Exploring Diversity: Trade Policies and Macroeconomic Factors

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Introduction

Globalisation has been at the heart of intense political and economic debates in the past twenty years. While there is no commonly accepted definition, it is often referred to as "an increase in the extent to which individuals and institutions transact or exchange with others based in nation states other than their own, or otherwise influence them through their economic and social behaviour" (CEPR 2002: 1). As this description implies, international trade constitutes one of the main pillars of globalisation along with migration, telecommunication and cultural Westernisation. Nation states have become increasingly interconnected since the postwar era, as Robert Keohane and Joseph Nye observed in their landmark book *Power and Interdependence* (1977). This trend accelerated after the fall of the Soviet Union and has been particularly salient in the realm of global commerce. Indeed, countries are increasingly dependent on foreign trade and tariffs have never been so low – not only in the Western world, but also in numerous emerging economies such as China. In fact, most nation states have engaged in rapid trade liberalisation recommended by multilateral institutions such as the World Trade Organization.

While this approach is still heavily debated among politicians and scholars – especially since the outset of the financial crisis – remarkably little has been written about the great diversity of trade policies across countries. A brief look at tariff levels reveals stark differences between nations, even among those sharing borders or apparently similar economic conditions. The aim of this study is to investigate this persistent diversity and move beyond traditional approaches to trade preferences, focusing on macroeconomic factors. I formulate two hypotheses based on existing theories of international trade. First, in line with the infant industry argument, innovative economies tend to have lower tariffs than non-innovative ones as they are more competitive. Second, export-led countries are generally more open than those relying heavily on imports – as suggested by the sectors model. I will use a large sample of diverse countries, as well as data from the World Bank (2010, 2012) and the Central Intelligence Agency (2012), to test both hypotheses and shed light on trade preferences. It will be concluded that both innovation and import dependence do affect trade policies, with only a few notable exceptions.

The paper is divided in four distinct parts. The first section provides a brief literature review on academic debates surrounding free trade, protectionism and trade preferences – with a strong focus on political and socio-economic determinants of tariff policy. The second part discusses the shortcomings of existing theories; it then offers a research design suitable for exploring two macroeconomic factors and their impact on trade policy-making. The third section presents the main findings of the cross-country statistical analysis, with a closer look at two extreme cases – Singapore and Nepal. The fourth and final part of the study will seek to explain the double paradox of Latin American trade policies: the region is more protectionist than average despite moderate to high levels of exports and innovation; and the statistical model cannot account for the diversity of trade policies within Latin America.

1. <u>Free Trade, Protectionism and Determinants of Trade Policies</u>

The Case for Free Trade

In a 2012 lecture in Melbourne, Pascal Lamy – then Director-General of the World Trade Organization – vigorously defended the current free trade regime and was unequivocal about the dangers of restriction: "protectionism does not protect, it does not strengthen economies and it does not save jobs" (Lamy 2012). This view epitomises the prevailing consensus on international commerce, both in academia and multilateral organisations. Free trade remains the overarching goal of the WTO and has been praised by International Monetary Fund officials as a "win-win situation [...] in the interest of all people" (Krueger 2004).

Nonetheless, the theoretical case for free trade was made long before the globalisation era and the existence of any such institutions. In the late eighteenth and early nineteenth centuries, British economists Adam Smith and David Ricardo challenged the prevailing mercantilist doctrine – which promoted very high import tariffs, export subsidies and a positive balance of trade. Smith first defended free commerce in his landmark 1776 book, *An Enquiry into the Nature and Causes of the Wealth of Nations*. He argued that trading civilisations like Ancient Egypt, China and the Netherlands prospered more rapidly than mercantilist nations. He also asserted that high tariffs were often counterproductive and mostly caused by "the avidity of great manufacturers" seeking monopoly (Smith 2012: 641). Greatly inspired by Adam Smith's work, David Ricardo published his *Principles of Political Economy and Taxation* in 1817, introducing the much discussed concept of comparative advantage. According to the British economist, a nation has a comparative advantage in a product if it is relatively abundant with that product. Thus, countries should specialise and give up trade restrictions for the benefit of all. As Ricardo puts it, "under a system of perfectly free commerce, each country naturally devotes its capital and labour to such employments as are most beneficial to each; this pursuit of individual advantage is admirably connected with the universal good of the whole" (Ricardo 1821: 81).

The Ricardian approach to international trade gained considerable prominence in nineteenth-century Britain and became one of the foundations of modern economics. John

Maynard Keynes (2008: 208) depicted the "complete and overwhelming domination of the classical schools" among his peers: few scholars would question the benefits of free trade or doubt the dangers of mercantilism. This trend was confirmed in later parts of the twentieth century with the rise of neoliberal thought. Economists such as Friedrich Hayek and Milton Friedman radically opposed trade restrictions requested by special interests in society but which, in their view, were detrimental to society as a whole – partly due to tariffs' effects on domestic prices.

This claim has since been supported by numerous empirical studies on the effects of different commercial policies on economic prosperity. In particular, scholars examined the impact of free trade and protectionism on economic growth, poverty and inequality – with a strong focus on developing countries. Indian-American economist Jagdish Bhagwati is one of the most vocal and prominent advocates of free trade in the academic world. He stressed the importance of free commerce for economic development (Bhagwati & Srinivasan 1975) and refuted the view that trade liberalisation increases poverty (Bhagwati & Srinivasan 2002). Similar claims were made by David Dollar and Aart Kraay in a much discussed paper for the World Bank. The authors argued that states which embraced free trade in the 1980s enjoyed more economic growth and less poverty than "non-globalisers" (Dollar & Kraay 2001).

Challenging the Consensus

While the consensus on free trade remains strong both in academia and international governance, sceptics have pointed to past and present instances of liberalisation failures. Branko Milanovic (2003) criticised the "malignant face" of globalisation which he claims led to more inequality and slower growth. A 2005 report by Christian Aid, a British NGO, condemned trade liberalisation programmes implemented in numerous African states in the 1990s, including Ghana, Malawi and Uganda. The report highlights the sharp decline of manufacturing employment and agricultural production in the years following liberalisation – which, according to Christian Aid, "has cost Sub-Saharan Africa $272 billion over the past twenty years" (Christian Aid 2005: 1). In the same period, the unemployment rate doubled in Zimbabwe after deep tariff cuts (Chang 2007: 68).

Critics also pointed to the benefits of trade restrictions in numerous cases. As Allen (2011: 81) remarked, the United States was among the most protectionist nations in the nineteenth century and "US cotton manufacturing grew rapidly behind the tariff wall". Similarly, European countries like France, Germany and Sweden benefited from protectionist measures introduced in the late nineteenth century and experienced a "distinct acceleration in economic growth" (Bairoch 1993: 50). More recently, emerging economies such as South Korea and Brazil have used trade barriers as an integral part of their development strategy. In fact, Yanikkaya (2002: 84) argues that "restrictions on trade can promote growth, especially of developing countries".

Critics deconstructed the theory behind free trade as early as the eighteenth century. Daniel Defoe, the famed writer of *Robinson Crusoe*, was also a businessman, a spy and an early commentator on commercial policy. He depicted how Tudor monarchs used tariffs and export subsidies to develop England's woollen manufacturing industry (Chang 2007: 40). A few decades later, American economist and founding father Alexander Hamilton recommended protectionist measures for the United States and first presented the so-called *infant industry* argument in his *Report on Manufactures*. According to Hamilton, nascent industries needed to be protected until they could cope with foreign competition. This approach provided the rationale for US protectionism until the First World War and had a major influence on modern economic policy – including German scholar Friedrich List and Japan's Meiji leadership.

While free commerce gained salience at the turn of the twentieth century, some contemporary economists expressed doubts about its theoretical foundations. The case of John Maynard Keynes is particularly compelling. Like most of his peers, the prominent British scholar first held free trade as a "principle of international morals". However, his views grew more critical with the Great Depression and he later pointed to the shortcomings of the Ricardian model, especially with regards to unemployment: "it assumes that if you throw men out of work in one direction you re-employ them in another; as soon as that link in the chain is broken the whole of the free trade argument breaks down" (Keynes 1981: 115).

More recent sceptics include Maurice Allais, Dani Rodrik and Ha-Joon Chang. Allais, the unorthodox Nobel laureate of 1988, called for an "enlightened" protectionism but defended

unrestricted trade among countries with similar economic characteristics and wage levels (Allais 2009). Dani Rodrik also offers a sceptical view of international trade and has become one of the most prominent globalisation critics. In his book *The Globalization Paradox* (2011), the Harvard economist criticises what he calls "hyperglobalisation" and warned against the dangers of reckless trade liberalisation. Ha-Joon Chang has a more radical approach and condemns the current free trade regime headed by the WTO. He accuses Western countries of "kicking away the ladder from which they have climbed" by deterring the global South from adopting protectionist measures which benefited them in the past. This is wrong, he argues, as it perpetuates global inequalities and deprives developing countries from valuable tariff revenue. More importantly, the focus on comparative advantage has led some states to specialise in agriculture without diversifying their economy; this trend is particularly salient in Sub-Saharan Africa (Chang 2007: 69).

