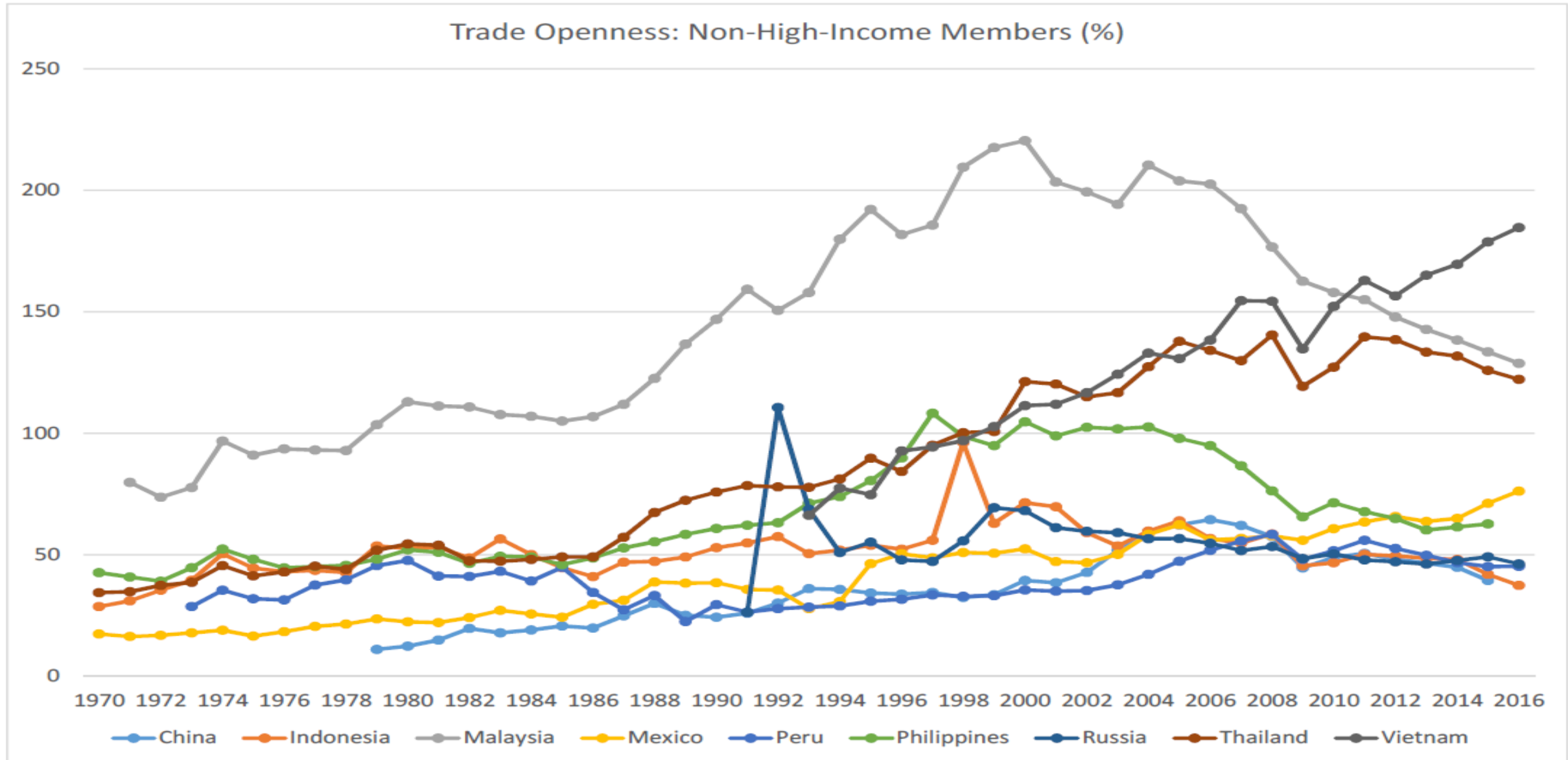
◆ Trade openness of APEC Members has been increasing over time.

- Trade Openness: share of trade (exports + imports) to the total GDP
- High-income members:
 - Hong Kong: 371.7% (2016); Singapore: 310.3% (2016);
 - Korea: 77.7% (2016); Canada: 64.4% (2016); Chile: 59.0% (2015); New Zealand: 51.3% (2016); Australia: 40.8% (2016); Japan: 35.6% (2015); The United States: 26.6% (2016)
- Non-high-income members:
 - Vietnam: 184.7% (2016); Malaysia: 128.8%; Thailand: 122.2% (2016); Mexico: 76.2% (2016); Philippines: 62.7% (2015); Russia: 46.2% (2016); Peru: 45.3% (2016); China: 39.5% (2015); Indonesia: 37.4% (2016)
- This trend is based on development of Global Value Chains (GVCs).

Structural Reforms in APEC: Trade Liberalization (cont.)



Structural Reforms in APEC: Trade Liberalization (cont.)

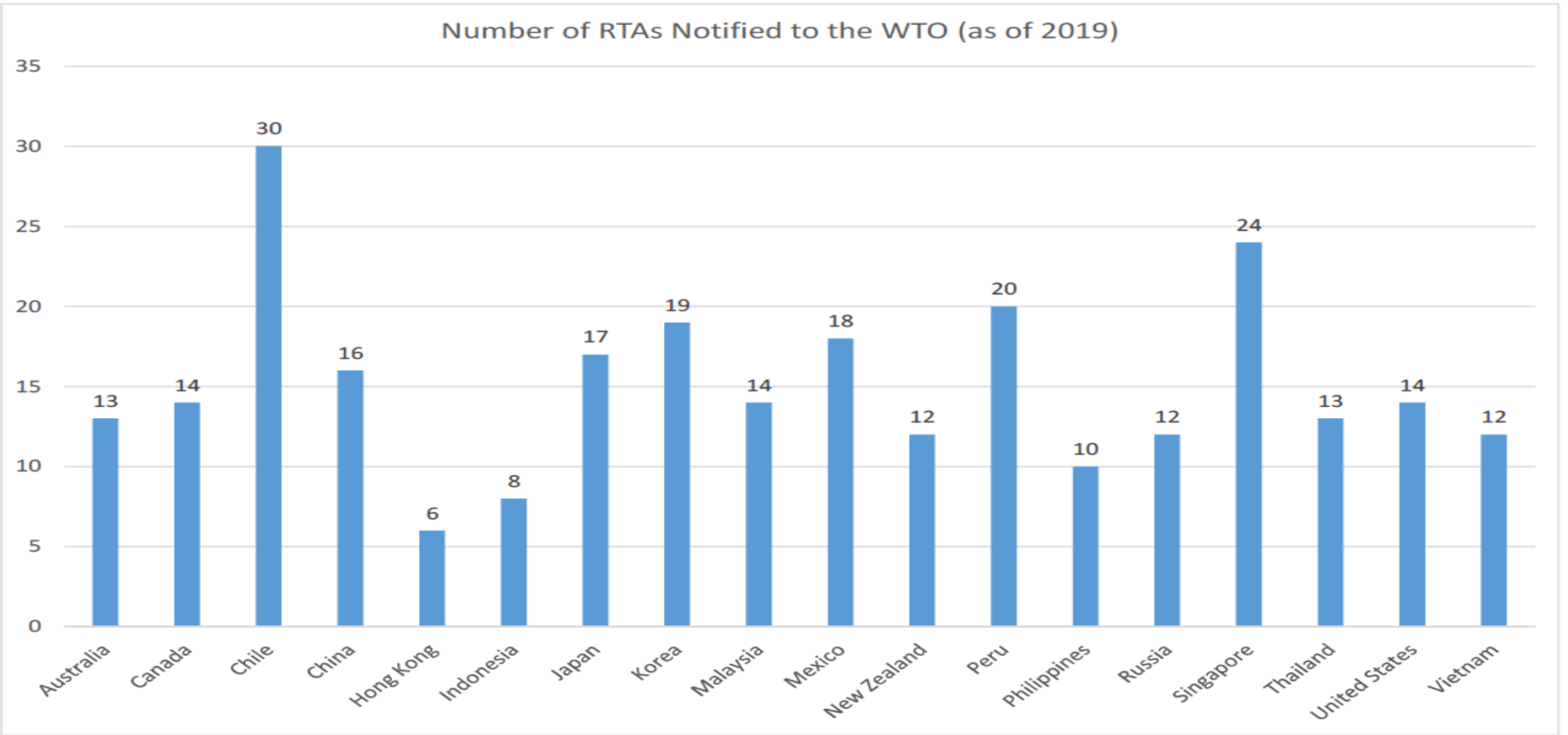


Structural Reforms in APEC: Trade Liberalization (cont.)

- ◆ APEC Members have been active in participating into regional trade agreements over time.
 - Data: WTO's RTA database (WTO members are required to notify any regional trade agreements to the Committee of Regional Trade Agreements).
 - Free trade agreements, Customs Unions, Common Market, Enabling Clause, Generalized System of Trade Preferences, etc.
 - Members have RTAs with APEC members as well as non-APEC members:
 - Chile (30): LAIA, Pacific Alliance, MERCOSUR, Central America, EU, Trans-Pacific SEP, Australia, Canada, China, Hong Kong, Japan, Korea, Malaysia, Mexico, Peru, Thailand, Vietnam, the US, etc.
 - Singapore (24): ASEAN, CPTPP, Trans-Pacific SEP, GCC, Australia, China, India, Japan, Korea, New Zealand, Peru, Chinese Taipei, the US, etc.
 - Peru (20): CAN (Andean Community), LAIA, Pacific Alliance, EU, Canada, Chile, China, Japan, Korea, Mexico, Singapore, the US, etc.
 - Korea (19): ASEAN, EFTA, EU, Australia, Canada, Chile, China, India, New Zealand, Peru, Singapore, Vietnam, the US, etc.
 - Mexico (18): CPTPP, LAIA, NAFTA (USMCA), Central America, MERCOSU, EFTA, EU, Chile, Japan, Peru, etc.
 - Japan (17): ASEAN, CPTPP, EU, Australia, Brunei, Chile, Indonesia, Malaysia, Mexico, Peru, Philippines, Singapore, Thailand, Vietnam, etc.
 - China (16): ASEAN, Australia, Chile, Hong Kong, Korea, New Zealand, Peru, Singapore, etc.
 - The United States (14): NAFTA (USMCA), CAFTA-DR, Australia, Chile, Korea, Peru, Singapore, etc.

Structural Reforms in APEC: Trade Liberalization (cont.)