Determinants of Trade Policies

Most of the existing literature on international trade focuses on the effects of different trade policies on economic growth, employment, poverty and inequality. The studies highlighted above yield diverging conclusions on the merits of open or restrictive trade, especially in the developing world. Explaining *why* countries choose to adopt such policies may shed light on their success or failure; indeed, socio-economic conditions vary greatly among nations and across time and may have a major impact on trade outcomes. Determinants of trade policies have been studied by less extensive but significant research in the past decades. Most scholars have focused on four sets of factors to account for the diversity of tariff levels across the globe: security issues, sociological factors, institutions and political economy models.

First, trade preferences are closely linked with security issues. This was already acknowledged by Adam Smith in the eighteenth century. The Scottish economist favoured free commerce but granted an exception "when some particular sort of industry is necessary for the defence of the country" – in his time, Great Britain's shipping industry (Smith 2012: 452). More generally, Gowa & Mansfield (1993: 408) insisted "the most critical aspect of trade agreements in the anarchic international system is their security externalities". For

example, trade embargos have been used as strong diplomatic measures against Iran, Cuba and apartheid South Africa. Nonetheless, it has often been argued that the main driver of trade policy is economic interest, as opposed to security. This implies that international trade often determines security policies rather than the opposite: for instance, countries are reluctant to go to war with a crucial economic partner.

Second, commercial policies can be determined by voters' interests, particularly in democratic regimes. Thus, sociological factors have been the subject of numerous studies on trade preferences. According to Ceccoli et al. (2004: 845), both gender and income are "strong predictors of support for trade liberalization". Women and blue-collar workers tend to be more favourable to protectionism as they often define themselves as "globalisation losers"; likewise, support for free trade is highly dependent on the level of education (Mayda & Rodrik 2005). Moreover, trade preferences are correlated with people's ideology, political opinions and, more generally, world views. For example, Edwards (2006) demonstrated that opinions on free trade are strongly linked to political views on the free market and state intervention in the economy. Fiscal conservatives and libertarians tend to champion free trade, while leftists often favour protectionism. Hence, governments' political orientation often has a major impact on trade policies.

Third, regime type and institutional arrangements can shape trade preferences. Different regimes often result in different trade outcomes; as Rodrik (1994: 69) put it, "historically sharp changes in trade policy have almost always been preceded or accompanied by changes in the political regime". For instance, democratisation is often associated with trade liberalisation. Nonetheless, numerous authoritarian regimes – including Kazakhstan, Saudi Arabia and the United Arab Emirates – have very low tariffs. A more convincing approach focuses on the number of *veto players*, commonly defined as "institutional or partisan actors whose consent is needed to alter policies" (Mansfield et al. 2007: 403), in a given country. They are present in democracies, but also in autocratic regimes, where the support of military or religious organisations is often required to amend policies. Countries are less likely to sign trade agreements as the number of veto players increases; however, such agreements can also be supported by business lobbies if they benefit the actors at stake. In

sum, corporate and societal interests remain a powerful influence on national trade preferences, both for restrictions and liberalisation – as highlighted by Helen Milner (1987) in her study of France and the United States.

Finally, political economy models arguably provide the most compelling understanding of international trade preferences. Building on Ricardo's theory of comparative advantage, Stolper & Samuelson (1941) applied it to the three main factors of production – namely land, capital and labour – and their interests in trade policies. This approach, commonly known as the *factors model*, states that "protection benefits [...] owners of factors in which society is poorly endowed" (Rogowski 1987: 1122); conversely, owners of abundant factors will support free trade. As a result, Ronald Rogowski predicts people will support free trade or protectionism depending on their factor's abundance. They can exert pressure on political elites by opposing commercial policies which are not in their interest. In other words, foreign trade can shape political and societal cleavages, and vice versa. Rogowski (1987: 1123) further argues that increasing exposure to trade "must result in urban-rural [...] or class conflict" – depending on the distribution of wealth among factor owners. For instance, poor countries with abundant land but scarce capital will often witness urban-rural cleavages between workers and landowners. Thus, according to the factors model, trade preferences are determined by the outcomes of such power struggles. This theory is backed by historical examples: different factor owners support political parties offering different trade policies. In advanced labour-scarce, capital-rich economies, owners of capital tend to support rightwing, economically liberal parties. On the other hand, leftwing parties backed by workers often advocate protectionist policies – hence the creation of 'Labour' parties around the world. Similarly, urban-rural conflicts as predicted by the factors model are often prominent in land-rich emerging economies, particularly in Latin America.

Other scholars have developed the *sectors model*, an alternative approach to trade preferences. Its main assumption is the following: import-competing sectors often favour "trade restricting rather than trade promoting" (Tovar 2004: 3) to protect them from foreign competition; conversely, export-led industries will support free trade and low tariff or non-tariff barriers to ease their access to foreign markets. The sectors model helps correct some of the factors model's shortcomings as it acknowledges the differences within factors of

production. As a general rule, sectors suffering from trade openness will push for higher tariff and non-tariff barriers to prevent their decline. As Tovar (2004: 1) puts it, higher protection is usually required by "those sectors in which profitability is declining". In Europe, for instance, owners of capital in import-competing industries such as clothing manufacturing often demand trade barriers to protect themselves from increasing competition on the part of emerging economies like China and India.

2. <u>Research Design</u>

Filling the Gaps

The existing literature on international commerce provides a wide array of explanations for trade preferences, including political economy, institutional arrangements and sociological features. The factors and sectors models, in particular, cast light upon the centrality of trade issues for domestic power struggles. Nonetheless, previous research suffers from substantial shortcomings. For example, sociological approaches focus exclusively on voters' preferences which may not have any impact on decision-making – especially when it comes to technical issues like global commerce. It could be argued that societal cleavages over trade do not generally affect policy outcomes, as the issue is rarely at the centre of national political debates. Political economy models, on the other hand, have been criticised for oversimplifying political struggles. As Rogowski (2008: 1134) admitted himself, the factors model "depends on simplifying assumptions that are never achieved in the real world, among them perfect mobility of factors".

More fundamentally, political economy models and other approaches often fail to account for the wide range of trade policies across nations: their focus on diverging interests *within* countries largely ignores differences *between* countries. Furthermore, few quantifiable variables have been used to study the impact of macroeconomic factors on trade outcomes. Thus, previous research fails to elucidate the great diversity in trade restrictions. The common view is that poor countries are quite restrictive while "small, rich economies tend to be the least protectionist" (The Economist 2008). Nevertheless, a correlation between openness and economic development has often been suggested but rarely confirmed or empirically tested. Tariff levels also vary greatly across states, even among those with seemingly comparable wealth, size or political structure. For instance, average import tariffs are three times higher in Mexico than in Malaysia – even though both countries are considered as large emerging economies with roughly equal GDP per capita. Similarly, Singapore and Japan both belong to the most industrialised nations in Asia; Japan, however, is significantly more protectionist than its Southeast Asian counterpart (World Bank 2010). This paper thus provides an attempt to explore such diversity and fill the gaps highlighted above.

How can we account for the great diversity of trade policies across states? Some of the theories exposed in the first section can be applied to macroeconomic factors at the country level and shed light on trade preferences. Two hypotheses may be formulated as follows:

H₁ – *In line with the infant industry argument, innovative economies tend to be more open than non-innovative ones*

H₂ – *In line with the sectors model, export-led countries tend to be more open than import-dependent ones*

The first hypothesis derives from the infant industry argument outlined in the opening section of this paper; it assumes states design trade policies in a broadly rational manner. As Alexander Hamilton first remarked, nascent industries cannot compete on the international market and may require protection. In particular, they are often unable to achieve the economies of scale of their foreign competitors. This may be due to several factors including differences in the institutional environment, technology, human capital or ease of getting credit. Thus, we could presume that tariffs will be relatively high in countries where most public and private enterprises lack skilled workers and high-tech facilities. Indeed, such industries will seek protection from international competition and governments may design strategic policies to promote domestic production. Conversely, highly innovative economies can adopt more open trade policies as technological advances, education and a sound business environment allow their firms to compete on a global or regional scale.

The second hypothesis applies the sectors model to the country level. As highlighted above, the model predicts diverging trade interests between import-competing and export-competing industries in a given country. The former often seek protection from international competition and push for higher tariffs. The latter are not threatened by imports and want access to foreign markets: they will thus support free trade. This logic can be taken a step further to account for the diversity of trade policies across countries. Indeed, if a state is highly dependent on imports, most of its industrial base – as well as its agricultural sector – will be import-competing. Most economic actors can thus be expected to require protection and support high tariffs. Besides, high tariff revenues can help offset the trade deficit

created by this reliance on imports. Conversely, export-led economies often have no particular need for protectionist policies as they run a trade surplus. Most of their industries are export-competing and do not require high levels of protection. In sum, it is conjectured that import-dependent countries tend to favour protectionism while export-led ones will champion free trade.

Data & Variables

I use recent data from the World Bank (2010 & 2012) and the Central Intelligence Agency (2012) to test the two hypotheses highlighted above. The diverse sample comprises 71 states from all continents – the European Union and Hong Kong are each counted as one country as they both have distinct trade policies. It includes developing, middle-income and advanced economies, as well as most major economic and demographic powers:

Albania	Honduras	Pakistan
Algeria	Hong Kong	Panama
Argentina	Iceland	Peru
Australia	India	Philippines
Bangladesh	Indonesia	Russia
Benin	Iran	Rwanda
Bolivia	Israel	Saudi Arabia
Brazil	Japan	Senegal
Burkina Faso	Jordan	Singapore
Cambodia	Kazakhstan	South Africa
Cameroon	Kenya	South Korea
Canada	Lebanon	Sri Lanka
Chile	Madagascar	Switzerland
China	Malawi	Tanzania
Côte d'Ivoire	Malaysia	Thailand
Croatia	Mali	Togo
Ecuador	Mauritius	Trinidad & Tobago
Egypt	Mexico	Turkey
El Salvador	Mongolia	Uganda
Ethiopia	Nepal	Ukraine
European Union	New Zealand	United Arab Emirates
Ghana	Niger	United States
Guatemala	Nigeria	Uruguay
	Norway	Zambia

Several variables will be employed to investigate the great diversity in trade policies. The Dependent Variable measures restrictions across countries at a given time. Using trade openness as a response rather than an explanatory variable is rather unusual, but still relevant: it has often been argued liberalisation is "the *outcome* rather than the *cause* of economic development" (Chang 2007: 74). The **Trade Tariff Restrictiveness Index** (TTRI) is extracted from the World Bank's World Trade Indicators (2010), the most recent available data. It reflects the equivalent uniform tariff of a nation that would maintain domestic import levels constant – taking the WTO's most-favoured nation (MFN) principle into account. In other words, the TTRI score measures a country's average applied tariff rate on all products. It should be acknowledged that tariffs constitute an imperfect indicator of trade openness; indeed, non-tariff barriers such as licenses and quotas have often been deemed as "murky protectionism" (Baldwin & Evenett 2009). Nevertheless, as Rodrik (2000: 24) pointed out, tariff levels provide a "reasonably accurate ranking of countries in terms of trade policy openness". In that regard, it may be more precise than other commonly used indicators such as trade volume – which combines the total amount of imports and exports but does not inform much about commercial restrictions.

The cross-country analysis will comprise several continuous Independent Variables. The first hypothesis will be tested with the use of the **Global Innovation Index (**GII*)*, published jointly by the INSEAD business school and the World Intellectual Property Organization (2012). This highly composite index measures innovation in a broad sense based on seven distinct pillars: *institutions*, including political stability, the business environment and the rule of law; *human capital and research*, which measures the quality of education and scientific research; *infrastructure* such as the access to communication technologies, environmental performance and means of transportation; *market sophistication*, including the value of stocks and the ease of getting credit; *business sophistication* which comprises employment in knowledge-intensive services and foreign direct investment (FDI); *knowledge and technology outputs*, including high-tech exports and the number of patents; and *creative outputs* such as trademark registrations and the number of feature films produced. The final index combines all these elements and allows for a fairly accurate ranking of the world's economies according to overall innovation.

Another Independent Variable will be employed to test the second hypothesis: ***Import Dependence***, based on recent data from the Central Intelligence Agency (2012). It is simply measured by dividing total imports by total exports for a given country. The higher the number, the more import-reliant the country is. For example, this number will be below 1 for export-led economies and well above it for those running a large trade deficit. The balance of trade thus helps us distinguish between export- and import-dependent countries.

Finally, ***Gross Domestic Product per Capita***, at purchasing power parity, will be included as a third explanatory variable to verify the independent effect of innovation and import dependence on average tariffs. Indeed, one could expect both factors – particularly innovation – to be strongly correlated with GDP per capita. I use data from the World Bank (2012) which measures "the market value of all goods and services of a country at a given time, divided by population size".

3. <u>Empirical Analysis: Exploring Diversity</u>

Main Findings

A first look at the data reveals the complex and diverse links between international trade and macroeconomic factors. As expected, the sample's 71 economies are pursuing very different trade policies. Table 1 below illustrates the diversity of tariff levels among nations: the TTRI score varies from Singapore's 0 to Malawi's 20.5, with a relatively high standard deviation. Explanatory variables are equally diverse: innovation – as measured by the Global Innovation Index –, import dependence and wealth vary greatly across sampled countries. For instance, Saudi Arabia exports three times more than it imports, thus scoring 0.33 on import dependence. Nepal's total imports, on the other hand, amount to more than six times its export levels (CIA 2012). Similarly, GDP per capita is only $732 in Niger – the poorest state in the sample – and over $61,000 in Singapore (World Bank 2012).

	N	Minimum	Maximum	Mean	Std. Deviation
TTRI Score	71	,0	20,5	7,501	4,3484
Valid N	71				

Table 1 – Descriptive Statistics on TTRI scores (SPSS)

Let us now divide each variable used into three roughly equal categories: "open", "quite protectionist" and "very protectionist" for the Trade Tariff Restrictiveness Index; "highly innovative", "quite innovative" and "not innovative" for the Global Innovation Index; "export-dependent", "balanced" and "import-dependent" for import dependence; and "high-income", "middle-income" and "low-income" for GDP per capita. We can then examine different macroeconomic factors and their interaction with trade openness.
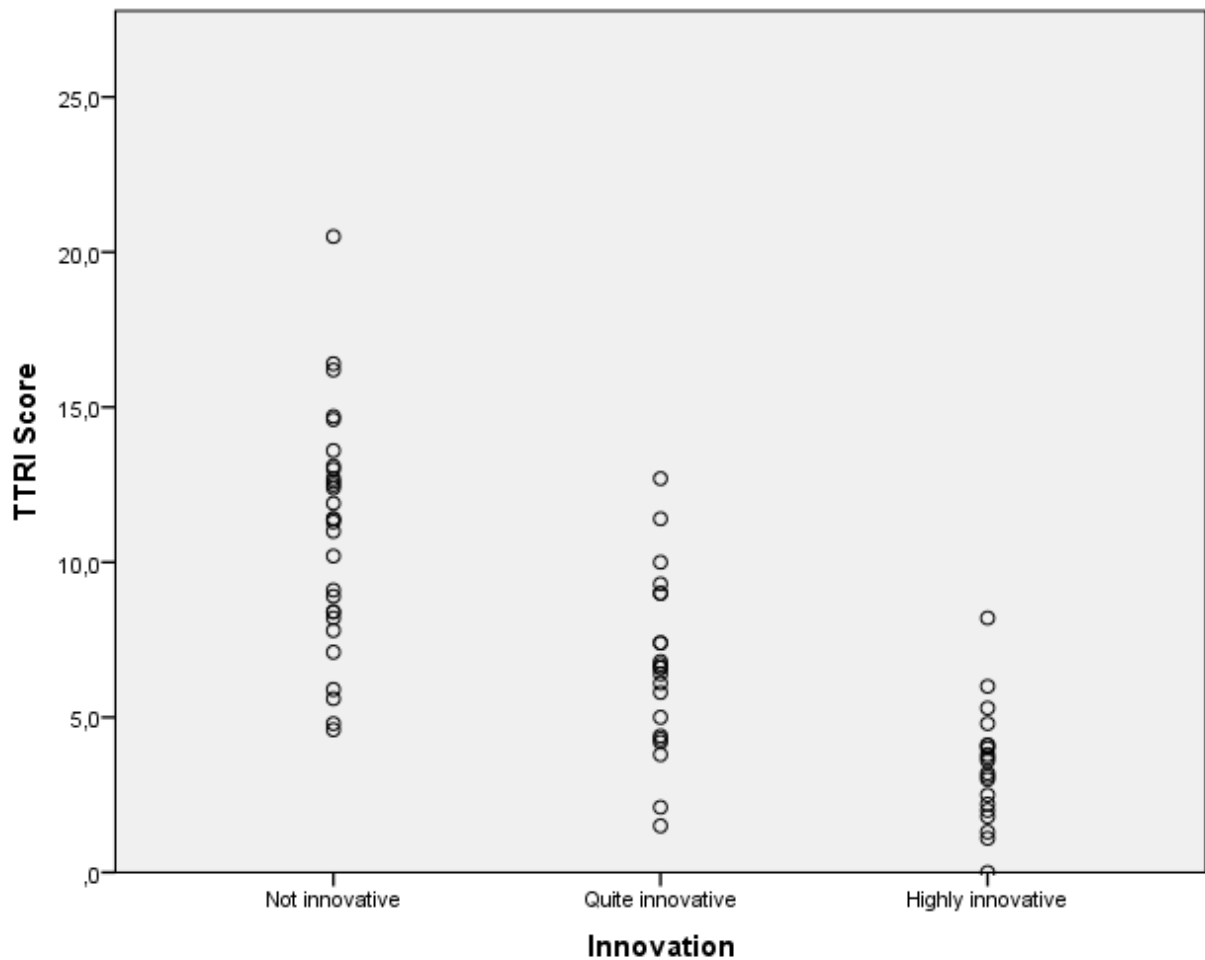
Figure 1 – Innovation Categories & Average Applied Tariff Rates (SPSS)