Number of RTAs Notified to the WTO (as of 2019)

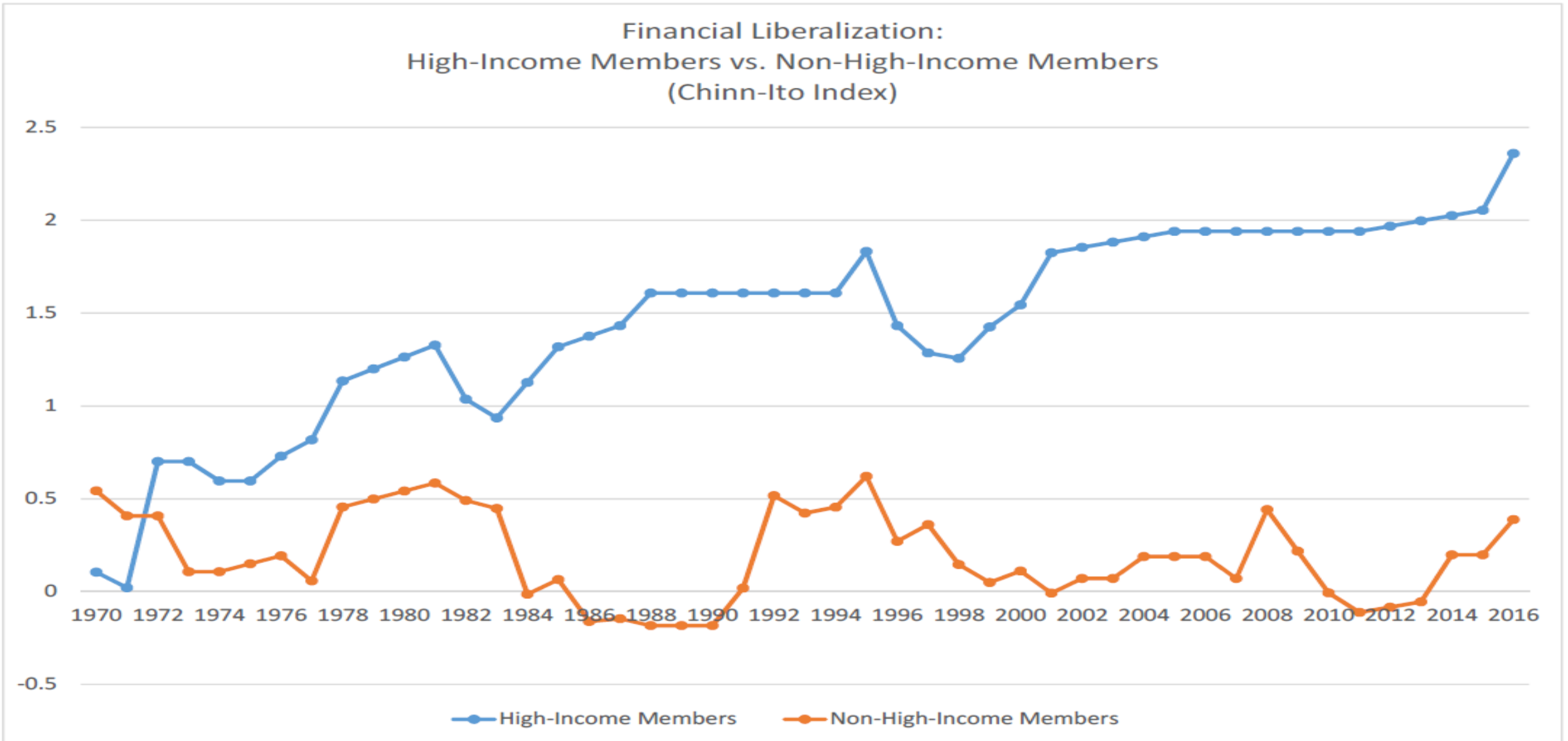


Structural Reforms in APEC: Financial Liberalization

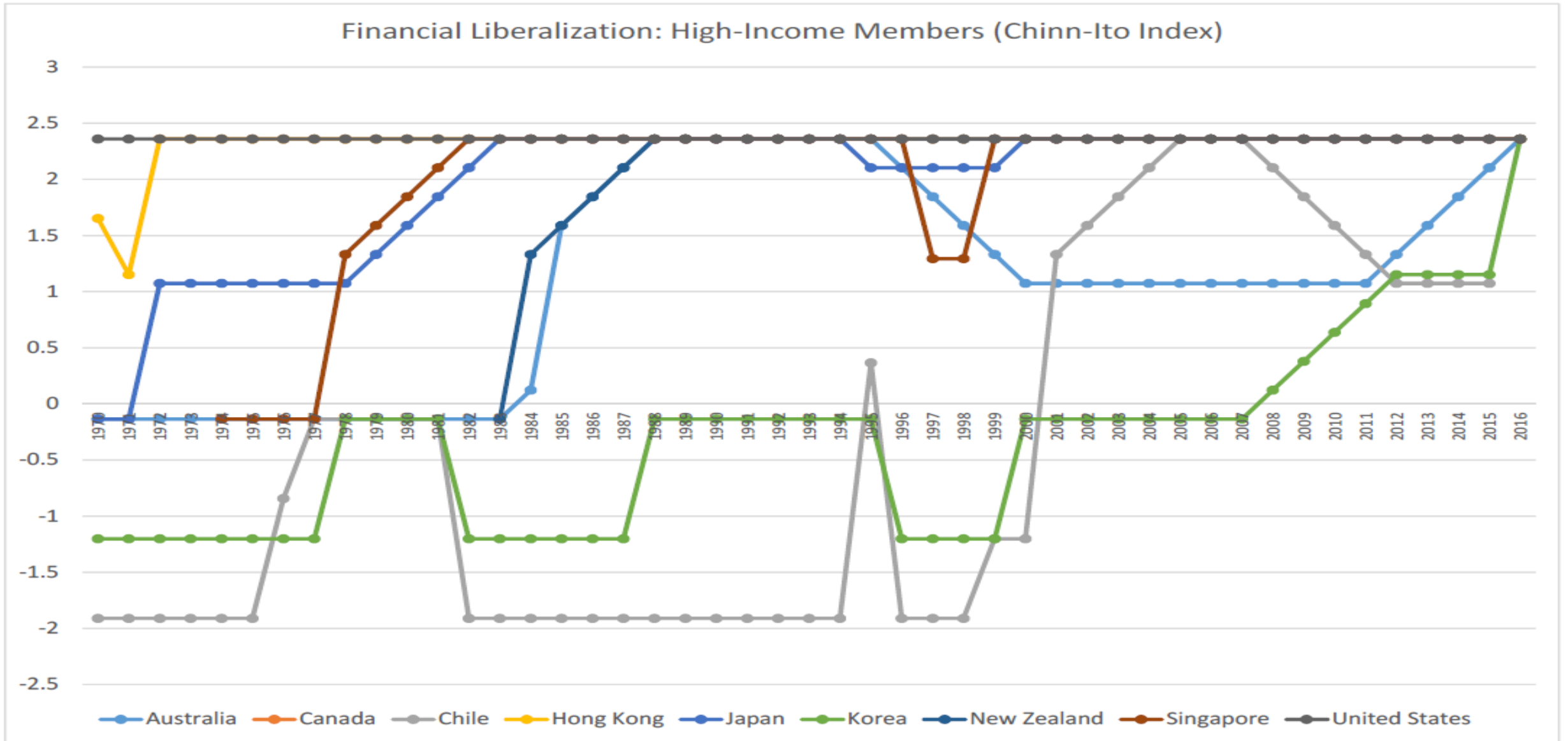
- ◆ On average, non-high-income members have been in a different track from high-income members in liberalizing their financial system.
 - Data: Chinn-Ito Financial Openness Index of de jure financial liberalization
 - All high-income members achieved a top level of the index in 2016.
 - However, non-high-income members showed very diverse performance in liberalizing financial sectors.

Structural Reforms in APEC: Financial Liberalization (cont.)

Financial Liberalization:
High-Income Members vs. Non-High-Income Members
(Chinn-Ito Index)

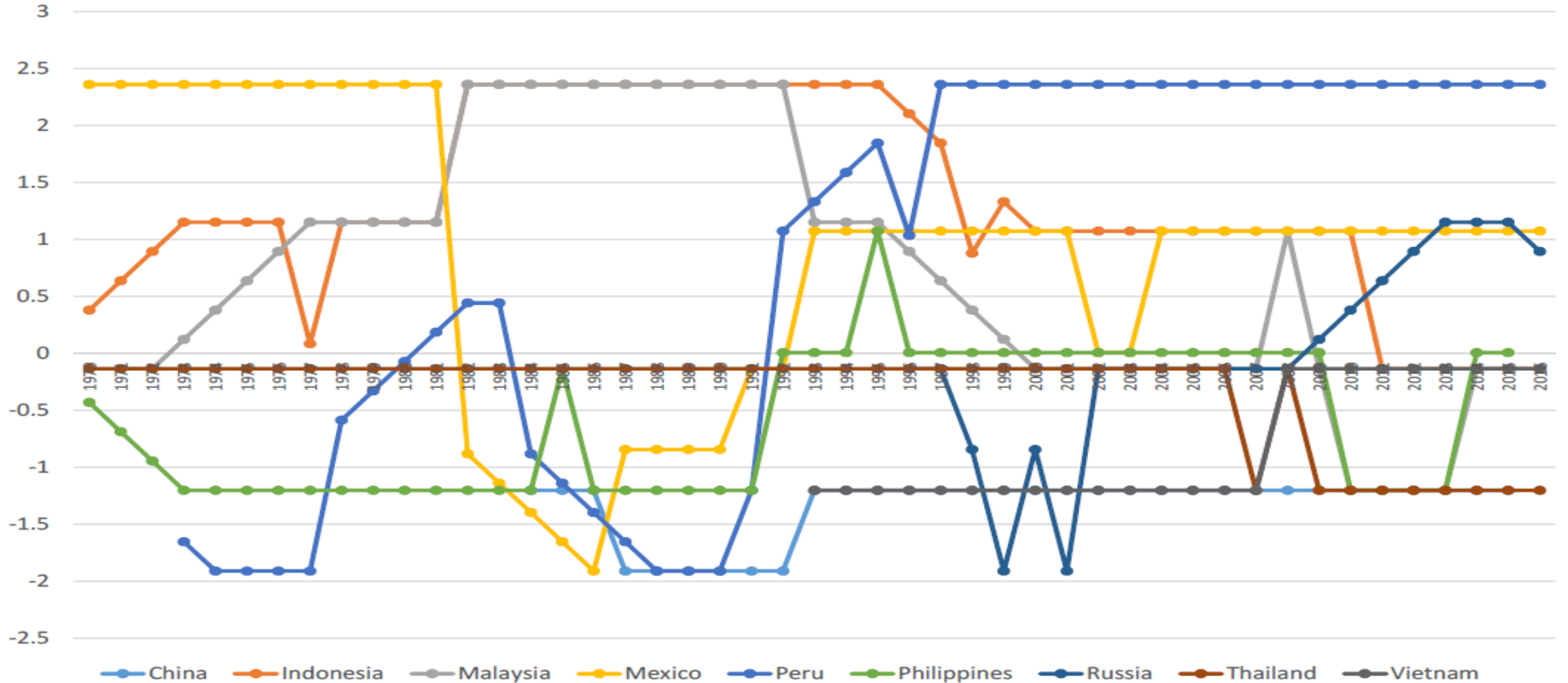


Structural Reforms in APEC: Financial Liberalization (cont.)