Several observations can be made. First, innovation and trade openness seem to be strongly correlated, as illustrated by Figure 1 above. In fact, only two countries in the least innovative group have tariffs below the sample average of 7.5: Egypt and Honduras, with TTRI scores of respectively 5.6 and 7.1. Highly innovative economies, on the other hand, all have TTRI scores below the sample average, with Jordan and South Korea as notable exceptions. As expected, "quite innovative" states adopt moderately high tariffs, with some – including Kazakhstan and Turkey – more open than most others. This seems to confirm our first hypothesis: innovation and tariff levels are intrinsically linked.

Second, a similar graphical analysis of import dependence and its relationship with trade openness reveals a more nuanced picture. Figure 2 below does not indicate a clear correlation between tariffs and import dependence. Indeed, stark variations can be observed in all three categories. This trend is particularly salient among import-dependent

economies – with a ten-fold difference between Malawi and Rwanda on the one hand, and Mauritius or the United States on the other. Besides, a number of export-led countries such as Algeria and Iran have TTRI scores well above the sample average. Our second hypothesis is thus put into question, as the graph below does not suggest substantial differences between the three categories.
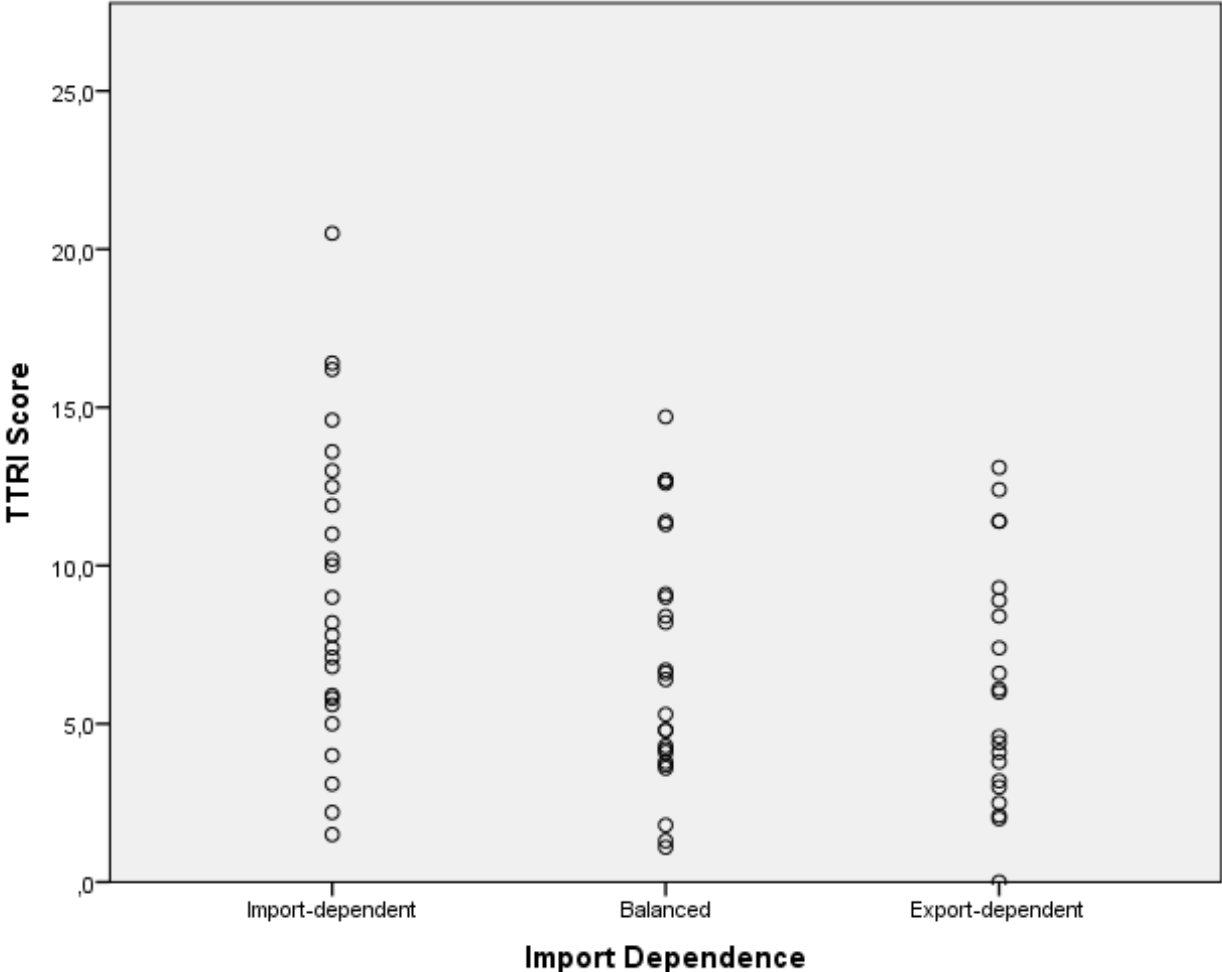

Figure 2 – Import Dependence Categories & Average Applied Tariff Rates

Third, GDP per capita appears to be strongly correlated with trade openness, as suggested by Table 2 below. The cross tabulation reveals a very close link between the two factors. Indeed, more than two-thirds of low-income countries in the sample can be classified as "very protectionist" and only one – the Philippines – belongs to the most open group. Conversely, almost 90 percent of high-income economies are open while none belong to the most restrictive group. As expected, more than half of middle-income countries are

"quite protectionist" with the rest roughly equally split between the other two categories. Table 2 therefore suggests a positive correlation between GDP per capita and trade openness: the richer the country, the lower the trade barriers.

			Openness			TOTAL
			Very Protectionist	Quite Protectionist	Open	
Income Groups	Low-income	Count	18	6	1	25
		% within Income Group	72,0%	24,0%	4,0%	100,0%
		% within Openness	78,3%	26,1%	4,0%	35,2%
		% of Total	25,4%	8,5%	1,4%	35,2%
	Middle-income	Count	5	15	8	28
		% within Income Group	17,9%	53,6%	28,6%	100,0%
		% within Openness	21,7%	65,2%	32,0%	39,4%
		% of Total	7,0%	21,1%	11,3%	39,4%
	High-income	Count	0	2	16	18
		% within Income Group	0,0%	11,1%	88,9%	100,0%
		% within Openness	0,0%	8,7%	64,0%	25,4%
		% of Total	0,0%	2,8%	22,5%	25,4%
TOTAL		Count	23	23	25	71
		% within Income Group	32,4%	32,4%	35,2%	100,0%
		% within Openness	100,0%	100,0%	100,0%	100,0%
		% of Total	32,4%	32,4%	35,2%	100,0%

Table 2 – Income Groups & Trade Openness (Cross Tabulation)

Given the results of the preliminary assessment, we can presume a sound statistical model should include all three explanatory variables – innovation, import dependence and GDP per capita (in thousands of dollars) – to account for the variance in tariff levels. Let us then examine the outcome of such a multiple linear regression model:

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	13,228	1,995		6,630	,000
	GDP/capita PPP	-,045	,055	-,163	-,824	,413
	Global Innovation Index	-,181	,071	-,494	-2,535	,014
	Import Dependence	,961	,441	,194	2,180	,033

a. Dependent Variable: TTRI Score

Table 3 – Multiple Linear Regression Model with 3 Explanatory Variables

Surprisingly, Table 3 above does not suggest an independent effect of a country's wealth on its TTRI score. Indeed, the standardised coefficient for GDP per capita is rather low (-.163) and the variable is not significant, with a p-value surpassing 40 percent. Innovation and import dependence, on the other hand, are both significant at the 5% level. Let us therefore exclude GDP per capita to design an alternative model with only two explanatory variables. The linear equation can be presented as follows:

$$TTRI_i = \beta_0 + \beta_1 * Innovation_i + \beta_2 * Import\ Dependence_i + \varepsilon_i$$

(Where i is country)

This second linear regression model, which only includes innovation and import dependence as independent variables, yields the following results:

Model Summary

Model	R	R Squared	Adjusted R Squared	Std. Error of the Estimate
1	,724[a]	,524	,510	3,0434

a. Predictors: (Constant), Global Innovation Index, Import Dependence

Coefficients[a]

Model	Unstandardized Coefficients		Standardized Coefficients	T	Sig.
	B	Std. Error	Beta		
1 (Constant)	14,339	1,466		9,778	,000
1 Import Dependence	1,030	,432	,208	2,386	,020
1 Global Innovation Index	-,234	,032	-,637	-7,300	,000

a. Dependent Variable: TTRI Score

Table 4 – Multiple Linear Regression Model with 2 Explanatory Variables

The model outlined in Table 4 is now a satisfactory one: it captures both hypotheses and has a good predictive value. The coefficient of determination – adjusted R squared – of 51 percent indicates a very strong goodness of fit to the data. Moreover, the model demonstrates a significant correlation of both innovation and import dependence with trade openness, as illustrated by the very low p-values. This confirms the two hypotheses outlined above. First, the Global Innovation Index is negatively correlated with the Trade Tariff Restrictiveness Index; in other words, innovative countries tend to be more open than those with a low GII. The relationship between both variables is indeed very strong and significant at the one percent level. Second, import dependence is positively correlated with TTRI scores. This means import-reliant economies will tend to be more protectionist than export-led ones. The variable is significant at the 5 percent level but the standardised coefficient is lower than for innovation, indicating a lesser correlation with trade openness.

The statistical model thus casts light on the diversity of trade policies across countries. A few observations can help clarify the link between openness and macroeconomic factors. As mentioned above, it may seem puzzling that tariffs in Mexico should be more than three times higher than in Malaysia. Indeed, the two countries are newly industrialised economies with a GDP per capita of around $15,500 – and both are classified as "flawed democracies" by The Economist (Economist Intelligence Unit 2012). Our final model partly explains this anomaly. With a GII of 45.9, Malaysia is one of the most innovative states in Asia, known for its strong investor protection laws and attracting considerable amounts of FDI each year. Moreover, its economy is driven by extensive exports of petroleum, wood and electronic

equipments; Malaysia thus has an import-dependence index of only 0.79. Mexico, on the other hand, has been growing slowly over the past few years, with low labour productivity and enduring corruption: the country scores a rather low 32.9 on the Global Innovation Index. Furthermore, as opposed to Malaysia, Mexico imports as much as it exports. Hence, given the results outlined in Table 4, it is no surprise that the Central American economy should be more protectionist than its Southeast Asian counterpart.

Other states in the sample follow similar patterns. Poor, non-innovative economies in South Asia and Sub-Saharan Africa tend to adopt very high tariffs. For instance, Malawi, Nepal and Rwanda all have 2010 TTRI scores surpassing 15 – more than twice the sample average. The three countries are characterised by very low GII scores and an unusual dependence on imports. On the other hand, major oil exporters like Norway, Saudi Arabia and the United Arab Emirates are often more open than other countries in the sample; this is partly due to their strong dependence on exports. Several newly industrialised countries with high levels of innovation and exports – including China, Thailand and Turkey – have also adopted low tariffs. As expected, rich, innovative economies such as Singapore, Switzerland, the United States and the European Union maintain relatively low tariffs.

Nonetheless, there are notable exceptions to the rule and a close look at the data reveals several outliers. A number of developing or emerging countries have very open trade policies in spite of high import levels and quite low innovation intensity: for example, Turkey and the Philippines have TTRI scores of respectively 1.5 and 3.8. Conversely, some highly innovative economies like Japan and South Korea have adopted relatively high tariffs. Algeria and Iran, on the other hand, have very high TTRI scores – unlike most other resource-rich and oil-exporting states. Finally, the three largest Latin American economies – Argentina, Brazil and Mexico – are particularly protectionist; this anomaly will be addressed in the fourth section of this paper.

Extreme Cases – Singapore and Nepal

As political theorist Giovanni Sartori (1991: 244) observed, "comparing is controlling [...] whether generalizations hold across the cases to which they apply". Having examined the main findings of the regression analysis, let us thus turn to two extreme cases: Singapore and Nepal. The two Asian countries are located at opposite ends of our statistical sample – as illustrated by Table 5 below. Singapore is by far the most open economy in the sample

while Nepal has the second highest tariffs, with a TTRI score of 16.4 surpassed only by Malawi; this stark difference can certainly be accounted for.

	Global Innovation Index	*Import Dependence*	*TTRI*
SINGAPORE	63.5	0.88	**0**
NEPAL	26	6.03	**16.4**

Table 5 – Macroeconomic Indicators for Singapore & Nepal

The city-state of Singapore has become one of the wealthiest and most densely populated countries in the world since its independence in 1965. It is usually referred to as the typical – and most successful – example of export-driven industrialisation. The country holds virtually no natural resources and has very little space for agriculture. Singapore was often described as an *entrepôt economy* which served as a transit point between Europe and South-East Asia for commodities and manufactured goods. Moreover, as Linnemann et al. (1987: 383) rightly argued, "given the limited size of the domestic market, industrialisation inevitably involves export-oriented industrialisation". Thus, the Singaporean economy is characterised by a strong reliance on foreign trade. In fact, the Port of Singapore has become the busiest in the world with over 23 million twenty-foot equivalent units (TEUs) of containerised traffic handled each year (International Herald Tribune 1997).

Originally a mere transit point between East and West, Singapore gradually developed its manufacturing sector from the 1960s onwards. A short period of strategic protection was followed by rapid trade liberalisation supported by a large export processing zone (EPZ). While services – including banking and finance – constitute Singapore's largest sector, manufacturing now accounts for more than 25 percent of the country's GDP, as opposed to 15% in 1965 (Linnemann et al. 1987: 382). Singapore is especially strong in electronics, biotechnology and oil refinery: the city-state holds no oil reserves but has become one of the largest refining centres in the world (Singapore Government 2010). The export-led economy is also supported by a largely corrupt-free business environment, high levels of innovation and an educated workforce. Research and development is one of Singapore's main assets: an empirical study by Cheah & Jussawalla (1983) found that "a sizeable portion" of the

country's economy was information-based as early as the 1980s. As a result, Singapore scores a high 63.5 on the Global Innovation Index, ahead of Hong Kong and the United States and only surpassed by Switzerland. Besides, the city-state imports relatively little compared to its exports which account for more than 200% of its GDP (World Bank 2012). All this explains why Singapore has low – or even inexistent – import tariffs.

Nepal faces an entirely different situation. This landlocked Himalayan country is one of the poorest in Asia with a GDP of around 40 billion dollars and a population surpassing 26 million. Despite relatively high growth rates in recent years, almost half of Nepalese people are unemployed and 55 percent of the population lives with less than $1.25 a day. Rural populations in the North and West are even poorer than the national average (Panday 2000). These rural areas suffered from the decline in development expenditure in the 1990s – partly induced by IMF adjustment programmes – "as many planned irrigation, health, and education projects were suspended" (Sharma 2006: 1245). Only a fraction of the Nepalese territory is cultivable due to its mountainous geography; the Southern Terai region is actually the only fertile area in the country. Moreover, agricultural output is highly dependent on the monsoon season: for instance, insufficient rainfalls significantly reduced Nepal's paddy output in 2012 (FAO 2012). As a result, most of the rural population are poor subsistence farmers. Along with population growth, these factors have led to a significant decline in commodity exports since the 1980s. Nepal's agricultural sector has performed poorly "even among South Asian countries" (Sharma 2006: 1239).

Furthermore, the Nepalese industry is still in its infancy and only employs a very small fraction of the nation's workforce (Oczkowski & Sharma 2005). It suffers from poor productivity and innovation, as illustrated by Nepal's GII index of 26. This is partly due to the lack of technological progress and a largely uneducated population: almost 40 percent of Nepalese adults are illiterate (UNICEF 2012). Nepal's troubled political environment is another hindrance to its economy. Prevalent corruption hampers growth and, more generally, economic development (NORAD 2011). Political instability also contributed to the current situation: a violent civil war erupted in 1996 between the royalist government and the Maoist movement. Both sides were accused of human rights violations and the death toll

reached 12,000 in only a few years (The Economist 2004). The conflict ended with a peace treaty signed in November 2006; nonetheless, Nepalese politics remains highly unstable.