Structural Reforms in APEC: Financial Liberalization (cont.)

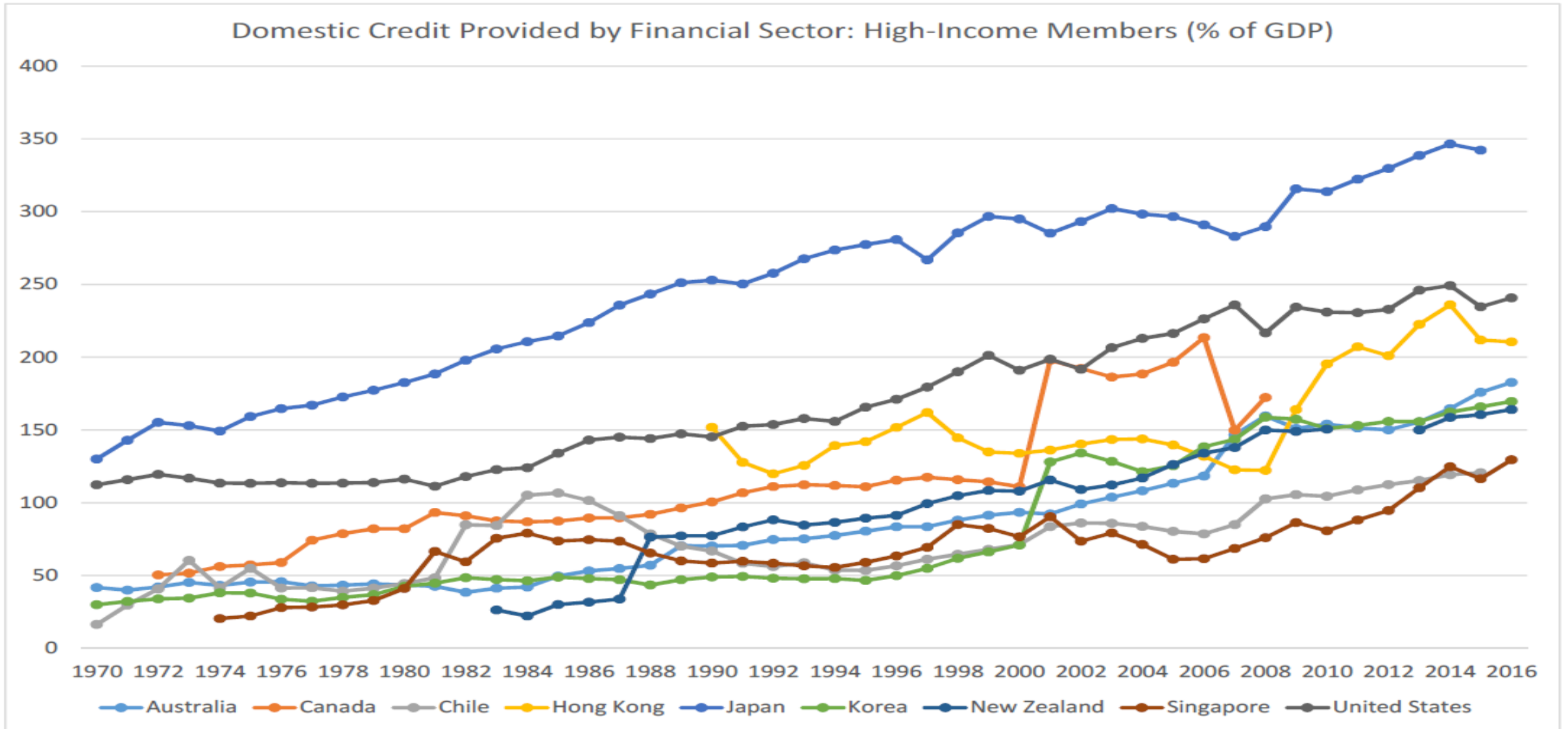
Financial Liberalization: Non-High-Income Members (Chinn-Ito Index)



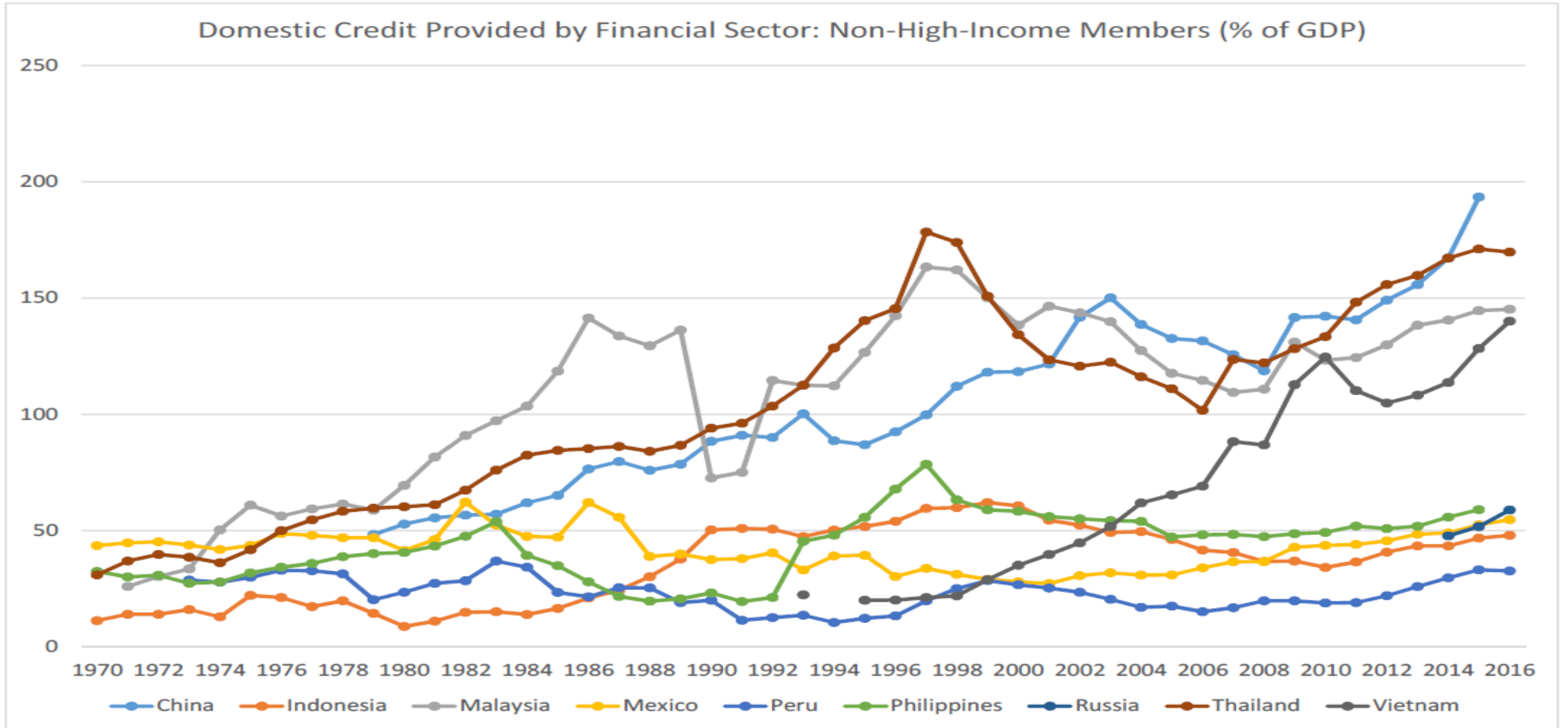
Structural Reforms in APEC: Financial Liberalization

- ◆ Domestic Credit, Provided by Financial Sector (% of GDP): includes all credit to various sectors on a gross basis, with the exception of credit to the central government, showing banking sector depth and financial sector development.
- ◆ On average, high-income members have a very high share of domestic credit provided by financial sector to the total GDP.
- ◆ Some non-high-income members, such as China, Thailand, Malaysia, and Vietnam, have a high share of domestic credit provided by financial sector to the total GDP.

Structural Reforms in APEC: Financial Liberalization (cont.)



Structural Reforms in APEC: Financial Liberalization (cont.)