In sum, the domestic economy is unable to meet the needs of Nepalese citizens – partly due to insufficient agricultural output and a very weak industrial sector. Therefore, Nepal relies extensively on foreign aid, remittances from its immigrants abroad and, most importantly, imports. While the country exports little else than carpets and garments, it is much more dependent on imports than any other country in the sample. Its import dependence ratio is 6.03 and total Nepalese exports only amount to 9 percent of its GDP (World Bank 2012). It is thus no surprise to find Nepal among the most protectionist economies in the world in light of the evidence presented above.

4. <u>The Latin American Paradox</u>

A Double Paradox

As we saw in the previous section, a model which includes innovation and import dependence as explanatory variables has good predictive value and helps shed light on the diversity of trade policies. Nonetheless, the regression model only explains part of the phenomenon under study. A close look at the data reveals several outliers; some suggest that Latin America[1] is one such outlier. Indeed, the region has come under fire in recent years for being too protectionist, especially since the outset of the global financial crisis. British newspaper *The Economist*, known for its strong advocacy of free trade, insisted "regional integration, not protectionism, is the right response to fears of deindustrialisation" in the continent (The Economist 2012). In a similar fashion, EU Trade Commissioner Karel de Gucht pointed to the "worrying signs of protectionism that are appearing in some Latin American countries" (The Parliament 2012). However, these assertions must be empirically verified: is the region more prone to protectionism than other parts of the world? The empirical data reveals a double paradox.

First, Latin America seems indeed more restrictive than Europe, Asia or North America: the average TTRI score for the twelve Latin American states in the sample is 7.7, as opposed to 7.4 for the remaining 59 economies. The three large regional powers – Argentina, Brazil and Mexico – are particularly restrictive despite their economic dynamism, with 2010 TTRI scores of respectively 11.4, 9.3 and 12.7. This is higher than several poor, non-innovative countries in Asia and Sub-Saharan Africa, such as Cambodia, Kenya and Zambia. Other states in the region retain relatively high tariffs, including Bolivia and Peru. This protectionist tendency is rather surprising in view of Latin America's moderate innovation capacity and high levels of exports. Figure 3 illustrates the positive correlation between import dependence and protectionism. Latin America – red data points in the graph below – exports more than other parts of the world: its average import dependence score is only 1.1, as opposed to 1.4 for the whole sample. Nevertheless, countries in the region are often more

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[1] To avoid confusion, I use a broad definition of *Latin America*, namely all American territories where the Spanish and Portuguese languages prevail; this includes Mexico, Central and South America.

restrictive than other middle-income economies. This is the first paradox of Latin American trade policy: average tariffs remain substantial despite high levels of exports and moderate scores on the Global Innovation Index.
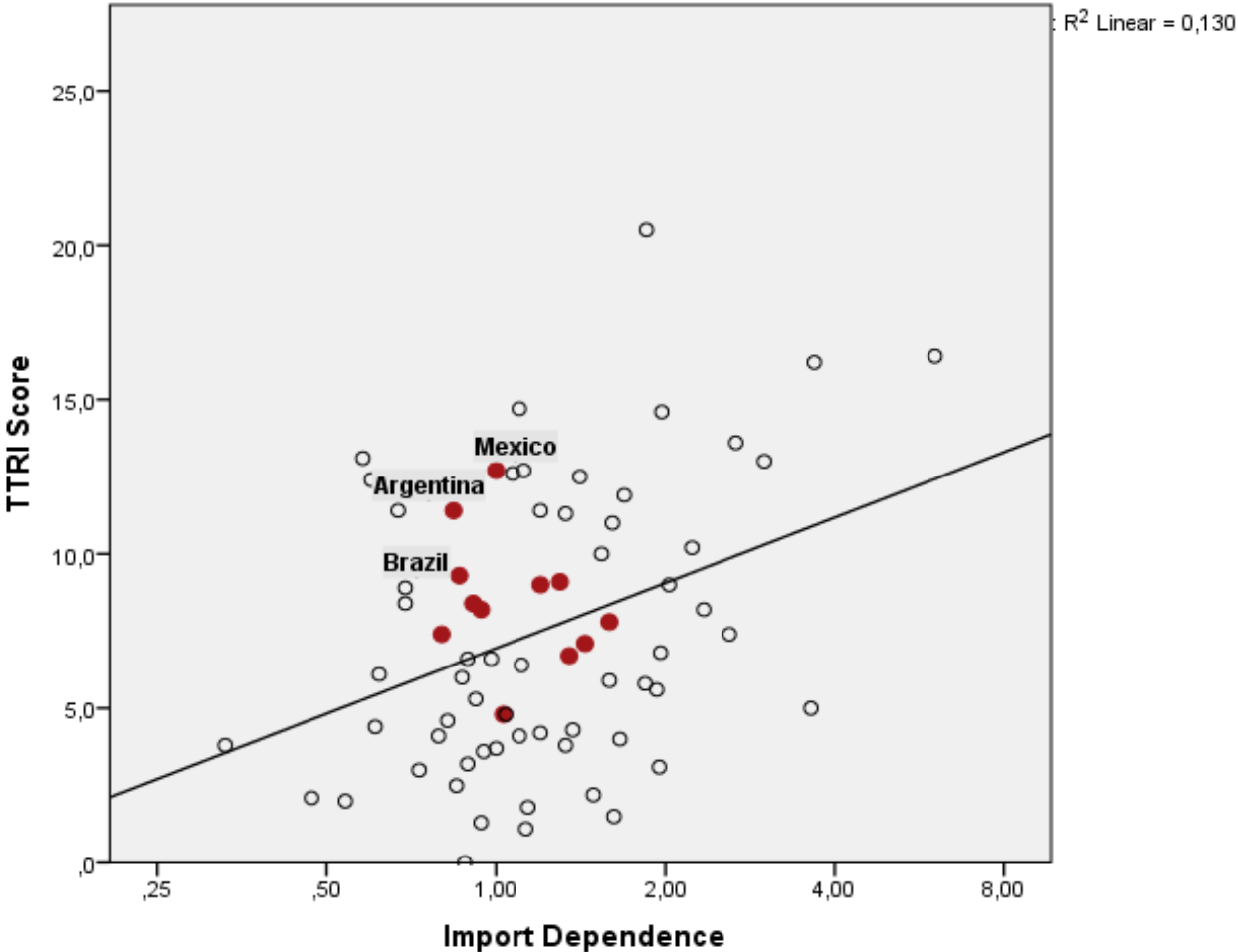

Figure 3 – Import Dependence & TTRI Scores

Second, the correlation between innovation and import dependence on the one hand, and trade openness on the other, appears minimal in the region; to some extent, it may even be reversed. Table 6 below outlines the diversity of innovation, import dependence and trade openness indicators for the twelve Latin American states in the sample. Surprisingly, the three most open economies – Ecuador, El Salvador and Guatemala – are not highly innovative and import more than they export. The case of El Salvador is particularly puzzling: this poor Central American state scores a low 29.5 on the Global Innovation Index. Besides, it imports almost twice as much as it exports which makes it the most import-

dependent nation in the continent. Nevertheless, El Salvador has a TTRI score of 5.8, well below the regional and sample averages. Conversely, some of the most innovative states in Latin America – including Argentina and, to a lesser extent, Brazil, Peru and Mexico – have adopted relatively high tariffs. Most of these restrictive countries also have export-led economies. In sum, differences in innovation and import dependence cannot account for the diversity of tariff levels in Latin America.

	Innovation	*Import Dependence*	*TTRI*
ARGENTINA	34.4	0.84	**11.4**
BOLIVIA	25.8	0.91	**8.4**
BRAZIL	36.6	0.86	**9.3**
CHILE	42.7	0.87	**6**
ECUADOR	28.5	1.04	**4.8**
EL SALVADOR	29.5	1.84	**5.8**
GUATEMALA	28.4	1.59	**5.9**
HONDURAS	26.3	1.44	**7.1**
MEXICO	32.9	1	**12.7**
PANAMA	30.9	1.35	**6.7**
PERU	34.1	0.80	**7.4**
URUGUAY	35.1	1.11	**6.4**

Table 6 – Macroeconomic Indicators for 12 Latin American countries

Latin America can be depicted as a double paradox in view of the analysis presented above. It remains particularly protectionist despite high levels of exports and moderate scores on the Global Innovation Index; and the model's two explanatory variables have little effect in the region. The statistical model outlined in the previous section is thus insufficient to investigate Latin American protectionism. After a brief overview of the region's economic history, some of the approaches highlighted in the first chapter – including political economy, geopolitics and the role of ideology – will help shed light on the region's

peculiarities. This section largely focuses on the three regional powers, which are also the most restrictive states in Latin America: Argentina, Brazil and Mexico.