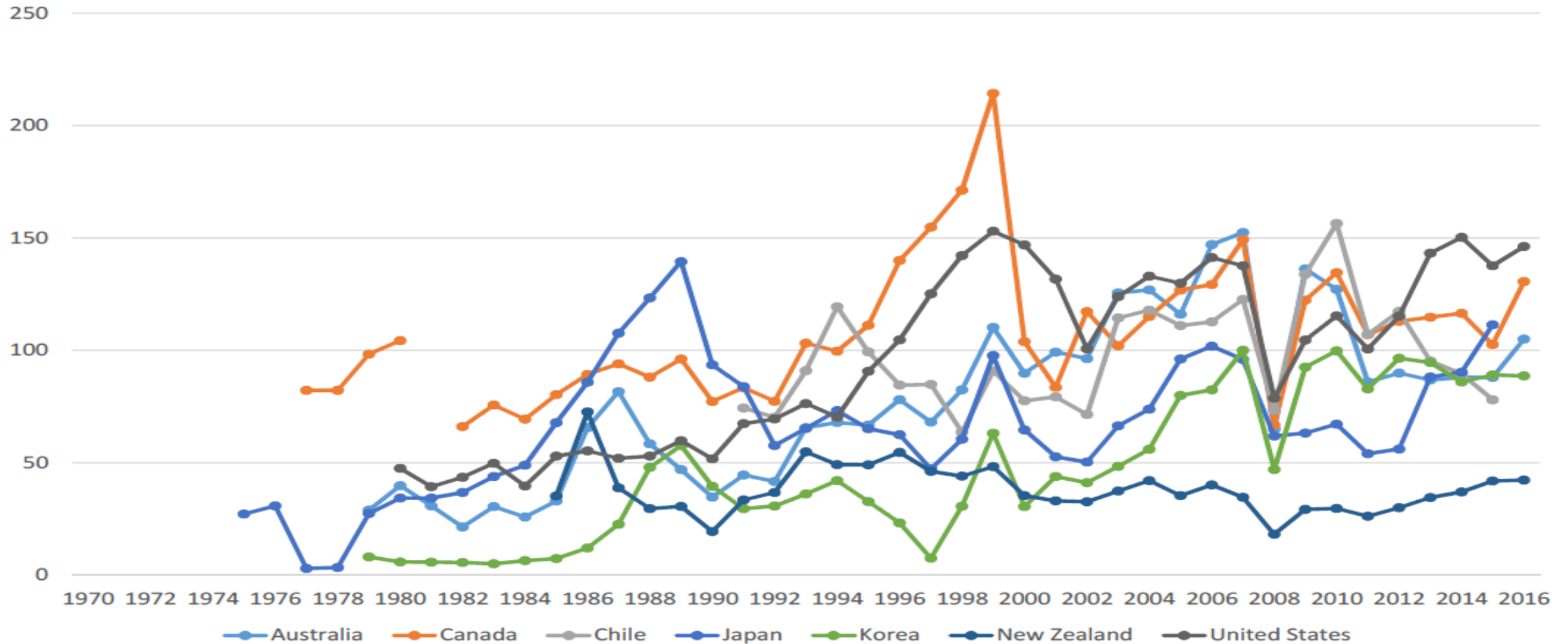


Structural Reforms in APEC: Financial Liberalization

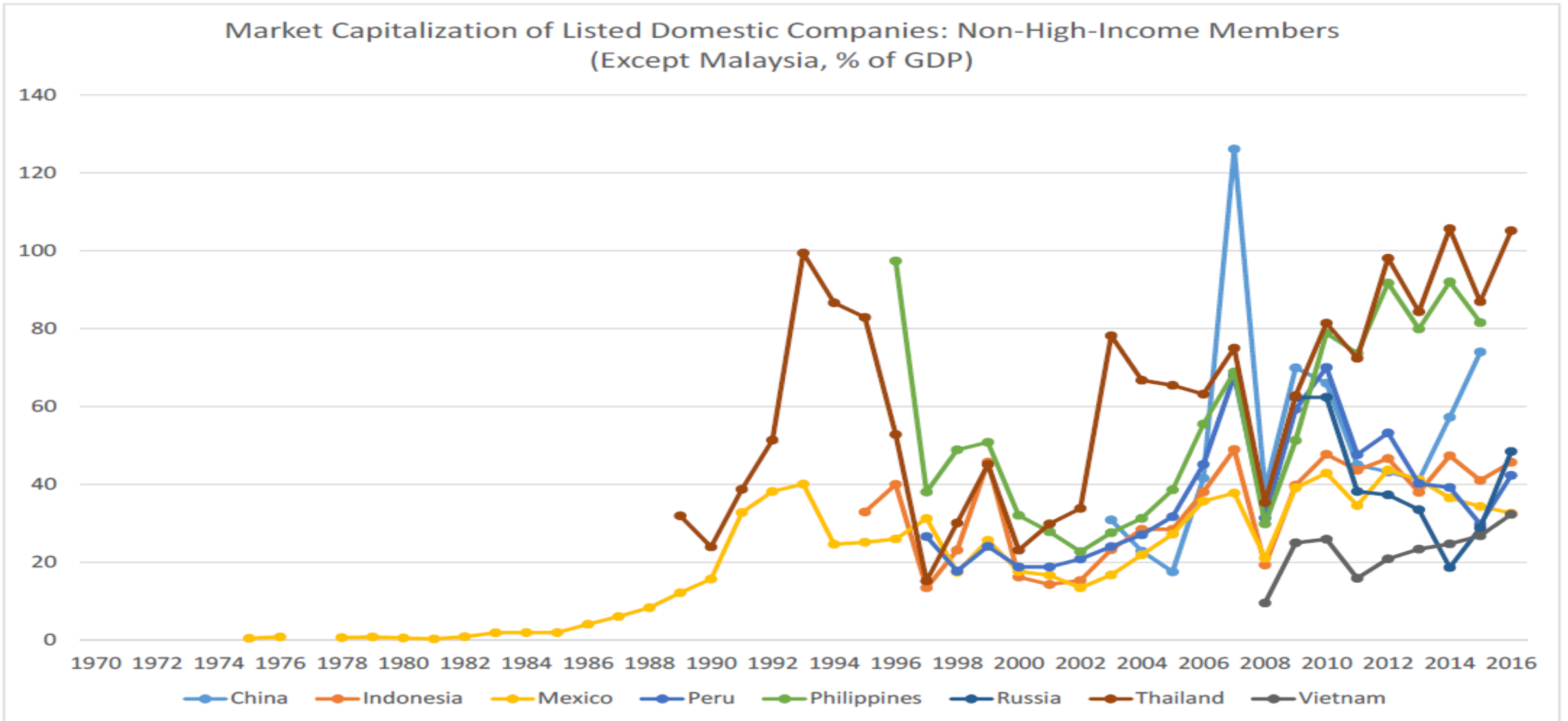
- ◆ Market Capitalization of Listed Domestic Companies (% of GDP): the share price times the number of shares outstanding for listed domestic companies, showing stock market size.
- ◆ On average, high-income members have a very high share of market capitalization of listed domestic companies to the total GDP.
- ◆ Some non-high-income members, such as Malaysia, Thailand, Philippines, and China, have a high share of market capitalization of listed domestic companies to the total GDP.

Structural Reforms in APEC: Financial Liberalization (cont.)

Market Capitalization of Listed Domestic Companies: High-Income Members
(Excluding Hong Kong, Singapore; % of GDP)



Structural Reforms in APEC: Financial Liberalization (cont.)

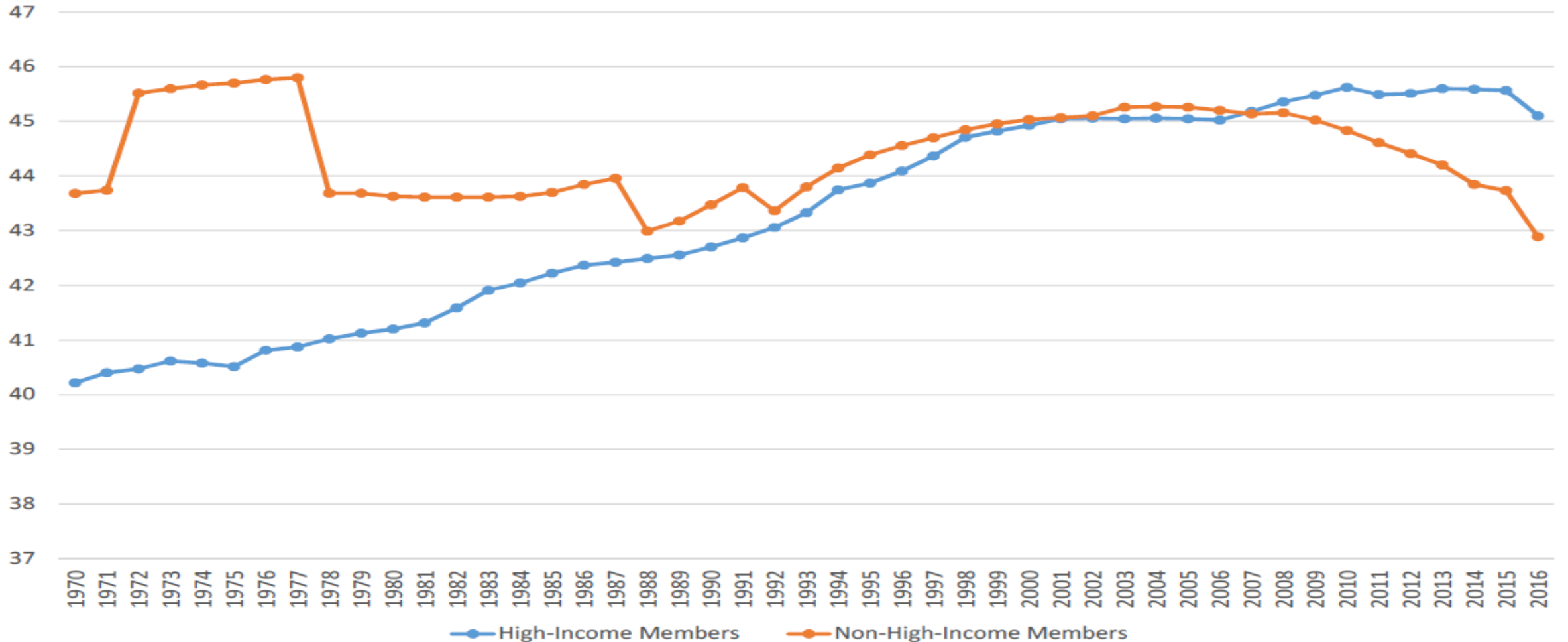


Income Inequality

- ◆ On average, income inequality, measured by market Gini index, of high-income members in APEC has been worse than that of non-high-income members after the global financial crisis of 2008-09.
 - Market Gini Index: Income inequality of market income
- ◆ Some high-income members have experienced that income inequality has been getting worse.
 - The United States: 51.6% (2017); Chile: 51.3% (2015)
 - Australia: 47.9% (2016); New Zealand: 47.0% (2017); Hong Kong: 46.4% (2016); Canada: 45.4% (2016); Singapore: 43.4% (2017); Japan: 42.0% (2015); Korea: 34.7% (2016)
- ◆ Income inequality of Non-high-income members has been diverse over time.
 - Peru and Thailand have improved income inequality.
 - However, China, Indonesia, and Vietnam have been worsened.

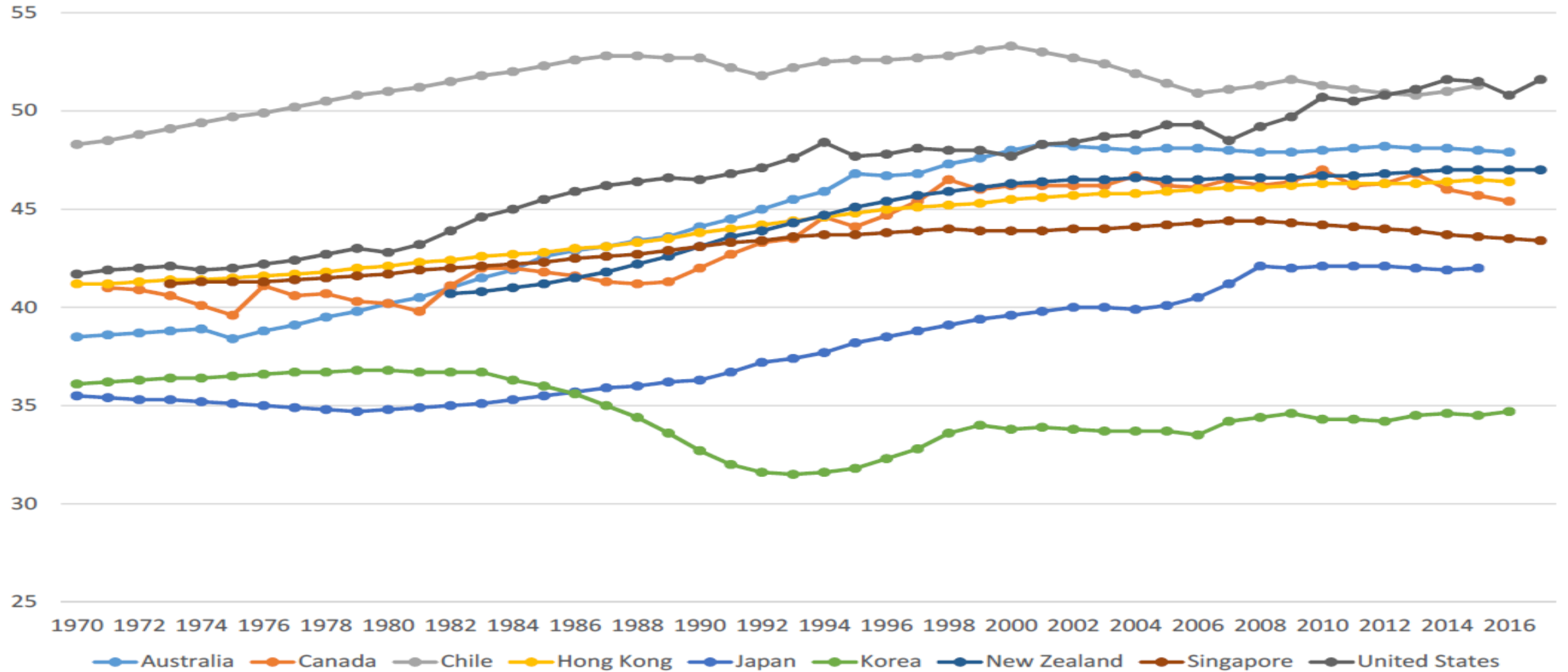
Income Inequality

Income Inequality: High-Income vs. Non-High-Income Members
(Average of Market Gini Index)