The Role of Economic History

The empirical data established two paradoxes in Latin American trade policies, among them the region's high tariffs despite high levels of exports. Some attributed the collapse of global commerce and the surge in protectionism to the recent financial crisis, partly due to the lack of trade credit. However, Latin American protectionism existed long before the 2008 financial crisis. As Coatsworth & Williamson (2002: 10) observed, "Latin America had the highest tariffs in the world as early as 1865, a leadership position it held until the 1930s". Even during the so-called *golden age* of globalisation, the region was extremely restrictive. In fact, tariffs kept rising until the outset of the First World War, a period usually considered as the *belle époque* for Latin America. International trade in the early 20th century was characterised by "an enormous variance in levels of protection between the regional club averages": tariffs in Brazil and Colombia were over ten times those in India and China. Thus, Latin American protectionism is not a new phenomenon, nor is the double paradox highlighted above. The variance in tariffs within the region – between Colombia and Chile for instance – was already considerable at the time.

Numerous scholars attempted to account for the high levels of tariff barriers in 19th and early 20th century Latin America. Miguel Centeno (1997) pointed to several historical factors. First, most states in the region had recently gained their independence and lacked the bureaucratic resources to tax income, expenditure or wealth; tariffs were thus an easy source of revenue for central governments. Second, the author counted over thirty major regional conflicts between 1819 and 1880. As a result, military expenditure rose to almost 90 percent of public spending in most countries. This further encouraged Latin American governments to adopt very high tariffs and finance the military budget. Even though Centeno's arguments are historically valid, they cannot account for present protectionism in the region. Indeed, most Latin American states have been independent for over a century and maintain relatively low levels of military expenditure. Part of the explanation lies in more recent economic history.

First, restrictive trade policies might be due to the enduring influence of import substitution industrialisation (ISI) policies. Ha-Joon Chang (2007: 22) summarises this much debated development strategy: "a backward country produces industrial products that it used to import, thereby substituting industrial products with domestically produced equivalents". This is achieved by providing home producers with temporary – or "strategic" – protection against imports. ISI originated in Latin America where it was first implemented in the 1930s and remained influential in the continent, as well as in the global South as a whole, until the 1970s. Nonetheless, import substitution lost prominence in the 1980s and has been largely deemed as inefficient since then. This is partly due to the economic crises experienced by Latin American states during that period. However, Dani Rodrik (2001: 17) insisted "trade and industrial policies had very little to do with bringing on the crisis". Instead, he argues poor monetary and fiscal policies and a global economic downturn were responsible for the hardships experienced by developing countries. In fact, ISI strategies have led to significant results in the global South. In the 1960s, over forty developing nations enjoyed growth rates exceeding 2.5 percent per capita per annum; these included numerous Sub-Saharan African countries like Togo and Côte d'Ivoire which also experienced a sharp rise in living conditions and life expectancy at birth. Latin American states were particularly successful in the 1960s and 70s, with per capita income growing at over 3% a year. It is thus no surprise they should seek to reproduce ISI strategies, in spite of conventional wisdom to the contrary.

A second factor may be the perceived failure of trade liberalisation programmes in the past thirty years – as part of the so-called Washington Consensus, coined by American economist John Williamson (1990). The principles of this neoliberal reform package heavily influenced the relationship between international financial institutions and developing countries in the 1990s. It included ten broad policy recommendations such as fiscal discipline and deregulation. Trade liberalisation was an essential part of the Washington Consensus and, more generally, of the neoliberal worldview. As Latin America witnessed a series of financial crises in the 1980s, it became the primary target of the neoliberal agenda and some of its policies were especially designed for the region. Governments in Peru, Bolivia, Argentina and other Latin American nations undertook radical reforms – often called

Structural Adjustment Programmes (SAPs) by the World Bank and the International Monetary Fund – which included a sharp reduction in import tariffs.

According to most scholars, such reforms were far from successful: regional economies stagnated and poverty increased in some countries. As Rodrik (2006: 975) observed, "the 1990s as a whole saw less growth in Latin America than in 1950-80, despite the dismantling of the state-led, populist and protectionist policy regimes of the region". Brazil and Bolivia, in particular, experienced a troubling stagnation in GDP and living standards following the implementation of structural adjustment programmes. The Argentine crisis which occurred from 1999 to 2002 has often been described as the ultimate failure of the Washington Consensus. Argentina, the IMF's "poster boy", suffered from enduring recession, hyperinflation, widespread unemployment and increasing social unrest following the devaluation of the Brazilian real which harmed Argentinean exports. The government finally defaulted on its external debt in late 2001 and engaged in a slow recovery in the following years (BBC 2001). In fact, import substitution and high tariffs were some of the tools used by the Kirchner administration to redress the country. While the Washington Consensus *per se* was not held responsible for the crisis, the IMF was heavily criticised for its slow reaction and short-sighted praise of the Argentine economy just months before the crash.

Critics of free trade also point to the Mexican crisis of the 1980s as an example of failed liberalisation. Neoliberal policies undertook by President Miguel de la Madrid from 1982 onwards led to rising unemployment and poverty and economic stagnation: Mexico's GDP per capita only grew by an average 0.1% a year between 1985 and 1995. In particular, rapid trade liberalisation wiped out whole swathes of Mexican industry and arguably undermined the country's agricultural sector (Chang 2007: 68). In sum, the perceived – and actual – failure of trade liberalisation policies in the 1980s and 90s still resounds in Latin America and may explain current protectionist tendencies.

Political Economy & Social Structures

Economic history casts light on the Latin American paradox. The enduring influence of ISI strategies and the recent reaction to neoliberal liberalisation programmes partly explain the region's trade restrictive policies. Nonetheless, historical approaches alone cannot

account for the double paradox highlighted above. Political economy models, on the other hand, analyse political struggles and deliver compelling analyses of the ways in which factorial distribution and societal cleavages shape trade policies. The Stolper-Samuelson theorem – commonly known as the factors model – is particularly relevant for Latin America. As mentioned in the first section of this paper, the factors model – as developed by Stolper & Samuelson (1941) – applies Ricardian theories to the three factors of production: land, labour and capital. Owners of the abundant factor will push for lower trade barriers while others will ask for protection. The model then predicts the emergence of urban-rural or class conflict, depending on factorial distribution (Rogowski 1987). Trade preferences are thus determined by political struggles between owners of land, labour and capital.

The theorem provides an interesting lens into trade preferences and can be easily applied to Latin America. Most countries in the continent – especially the three large regional powers – are characterised by land-rich, capital-scarce economies and low population density. Indeed, Latin America enjoys abundant agricultural resources: it contributes to 11 percent of global food production and represents almost a quarter of the world's arable land (Inter-American Development Bank 2013). Moreover, population density remains consistently lower than in other continents with less than fifty people per square kilometre (UN Department of Economic and Social Affairs 2010). Therefore, countries such as Brazil, Bolivia and Argentina have been experiencing urban-rural conflicts predicted by the factors model. Labour and urban middle classes are often united against rich landowners: the former support their government's protectionist policies while the latter – owners of the abundant factor – often reject them and push for lower tariffs (Skidmore & Smith 1984). Similarly, this may explain why some Latin American economies are more open than others. For instance, Guatemala and El Salvador, two of the least restrictive states in the region, have less abundant resources and very high population density comparable to Thailand or the United Kingdom (UNDESA 2010). As a result, urban-rural conflicts are less prevalent in small Central American countries.

On the other hand, struggles over trade have fuelled continuous conflicts between landowners and Latin American governments, particularly in Argentina and Brazil. The 2008 food crisis exacerbated these tensions as both governments used trade policies to increase domestic supply and reduce prices. For instance, the Argentine government led by Cristina

Kirchner raised levies on soybeans and introduced export bans on crucial agricultural products such as wheat and flour to prevent staple food shortages. This led to a major conflict with the agricultural sector which resulted in mass protests, farmers' strikes and road blocks all across the country. After four months of confrontation, the Senate narrowly rejected the rise in export levies and the reforms were cancelled (FAO 2009).

The Argentine case illustrates the centrality of trade issues for social and political cleavages in Latin America. For instance, urban-rural tensions are reflected in the region's tariff system. In Brazil and Argentina, import restrictions are considerably higher for manufactured than for agricultural products (World Bank 2010). The trade regime thus reveals societal cleavages in both countries: landowners pushed for openness while the urban working and middle classes – as well as industrialists – obtained restrictions on non-agricultural products. The latter group has grown in size and political influence in the last decades and has been able to shape trade policy in its own interest. Nevertheless, a number of scholars such as Ronald Rogowski (1987: 1134) recognised the limitations of the factors model and its stylised assumptions. The theory's application to the Latin American trade regime does reveal several flaws. For example, Peru and Ecuador both have high tariffs on agricultural goods despite abundant agricultural resources and competitive exports. Mexico's remarkably high tariff regime also remains a puzzle. The country is not particularly innovative and exports relatively little compared to its imports; but its 2010 TTRI score of 12.7 is only surpassed by a handful of underdeveloped nations in South Asia and Sub-Saharan Africa.