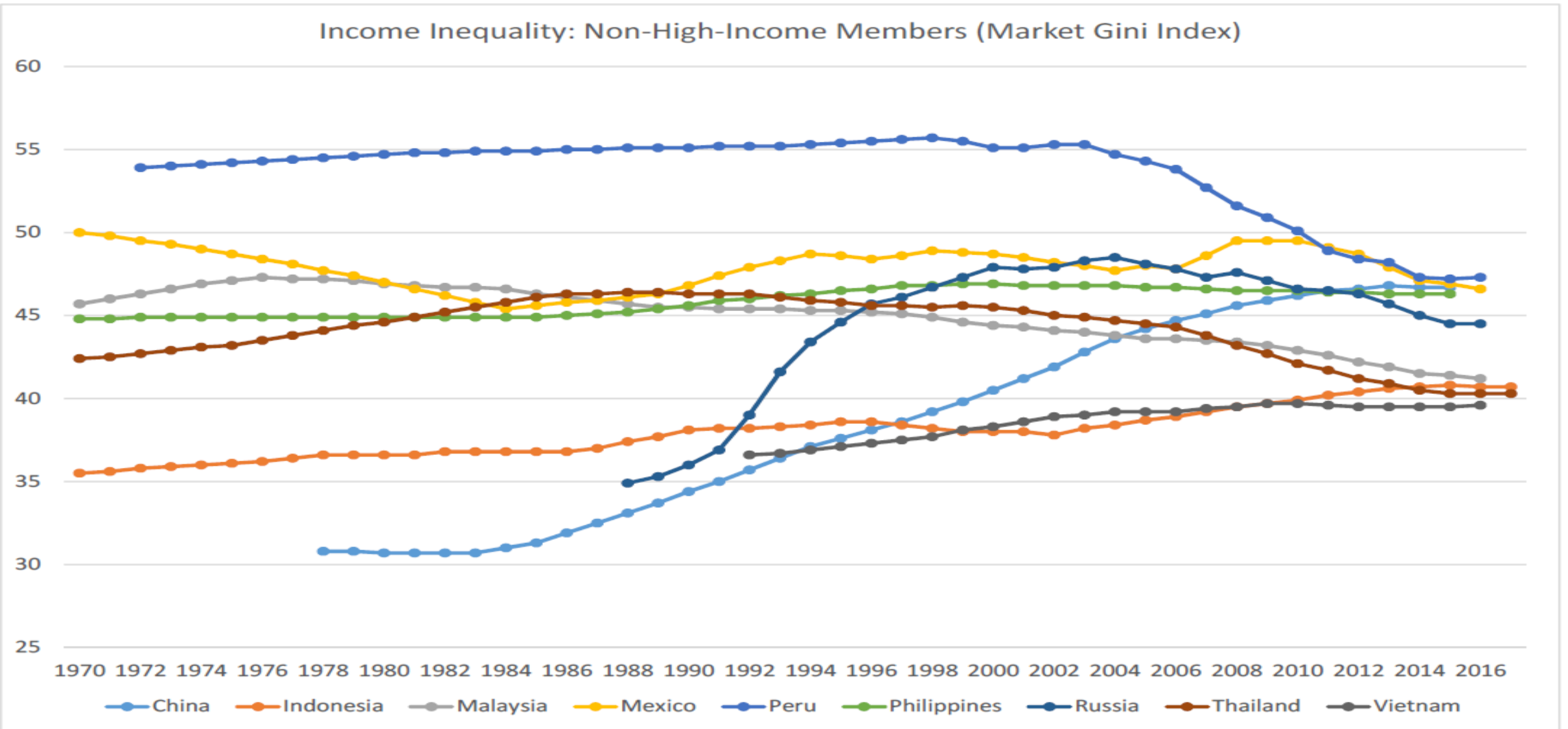
Income Inequality

Income Inequality: High-Income Members (Market Gini Index)



Income Inequality

Income Inequality: Non-High-Income Members (Market Gini Index)



Empirical Analysis: Model

◆ Standard Panel Growth Model (Dynamic Panel Model)

$$\Delta y_{jt} = \theta y_{jt-1} + \alpha \text{Reform}_{jt-1} + \beta X_{jt-1} + f_j + d_t + \varepsilon_{jt}$$

following Christiansen et al (Growth and structural reforms: A new assessment, Journal of International Economics, 2012)

y_{jt}: inclusive growth of country j at time t

Inclusive Growth = Real GDP per capita growth – changes in Disposable GINI

Reform_{jt}: structural reform of country j at time t

X_{jt}: control variables of country j at time t

f_j: a set of country fixed effects

d_t: a set of year dummies

ε_{jt}: the effort term

Empirical Analysis: Data

- ◆ 17 members, except Brunei, PNG, Russia, Chinese Taipei due to data limits
 - 9 High-Income Members: Australia, Canada, Chile, Hong Kong, Japan, Korea, New Zealand, Singapore, United States
 - 8 Non-High-Income Members: China, Indonesia, Malaysia, Mexico, Peru, Philippines, Thailand, Vietnam
- ◆ Dependent Variables: Real GDP Per Capital Growth, Disposable GINI Index, Inclusive Growth Rates

Empirical Analysis: Data (Cont.)

◆ Structural Reforms

- Trade Openness (trade_open)
- Capital Account Openness (Chinn-Ito Index, kaopen)
- Other variables of financial liberalization: Domestic credit provided by financial sector (credit_financial), market capitalization of listed domestic companies (market_capitalization)

◆ Control Variables

- Lagged (t-1) inclusive growth (inclusive_growth), inflation (inflation_cpi), growth rates of government expenditure (govt_exp_growth), M2/GDP (m2_gdp)

Empirical Analysis: Descriptive Statistics

Variables	Variable name	Data Explanation	Source
Country	country	Among 21 APEC member economies, 17 APEC member economies excluding Brunei Darussalam, PNG, Russia, and Chinese Taipei	APEC
year	year	47 years (1970-2016)	Different for each data
Inclusive growth Rate	inclusive_growth	Real GDP per capita growth rate – change in net Gini coefficient	Calculation based on Anand et al. (2013), Aoyagi and Ganelli (2015), APEC (2015b), Kang et al. (2017).
GDP per capita Growth	gdppc_growth	Annual percentage growth rate of GDP per capita based on constant local currency (World Bank)	World Bank national accounts data, and OECD National Accounts data files.
Income Inequality	gini_disp	Disposable Gini Coefficient for inequality in disposable (post-tax, post-transfer) income	The Standardized World Income Inequality Database (SWIID)
Capital account liberalization index	kaopen	Chinn-Ito Index for financial liberalization with capital account Openness	Chinn, Menzie D. and Hiro Ito (2006). "What Matters for Financial Development? Capital Controls, Institutions, and Interactions," Journal of Development Economics, Pages 163-192 (October).
Trade liberalization	trade_open	Trade openness (% of GDP); Trade is the sum of exports and imports of goods and services measured as a share of GDP	World Bank national accounts data, and OECD National Accounts data files.

Empirical Analysis: Descriptive Statistics (cont.)

Variables	Variable name	Data Explanation	Source
Domestic credit provided by financial sector (% of GDP)	credit_financial	Domestic credit provided by the financial sector includes all credit to various sectors on a gross basis, with the exception of credit to the central government, which is net.	International Monetary Fund, International Financial Statistics and data files, and World Bank and OECD GDP estimates.
Market capitalization of listed domestic companies (% of GDP)	market_capitalization	Market capitalization (also known as market value) is the share price times the number of shares outstanding (including their several classes) for listed domestic companies. Investment funds, unit trusts, and companies whose only business goal is to hold shares of other listed companies are excluded. Data are end of year values.	World Federation of Exchanges database.
Inflation, consumer prices (annual %)	inflation_cpi	Inflation as measured by the consumer price index reflects the annual percentage change in the cost to the average consumer of acquiring a basket of goods and services that may be fixed or changed at specified intervals, such as yearly. The Laspeyres formula is generally used.	International Monetary Fund, International Financial Statistics and data files.
General government final consumption expenditure (annual % growth)	govt_exp_growth	Annual percentage growth of general government final consumption expenditure based on constant local currency. Aggregates are based on constant 2010 U.S. dollars. General government final consumption expenditure (general government consumption) includes all government current expenditures for purchases of goods and services (including compensation of employees). It also includes most expenditures on national defense and security, but excludes government military expenditures that are part of government capital formation.	World Bank national accounts data, and OECD National Accounts data files.
M2/GDP (Broad money/GDP) (%)	m2_gdp	Broad money is the sum of currency outside banks; demand deposits other than those of the central government; the time, savings, and foreign currency deposits of resident sectors other than the central government; bank and traveler's checks; and other securities such as certificates of deposit and commercial paper.	International Monetary Fund, International Financial Statistics and data files, and World Bank and OECD GDP estimates.

Empirical Analysis: Summary Statistics

Variable	Obs	Mean	Std. Dev.	Min	Max
Inclusive Growth	740	3.216746	3.817293	-14.3468	14.7139
GDP per capita growth	740	3.217906	3.817201	-14.3468	14.7139
Income Inequality	734	38.16962	7.4135	24.3	54.7
Capital account liberalization index	735	0.89571	1.478447	-1.91043	2.359998
Trade liberalization	740	88.21975	91.88598	10.73037	442.62
Domestic credit provided by financial sector	709	94.70192	66.65687	8.821473	346.4888
Market capitalization of listed domestic companies	519	102.8318	153.8352	0.382635	1254.465
Inflation, consumer prices	716	27.33223	309.297	-4.00943	7481.664
General government final consumption expenditure	700	4.266783	4.89153	-19.0704	36.53846
M2/GDP	708	80.50253	59.64032	9.610779	376.5244
Dummy for high-income member economies	740	0.543243	0.498463	0	1
Dummy for non-high-income member economies	740	0.456757	0.498463	0	1

Empirical Analysis: Results (Δ GDP Per Capita Growth, 17 members, OLS)

	(1)	(2)	(3)	(4)	(5)	(6)
Dependent Variable: delta_gdppc_growth						
L.gdppc_growth	-0.658*** (0.046)	-0.648*** (0.050)	-0.666*** (0.044)	-0.668*** (0.043)	-0.750*** (0.043)	-0.752*** (0.040)
L.kaopen	0.350 (0.208)		0.395* (0.208)			
L.trade_open		0.007 (0.005)	0.011* (0.006)	0.002 (0.005)	-0.002 (0.005)	-0.005 (0.005)
L.credit_financial				-0.017*** (0.005)		-0.015** (0.006)
L.market_capitalization					0.004*** (0.001)	0.003* (0.002)
L.inflation_cpi	0.000 (0.000)	-0.000 (0.000)	0.000 (0.000)	-0.000 (0.000)	-0.019* (0.011)	-0.013 (0.012)
L.govt_exp_growth	0.012 (0.033)	0.018 (0.032)	0.015 (0.033)	0.020 (0.032)	0.029 (0.056)	0.029 (0.055)
L.m2_gdp	-0.013 (0.008)	-0.014* (0.008)	-0.019** (0.008)	0.001 (0.009)	-0.018** (0.008)	-0.005 (0.011)
_cons	1.852* (1.029)	1.496* (0.798)	1.420 (0.898)	1.961** (0.745)	3.614*** (1.018)	3.955*** (0.946)
N	652	652	652	652	465	465
R-sq	0.536	0.532	0.538	0.537	0.624	0.628

Standard errors in parentheses

* p<0.10

** p<0.05

*** p<0.01"

Empirical Analysis: Results (GDP Per Capita Growth, 17 members, OLS)

	(1)	(2)	(3)	(4)	(5)	(6)
	Dependent Variable: gdppc_growth					
kaopen	0.385** (0.134)		0.441*** (0.124)			
trade_open		0.011 (0.007)	0.015** (0.006)	0.003 (0.007)	-0.004 (0.008)	-0.005 (0.008)
credit_financial				-0.026*** (0.008)		-0.002 (0.008)
market_capitalization					0.008*** (0.003)	0.008*** (0.003)
inflation_cpi	-0.001*** (0.000)	-0.002*** (0.000)	-0.001*** (0.000)	-0.002*** (0.000)	-0.064*** (0.020)	-0.063*** (0.020)
govt_exp_growth	0.200*** (0.059)	0.210*** (0.064)	0.202*** (0.059)	0.208*** (0.059)	0.158** (0.067)	0.158** (0.067)
m2_gdp	-0.021* (0.011)	-0.024** (0.009)	-0.029*** (0.008)	0.000 (0.011)	-0.030*** (0.009)	-0.028*** (0.009)
_cons	2.945** (1.338)	2.456 (1.479)	2.336 (1.475)	3.092** (1.367)	3.285** (1.121)	3.334** (1.172)
N	667	667	667	667	480	480
R-sq	0.373	0.368	0.380	0.387	0.451	0.451

Standard errors in
parentheses

* p<0.10

** p<0.05

*** p<0.01"

Empirical Analysis: Results (Δ GDP Per Capita Growth, 17 members, DPD)

	(1)	(2)	(3)	(4)	(5)	(6)
Dependent Variable: delta_gdppc_growth						
L.delta_gdppc_growth	0.115*** (0.040)	0.106*** (0.040)	0.117*** (0.040)	0.117*** (0.040)	0.095** (0.045)	0.099** (0.044)
L.gdppc_growth	-0.846*** (0.052)	-0.825*** (0.052)	-0.850*** (0.052)	-0.857*** (0.052)	-0.944*** (0.061)	-0.955*** (0.060)
L.kaopen	0.400*** (0.152)		0.406*** (0.153)			
L.trade_open		0.001 (0.007)	0.003 (0.007)	-0.005 (0.007)	-0.016** (0.008)	-0.018** (0.008)
L.credit_financial				-0.027*** (0.007)		-0.020*** (0.007)
L.market_capitalization					0.009*** (0.002)	0.007*** (0.002)
L.inflation_cpi	-0.000 (0.000)	-0.000 (0.000)	-0.000 (0.000)	-0.001 (0.000)	-0.019 (0.013)	-0.019 (0.013)
L.govt_exp_growth	0.047 (0.030)	0.051* (0.030)	0.048 (0.030)	0.043 (0.029)	0.051 (0.039)	0.046 (0.039)
L.m2_gdp	-0.015*** (0.005)	-0.012* (0.006)	-0.017** (0.007)	0.017* (0.010)	-0.026*** (0.007)	-0.003 (0.010)
N	633	633	633	633	446	446
R-sq						

Empirical Analysis: Results (Δ GDP Per Capita Growth, 17 members, System GMM)

	(1)	(2)	(3)	(4)	(5)	(6)
Dependent Variable: delta_gdppc_growth						
L.delta_gdppc_growth	0.120*** (0.031)	0.118*** (0.031)	0.126*** (0.031)	0.125*** (0.031)	0.099*** (0.034)	0.099*** (0.034)
L.gdppc_growth	-0.838*** (0.046)	-0.828*** (0.046)	-0.848*** (0.046)	-0.850*** (0.046)	-0.934*** (0.053)	-0.931*** (0.053)
L.kaopen	0.400*** (0.139)		0.412*** (0.140)			
L.trade_open		0.007* (0.004)	0.008* (0.004)	-0.001 (0.005)	0.003 (0.004)	-0.002 (0.004)
L.credit_financial				-0.027*** (0.006)		-0.022*** (0.007)
L.market_capitalization					0.006*** (0.002)	0.005** (0.002)
L.inflation_cpi	-0.000 (0.000)	-0.001* (0.000)	-0.000 (0.000)	-0.001** (0.000)	-0.014 (0.012)	-0.013 (0.012)
L.govt_exp_growth	0.045 (0.028)	0.055* (0.029)	0.050* (0.028)	0.045 (0.028)	0.046 (0.037)	0.034 (0.037)
L.m2_gdp	-0.013*** (0.004)	-0.016*** (0.005)	-0.021*** (0.006)	0.015* (0.009)	-0.031*** (0.006)	-0.004 (0.010)
_cons	2.846*** (0.377)	2.721*** (0.388)	2.703*** (0.386)	3.629*** (0.438)	4.379*** (0.591)	5.159*** (0.631)
N	650	650	650	650	465	465
R-sq						

Empirical Analysis: Results (Δ GINI, 17 members, OLS)

	(1)	(2)	(3)	(4)	(5)	(6)
Dependent Variable: delta_gini_disp						
L.gini_disp	-0.023 (0.086)	-0.030 (0.080)	-0.030 (0.083)	0.021 (0.093)	-0.077 (0.142)	-0.026 (0.151)
L.kaopen	0.008 (0.121)		0.001 (0.114)			
L.trade_open		-0.002 (0.005)	-0.002 (0.005)	-0.004 (0.005)	-0.009 (0.007)	-0.009 (0.007)
L.credit_financial				-0.011 (0.007)		-0.010 (0.007)
L.market_capitalization					0.004 (0.002)	0.003 (0.002)
L.inflation_cpi	0.000 (0.000)	0.000 (0.000)	0.000 (0.000)	0.000 (0.000)	-0.007 (0.005)	-0.002 (0.005)
L.govt_exp_growth	0.014 (0.013)	0.013 (0.015)	0.013 (0.013)	0.013 (0.015)	0.027 (0.035)	0.028 (0.036)
L.m2_gdp	-0.003 (0.006)	-0.002 (0.005)	-0.002 (0.005)	0.007 (0.008)	-0.005 (0.007)	0.003 (0.009)
_cons	0.953 (3.190)	1.312 (2.976)	1.310 (3.102)	-0.414 (3.380)	3.262 (5.636)	1.561 (5.812)
N	649	649	649	649	462	462
R-sq	0.115	0.115	0.115	0.121	0.125	0.128

Empirical Analysis: Results (GINI, 17 members, OLS)

	(1)	(2)	(3)	(4)	(5)	(6)
Dependent Variable: gini_disp						
kaopen	-0.055 (0.448)		-0.175 (0.418)			
trade_open		-0.031*** (0.010)	-0.032*** (0.011)	-0.019 (0.011)	-0.027** (0.012)	-0.021** (0.010)
credit_financial				0.037** (0.013)		0.033*** (0.009)
market_capitalization					0.003 (0.003)	0.005* (0.002)
inflation_cpi	0.000 (0.000)	0.000*** (0.000)	0.000 (0.000)	0.000*** (0.000)	-0.006 (0.009)	-0.020** (0.009)
govt_exp_growth	-0.010 (0.018)	-0.017 (0.023)	-0.014 (0.017)	-0.013 (0.018)	-0.033 (0.025)	-0.034 (0.020)
m2_gdp	0.022 (0.015)	0.038** (0.014)	0.040** (0.015)	0.003 (0.015)	0.027** (0.011)	-0.001 (0.008)
_cons	37.387*** (0.832)	38.691*** (0.738)	38.738*** (0.743)	37.755*** (0.915)	38.051*** (2.009)	37.318*** (1.507)
N	661	661	661	661	474	474
R-sq	0.121	0.220	0.226	0.355	0.368	0.470

Empirical Analysis: Results (Δ GINI, 17 members, DPD)

	(1)	(2)	(3)	(4)	(5)	(6)
Dependent Variable: delta_gini_disp						
L.delta_gini_disp	0.670** (0.284)	0.630** (0.277)	0.679** (0.284)	0.562** (0.277)	0.515 (0.373)	0.342 (0.375)
L.gini_disp	-0.003 (0.045)	0.006 (0.047)	0.008 (0.047)	0.073 (0.050)	0.031 (0.069)	0.135* (0.076)
L.kaopen	0.064 (0.093)		0.073 (0.093)			
L.trade_open		0.003 (0.004)	0.003 (0.004)	0.000 (0.004)	-0.002 (0.006)	-0.003 (0.006)
L.credit_financial				-0.015*** (0.004)		-0.019*** (0.006)
L.market_capitalization					0.003* (0.002)	0.001 (0.002)
L.inflation_cpi	0.000 (0.000)	0.000 (0.000)	0.000 (0.000)	0.000 (0.000)	-0.000 (0.010)	0.002 (0.010)
L.govt_exp_growth	0.020 (0.016)	0.021 (0.016)	0.020 (0.016)	0.018 (0.016)	0.039 (0.029)	0.037 (0.029)
L.m2_gdp	-0.011*** (0.003)	-0.013*** (0.004)	-0.013*** (0.004)	0.002 (0.005)	-0.017*** (0.005)	0.002 (0.008)
N	620	620	620	620	443	443
R-sq						

Empirical Analysis: Results (Δ GINI, 17 members, SGMM)

	(1)	(2)	(3)	(4)	(5)	(6)
Dependent Variable: delta_gini_disp						
L.delta_gini_disp	0.543** (0.239)	0.512** (0.235)	0.539** (0.241)	0.522** (0.235)	0.421 (0.314)	0.401 (0.314)
L.gini_disp	-0.029 (0.023)	-0.031 (0.023)	-0.028 (0.023)	-0.028 (0.023)	-0.038 (0.032)	-0.038 (0.032)
L.kaopen	0.049 (0.087)		0.046 (0.087)			
L.trade_open		-0.001 (0.003)	-0.001 (0.003)	-0.003 (0.003)	-0.003 (0.004)	-0.006 (0.004)
L.credit_financial				-0.007** (0.003)		-0.007 (0.005)
L.market_capitalization					0.002 (0.001)	0.002 (0.001)
L.inflation_cpi	0.000 (0.000)	0.000 (0.000)	0.000 (0.000)	0.000 (0.000)	-0.002 (0.009)	-0.001 (0.009)
L.govt_exp_growth	0.013 (0.016)	0.013 (0.016)	0.013 (0.016)	0.010 (0.016)	0.024 (0.028)	0.020 (0.028)
L.m2_gdp	-0.010*** (0.003)	-0.009*** (0.003)	-0.009*** (0.003)	-0.001 (0.005)	-0.012*** (0.004)	-0.003 (0.007)
_cons	1.611* (0.934)	1.749* (0.909)	1.625* (0.939)	1.880** (0.911)	2.353* (1.264)	2.581** (1.272)
N	637	637	637	637	462	462
R-sq						

Empirical Analysis: Results (Δ Inclusive Growth, 17 members, OLS)

	(1)	(2)	(3)	(4)	(5)	(6)
Dependent Variable: delta_inclusive_growth						
L.inclusive_growth	-0.658*** (0.046)	-0.647*** (0.050)	-0.665*** (0.044)	-0.667*** (0.043)	-0.749*** (0.043)	-0.751*** (0.040)
L.kaopen	0.351 (0.208)		0.396* (0.208)			
L.trade_open		0.007 (0.005)	0.011* (0.006)	0.002 (0.005)	-0.002 (0.005)	-0.005 (0.005)
L.credit_financial				-0.017*** (0.005)		-0.015** (0.006)
L.market_capitalization					0.004*** (0.001)	0.003* (0.002)
L.inflation_cpi	0.000 (0.000)	-0.000 (0.000)	0.000 (0.000)	-0.000 (0.000)	-0.019* (0.010)	-0.013 (0.012)
L.govt_exp_growth	0.012 (0.033)	0.018 (0.032)	0.015 (0.033)	0.020 (0.032)	0.029 (0.056)	0.029 (0.055)
L.m2_gdp	-0.013 (0.008)	-0.014* (0.008)	-0.019** (0.008)	0.001 (0.009)	-0.018** (0.008)	-0.005 (0.011)
_cons	1.852* (1.030)	1.495* (0.798)	1.419 (0.898)	1.960** (0.745)	3.615*** (1.018)	3.955*** (0.947)
N	652	652	652	652	465	465
R-sq	0.536	0.532	0.538	0.537	0.624	0.628

Empirical Analysis: Results (Inclusive Growth, 17 members, OLS)

	(1)	(2)	(3)	(4)	(5)	(6)
Dependent Variable: inclusive_growth						
kaopen	0.386** (0.134)		0.443*** (0.124)			
trade_open		0.011 (0.007)	0.015** (0.006)	0.003 (0.007)	-0.004 (0.008)	-0.005 (0.008)
credit_financial				-0.026*** (0.008)		-0.002 (0.008)
market_capitalization					0.008*** (0.003)	0.008*** (0.003)
inflation_cpi	-0.001*** (0.000)	-0.002*** (0.000)	-0.001*** (0.000)	-0.002*** (0.000)	-0.064*** (0.020)	-0.063*** (0.020)
govt_exp_growth	0.200*** (0.059)	0.211*** (0.064)	0.202*** (0.060)	0.208*** (0.059)	0.158** (0.067)	0.158** (0.067)
m2_gdp	-0.021* (0.011)	-0.024** (0.009)	-0.029*** (0.008)	0.000 (0.011)	-0.030*** (0.009)	-0.028*** (0.009)
_cons	2.946** (1.338)	2.455 (1.479)	2.335 (1.474)	3.091** (1.367)	3.289** (1.121)	3.336** (1.172)
N	667	667	667	667	480	480
R-sq	0.373	0.368	0.380	0.387	0.451	0.451

Empirical Analysis: Results (Δ Inclusive Growth, 17 members, DPD)

	(1)	(2)	(3)	(4)	(5)	(6)
Dependent Variable: delta_inclusive_growth						
L.delta_inclusive_growt h	0.115*** (0.040)	0.104** (0.041)	0.118*** (0.041)	0.114*** (0.040)	0.095** (0.045)	0.099** (0.044)
L.inclusive_growth	-0.843*** (0.052)	-0.816*** (0.052)	-0.847*** (0.053)	-0.843*** (0.052)	-0.944*** (0.061)	-0.954*** (0.060)
L.kaopen	0.511*** (0.160)		0.519*** (0.162)			
L.trade_open		0.001 (0.007)	0.004 (0.007)	-0.004 (0.007)	-0.016** (0.008)	-0.018** (0.008)
L.credit_financial				-0.024*** (0.007)		-0.020*** (0.007)
L.market_capitalization					0.009*** (0.002)	0.007*** (0.002)
L.inflation_cpi	-0.000 (0.000)	-0.000 (0.000)	-0.000 (0.000)	-0.001 (0.000)	-0.019 (0.013)	-0.019 (0.013)
L.govt_exp_growth	0.047 (0.030)	0.050 (0.030)	0.048 (0.030)	0.043 (0.030)	0.051 (0.039)	0.046 (0.039)
L.m2_gdp	-0.013*** (0.005)	-0.010 (0.006)	-0.015** (0.007)	0.017* (0.010)	-0.026*** (0.007)	-0.003 (0.010)
N	623	623	623	623	446	446
R-sq						

Empirical Analysis: Results (Δ Inclusive Growth, 17 members, SGMM)

	(1)	(2)	(3)	(4)	(5)	(6)
Dependent Variable: delta_inclusive_growth						
L.delta_inclusive_growth	0.121*** (0.031)	0.116*** (0.031)	0.126*** (0.031)	0.121*** (0.031)	0.099*** (0.034)	0.099*** (0.034)
L.inclusive_growth	-0.836*** (0.046)	-0.819*** (0.046)	-0.845*** (0.047)	-0.838*** (0.046)	-0.934*** (0.053)	-0.930*** (0.053)
L.kaopen	0.487*** (0.146)		0.498*** (0.146)			
L.trade_open		0.007* (0.004)	0.008* (0.004)	-0.000 (0.005)	0.003 (0.004)	-0.002 (0.004)
L.credit_financial				-0.025*** (0.006)		-0.022*** (0.007)
L.market_capitalization					0.006*** (0.002)	0.005** (0.002)
L.inflation_cpi	-0.000 (0.000)	-0.001 (0.000)	-0.000 (0.000)	-0.001* (0.000)	-0.014 (0.012)	-0.013 (0.012)
L.govt_exp_growth	0.046 (0.029)	0.054* (0.029)	0.050* (0.029)	0.045 (0.029)	0.046 (0.037)	0.034 (0.037)
L.m2_gdp	-0.012*** (0.004)	-0.014*** (0.005)	-0.019*** (0.006)	0.015 (0.009)	-0.031*** (0.006)	-0.004 (0.010)
_cons	2.646*** (0.380)	2.565*** (0.391)	2.512*** (0.389)	3.403*** (0.441)	4.369*** (0.590)	5.148*** (0.631)
N	640	640	640	640	465	465
R-sq						

Empirical Analysis: Results (Δ Inclusive Growth, High-Income Members, OLS)

	(1)	(2)	(3)	(4)	(5)	(6)
Dependent Variable: delta_inclusive_growth						
L.inclusive_growth	-0.767*** (0.036)	-0.789*** (0.028)	-0.789*** (0.029)	-0.791*** (0.028)	-0.820*** (0.048)	-0.820*** (0.049)
L.kaopen	-0.012 (0.152)		0.022 (0.147)			
L.trade_open		0.015 (0.009)	0.015 (0.010)	0.013 (0.010)	-0.002 (0.004)	-0.002 (0.004)
L.credit_financial				-0.005 (0.009)		-0.000 (0.009)
L.market_capitalization					0.004* (0.002)	0.004* (0.002)
L.inflation_cpi	-0.013*** (0.001)	-0.014*** (0.001)	-0.014*** (0.002)	-0.013*** (0.002)	-0.160* (0.083)	-0.159* (0.082)
L.govt_exp_growth	-0.061 (0.043)	-0.057 (0.042)	-0.058 (0.043)	-0.059 (0.042)	-0.044 (0.085)	-0.044 (0.083)
L.m2_gdp	-0.004 (0.010)	-0.013 (0.010)	-0.013 (0.010)	-0.010 (0.012)	-0.013 (0.011)	-0.012 (0.015)
_cons	3.644** (1.362)	2.883** (1.213)	2.890** (1.199)	3.147** (1.167)	6.905*** (1.947)	6.910*** (2.000)
N	361	361	361	361	296	296
R-sq	0.599	0.604	0.604	0.604	0.643	0.643

Empirical Analysis: Results (Inclusive Growth, High-Income Members, OLS)

	(1)	(2)	(3)	(4)	(5)	(6)
Dependent Variable: inclusive_growth						
kaopen	0.083 (0.197)		0.141 (0.161)			
trade_open		0.027*** (0.005)	0.027*** (0.006)	0.025*** (0.005)	0.023** (0.007)	0.025*** (0.006)
credit_financial				-0.005 (0.012)		0.010 (0.011)
market_capitalization					0.003 (0.003)	0.004 (0.003)
inflation_cpi	-0.023*** (0.003)	-0.023*** (0.003)	-0.023*** (0.004)	-0.023*** (0.004)	-0.185 (0.114)	-0.190 (0.112)
govt_exp_growth	0.106 (0.090)	0.110 (0.092)	0.106 (0.089)	0.108 (0.087)	0.056 (0.054)	0.051 (0.051)
m2_gdp	-0.009 (0.012)	-0.024** (0.008)	-0.024** (0.007)	-0.021* (0.010)	-0.035*** (0.010)	-0.041** (0.013)
_cons	3.521 (2.357)	2.008 (2.666)	2.047 (2.618)	2.262 (2.588)	2.761 (2.168)	2.649 (2.096)
N	369	369	369	369	304	304
R-sq	0.390	0.414	0.415	0.415	0.429	0.432

Empirical Analysis: Results (Δ Inclusive Growth, High-Income Members, DPD)

	(1)	(2)	(3)	(4)	(5)	(6)
Dependent Variable: delta_inclusive_growth						
L.delta_inclusive_growth	0.133** (0.053)	0.145*** (0.054)	0.144*** (0.054)	0.150*** (0.054)	0.113** (0.056)	0.114** (0.056)
L.inclusive_growth	-0.940*** (0.070)	-0.963*** (0.073)	-0.960*** (0.073)	-0.976*** (0.073)	-0.998*** (0.077)	-1.002*** (0.076)
L.kaopen	-0.161 (0.234)		-0.155 (0.231)			
L.trade_open		0.009 (0.008)	0.008 (0.008)	0.002 (0.009)	-0.008 (0.010)	-0.011 (0.010)
L.credit_financial				-0.015** (0.007)		-0.018** (0.007)
L.market_capitalization					0.007*** (0.002)	0.006*** (0.002)
L.inflation_cpi	-0.019*** (0.005)	-0.019*** (0.005)	-0.019*** (0.005)	-0.019*** (0.005)	-0.142*** (0.050)	-0.159*** (0.050)
L.govt_exp_growth	-0.056 (0.052)	-0.056 (0.052)	-0.053 (0.052)	-0.066 (0.052)	-0.028 (0.053)	-0.033 (0.052)
L.m2_gdp	-0.015*** (0.006)	-0.022*** (0.007)	-0.020*** (0.007)	-0.004 (0.011)	-0.035*** (0.008)	-0.015 (0.011)
N	345	345	345	345	285	285
R-sq						

Empirical Analysis: Results (Δ Inclusive Growth, High-Income Members, SGMM)

	(1)	(2)	(3)	(4)	(5)	(6)
Dependent Variable: delta_inclusive_growth						
L.delta_inclusive_growth	0.127*** (0.040)	0.141*** (0.041)	0.143*** (0.041)	0.147*** (0.040)	0.126*** (0.043)	0.123*** (0.043)
L.inclusive_growth	-0.895*** (0.059)	-0.930*** (0.060)	-0.929*** (0.060)	-0.946*** (0.060)	-0.975*** (0.064)	-0.969*** (0.064)
L.kaopen	-0.438** (0.193)		-0.433** (0.191)			
L.trade_open		0.010*** (0.003)	0.009*** (0.003)	0.003 (0.004)	0.004 (0.003)	-0.002 (0.004)
L.credit_financial				-0.019*** (0.006)		-0.021*** (0.006)
L.market_capitalization					0.004** (0.002)	0.003 (0.002)
L.inflation_cpi	-0.017*** (0.004)	-0.016*** (0.004)	-0.018*** (0.004)	-0.017*** (0.004)	-0.085** (0.040)	-0.106*** (0.040)
L.govt_exp_growth	-0.061 (0.047)	-0.072 (0.047)	-0.065 (0.047)	-0.089* (0.047)	-0.011 (0.048)	-0.028 (0.048)
L.m2_gdp	-0.011** (0.004)	-0.025*** (0.005)	-0.020*** (0.006)	-0.004 (0.009)	-0.030*** (0.006)	-0.006 (0.010)
_cons	4.472*** (0.519)	4.387*** (0.512)	4.589*** (0.519)	5.323*** (0.594)	5.219*** (0.696)	6.284*** (0.763)
N	355	355	355	355	296	296
R-sq						

Empirical Analysis: Results (Δ Inclusive Growth, Non-High-Income Members, OLS)

	(1)	(2)	(3)	(4)	(5)	(6)
Dependent Variable: delta_inclusive_growth						
L.inclusive_growth	-0.667*** (0.087)	-0.608*** (0.088)	-0.664*** (0.087)	-0.643*** (0.089)	-0.879*** (0.134)	-1.012*** (0.090)
L.kaopen	0.678*** (0.128)		0.710*** (0.152)			
L.trade_open		-0.003 (0.006)	0.009 (0.007)	0.003 (0.005)	-0.006 (0.005)	0.002 (0.011)
L.credit_financial				-0.046** (0.016)		-0.081* (0.039)
L.market_capitalization					0.022** (0.007)	0.026*** (0.005)
L.inflation_cpi	0.000 (0.000)	0.000 (0.000)	0.000 (0.000)	-0.000 (0.000)	-0.012 (0.020)	-0.013 (0.015)
L.govt_exp_growth	0.029 (0.036)	0.028 (0.031)	0.028 (0.036)	0.032 (0.027)	0.080 (0.064)	0.121 (0.065)
L.m2_gdp	-0.016* (0.008)	-0.010 (0.010)	-0.023* (0.010)	0.042 (0.024)	-0.035 (0.028)	0.023 (0.033)
_cons	0.753 (1.388)	0.832 (1.068)	0.550 (1.382)	0.548 (1.364)	4.081** (1.299)	5.746*** (0.803)
N	291	291	291	291	169	169
R-sq	0.582	0.557	0.583	0.567	0.757	0.783

Empirical Analysis: Results (Inclusive Growth, Non-High-Income Members, OLS)

	(1)	(2)	(3)	(4)	(5)	(6)
Dependent Variable: inclusive_growth						
kaopen	0.619*** (0.072)		0.573*** (0.061)			
trade_open		-0.022 (0.012)	-0.012 (0.011)	-0.013 (0.011)	-0.013 (0.007)	-0.006 (0.007)
credit_financial				-0.058** (0.021)		-0.076** (0.028)
market_capitalization					0.030** (0.009)	0.030** (0.010)
inflation_cpi	-0.001*** (0.000)	-0.002*** (0.000)	-0.001*** (0.000)	-0.002*** (0.000)	-0.058** (0.019)	-0.050** (0.020)
govt_exp_growth	0.198** (0.067)	0.211** (0.072)	0.199** (0.066)	0.204** (0.063)	0.193* (0.083)	0.202** (0.082)
m2_gdp	-0.031** (0.011)	-0.012 (0.019)	-0.021 (0.017)	0.052 (0.037)	-0.040** (0.012)	0.018 (0.019)
_cons	2.904** (1.165)	3.526** (0.994)	3.177** (1.059)	3.079*** (0.704)	4.815*** (0.768)	6.018*** (1.104)
N	298	298	298	298	176	176
R-sq	0.517	0.496	0.519	0.519	0.683	0.723

Empirical Analysis: Results (Δ Inclusive Growth, Non-High-Income Members, DPD)

Dependent Variable: delta_inclusive_growth	(1)	(2)	(3)	(4)	(5)	(6)
L.delta_inclusive_growth	0.145** (0.061)	0.114* (0.062)	0.145** (0.061)	0.129** (0.060)	0.079 (0.073)	0.113* (0.067)
L.inclusive_growth	-0.846*** (0.079)	-0.774*** (0.078)	-0.846*** (0.079)	-0.846*** (0.077)	-0.998*** (0.104)	-1.132*** (0.100)
L.kaopen	0.779*** (0.200)		0.782*** (0.203)			
L.trade_open		-0.005 (0.012)	0.002 (0.012)	-0.002 (0.011)	-0.018 (0.012)	-0.019* (0.012)
L.credit_financial				-0.078*** (0.018)		-0.104*** (0.021)
L.market_capitalization					0.029*** (0.008)	0.033*** (0.007)
L.inflation_cpi	0.000 (0.000)	-0.000 (0.000)	0.000 (0.000)	-0.000 (0.000)	-0.007 (0.015)	0.006 (0.014)
L.govt_exp_growth	0.077** (0.037)	0.074** (0.037)	0.077** (0.037)	0.074** (0.036)	0.133** (0.060)	0.135** (0.056)
L.m2_gdp	-0.007 (0.010)	0.000 (0.014)	-0.009 (0.014)	0.080*** (0.023)	-0.037* (0.022)	0.048* (0.027)
N	278	278	278	278	161	161
R-sq						

Empirical Analysis: Results (Δ Inclusive Growth, Non-High-Income Members, SGMM)

	(1)	(2)	(3)	(4)	(5)	(6)
Dependent Variable: delta_inclusive_growth						
L.delta_inclusive_growth	0.132*** (0.047)	0.115** (0.047)	0.134*** (0.047)	0.125*** (0.046)	0.027 (0.052)	0.038 (0.050)
L.inclusive_growth	-0.822*** (0.069)	-0.775*** (0.070)	-0.823*** (0.069)	-0.829*** (0.069)	-0.920*** (0.081)	-0.963*** (0.078)
L.kaopen	0.875*** (0.183)		0.888*** (0.185)			
L.trade_open		0.001 (0.010)	0.007 (0.010)	-0.000 (0.010)	-0.009 (0.011)	-0.012 (0.010)
L.credit_financial				-0.078*** (0.016)		-0.087*** (0.018)
L.market_capitalization					0.029*** (0.007)	0.030*** (0.006)
L.inflation_cpi	0.000 (0.000)	-0.000 (0.000)	0.000 (0.000)	-0.000 (0.000)	-0.008 (0.012)	0.007 (0.012)
L.govt_exp_growth	0.091*** (0.034)	0.093*** (0.035)	0.091*** (0.034)	0.090*** (0.034)	0.144*** (0.054)	0.137*** (0.052)
L.m2_gdp	0.005 (0.008)	0.004 (0.013)	-0.003 (0.013)	0.088*** (0.022)	-0.015 (0.015)	0.074*** (0.023)
_cons	1.293** (0.538)	1.490** (0.588)	1.143* (0.583)	1.735*** (0.573)	2.251** (1.001)	2.884*** (0.967)
N	285	285	285	285	169	169
R-sq						

Empirical Analysis: Interpretation

- ◆ From the results of system GMM, structural reforms such as trade liberalization and capital account openness showed a positive impact on the GDP per capita growth in all APEC members.
- ◆ From the results of dynamic panel data estimation and system GMM, it turns out that trade liberalization and capital account openness did not affect income inequality, but domestic credit provided by financial sector (that is, financial sector development) has improved income inequality in all APEC members.

Empirical Analysis: Interpretation (cont.)

- ◆ Trade liberalization and capital account openness showed a positive impact on inclusive growth rates in all APEC members.
 - However, financial sector development has a negative impact on inclusive growth rates, even though the size of stock market has a positive impact.
- ◆ For high-income members, it turns out that capital account openness has a negative impact on inclusive growth, even though trade liberalization has a positive impact.
 - Especially, financial sector development has a negative impact on inclusive growth rates, even though the size of stock market has a positive impact.

Empirical Analysis: Interpretation (cont.)

- ◆ For non-high-income members, it turns out that capital account openness has a positive impact on inclusive growth, even though trade liberalization did not affect inclusive growth.
 - Just like high-income members, financial sector development has a negative impact on inclusive growth rates, even though the size of stock market has a positive impact.

Policy Implications

- ◆ APEC member economies need to keep reforming their economic system, by liberalizing trade and financial sectors, in order to enhance inclusive growth.
- ◆ However, high-income members need to redesign the financial sector in a more inclusive way.
 - Financial concentration in high-income members has been developed in a rich-friendly way. High-income members need to design the financial sector in a more inclusive way.

Policy Implications (cont.)

- ◆ Non-high-income members need to expand outcomes of trade liberalization in a more inclusive way.
 - Increase extensive margins of export sectors
 - Trade adjustment assistance (TAA)

- ◆ Financial sectors must be developed in a more inclusive way, by developing inclusive financial systems.
 - Increase access to the financial sector for poor and socially marginalized people.
 - Microfinance

Thank You for Listening!

Moonsung Kang
(Korea University)

mkang@korea.ac.kr