In sum, the factors model helps understand the double paradox of Latin America's commercial policies. Recurrent tensions between wealthy landowners and the urban working classes have greatly influenced policy-making on trade in Argentina, Brazil and elsewhere. Conversely, high population density and low agricultural output partly explain the relative openness of small Central American nations.

Politics & Ideology

Politics and ideology also play a major role in shaping trade preferences in Latin America. As mentioned in the first chapter, Edwards (2006) demonstrated the strong link

between people's ideology and their views on international commerce. Leftwing governments tend to adopt more restrictive policies than rightwing and neoliberal ones; this may explain the prevalence of protectionism in the region. Indeed, the vast majority of Latin American countries are currently governed by leftwing – or so-called populist – parties. The most prominent heads of state include Dilma Rousseff and her predecessor Lula da Silva in Brazil; Cristina Kirchner in Argentina; and Uruguay's José Mujica, also known as the world's "poorest president" for his inexpensive lifestyle (BBC 2012b). Some Latin American presidents even claim to follow Marxist principles, including Venezuela's Hugo Chavez and Bolivia's Evo Morales, whose election attracted considerable media attention in 2005. Of the twelve Latin American states in the sample, only two are currently governed by rightwing parties – Chile and Honduras –, both of which have relatively low tariffs. Past declarations epitomised regional leaders' attitude towards foreign trade. The recently elected Mexican president Enrique Peña Nieto argued "the way forward is not protectionism, but openness" (Financial Times 2012). However, other heads of state have stressed the need for defensive commercial policies. Brazilian president Dilma Rousseff claimed her country's industrial sector had to be defended against foreign competition (Bloomberg 2012). Similarly, Rafael Correa insisted Ecuador would not sign free-trade agreements with any Western states (Wall Street Journal 2013).

Finally, some attribute the prevalence of protectionism in Latin America to geopolitical factors and the peculiarity of regional integration in the continent. It is dominated by two organisations: Mercosur, a political and customs union founded in 1991 by Argentina, Brazil, Paraguay, Uruguay and Venezuela; and the Andean Community, a customs union created in 1969 by Bolivia, Colombia, Ecuador and Peru. While both institutions have established free trade and flow of people among members, political and economic integration is only partial, as illustrated by the variety in import quotas on external products. Intra-regional trade remains very limited in Latin America with only 25 percent of total exports in 2010, as opposed to 50 percent in Asia (The Economist 2012). Besides, the current levels of import tariffs have led some commentators to use the term "fortress Mercosur" (BBC 2012a).

Restrictions are mainly directed at American exports: although the United States remains the region's first trading partner, their troubled political relationship often spills over to

commercial policies. Indeed, Latin American leaders have been very critical of American foreign policy since the CIA's involvement in several coups during the Cold War – including those in Guatemala and Chile. Current governments in Venezuela, Bolivia, Ecuador and elsewhere still have tense diplomatic relations with the United States. As Leeds & Long (2006: 433) remarked, geopolitical alliances often shape trade policies. Thus, numerous Latin American countries maintain relatively high tariffs on U.S. products; this may have a direct impact on the region's average tariff rate. The long trade dispute involving Brazilian and American governments over cotton subsidies illustrates the problematic commercial relationship between Latin America and the United States. In 2010, Brazil implemented trade sanctions against various American goods in retaliation for U.S. subsidies to cotton farmers (BBC 2010).

A Successful Policy Choice?
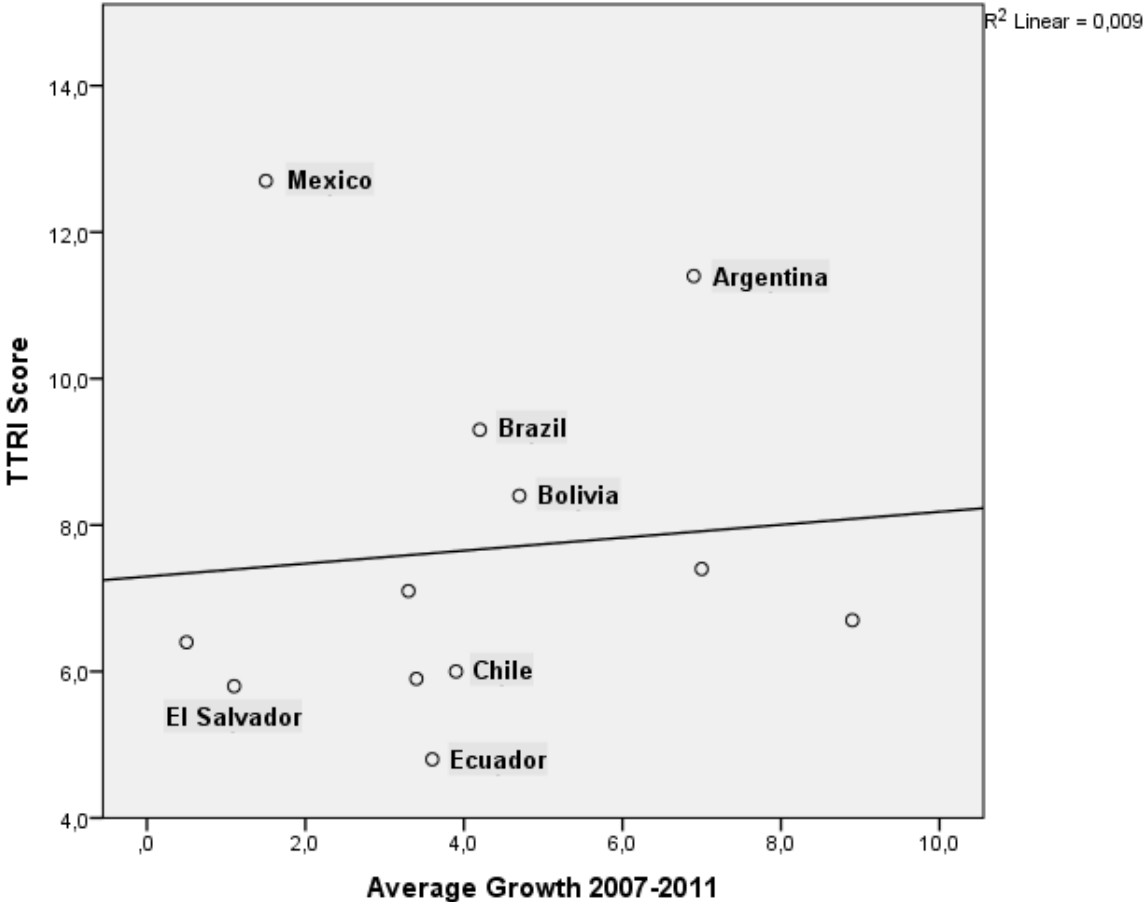
Figure 4 – Trade Restrictiveness and Average Annual Growth Rate (2007-2011) in Latin America

One should question the merits of Latin American protectionism and its impact on economic performance. This is a particularly sensitive issue in view of the debates outlined in the first section. Figure 4 above illustrates the link between trade restrictiveness and average annual growth in Latin America for the period 2007-2011. At first glance, it does not suggest a significant difference between open and restrictive nations. Mexico – the most protectionist Latin American state – only grew at an average annual rate of 1.5% between 2007 and 2011. Ecuador and Chile, two of the most open economies in the region, enjoyed much higher growth rates in the same period. Nevertheless, three of the most restrictive Latin American countries – Argentina, Bolivia and Brazil – grew by respectively 6.9, 4.7 and 4.2 percent annually. By contrast, El Salvador was the slowest-growing state with a mere 1.1% average in 2007-11, despite low tariffs. The case of Argentina is particularly striking. The country suffered a major economic crisis in 2002 and adopted some of the most restrictive trade policies in the region; nonetheless, its GDP grew by an astonishing 6.9 percent annually between 2007 and 2011, in the midst of the global financial meltdown.[2]

It remains unclear whether high tariffs have led to higher growth. However, the Latin American case – like other past instances – demonstrates that protectionism and strong economic performance can certainly coexist. Indeed, the region grew at an average 4.6 percent annually since 2007, faster than other states in the sample (4.2%). This highlights the region's resilience to the recent financial crisis compared to some of its emerging counterparts: for example, annual growth rates in Russia, South Africa and Thailand did not surpass 3% over the same period. Other developing nations such as Bangladesh, India and Ghana have grown very rapidly since 2007 – with average rates of respectively 6.2, 7.7 and 8.3 percent – behind high tariff barriers. Nonetheless, some more open Asian economies have also done well – especially China, Mongolia and Indonesia. This illustrates there is no single recipe for economic success: Latin America has numerous specificities which are not necessarily shared by other regions, among them urban-rural conflicts and recent economic history. In any case, the coexistence of high tariffs and consistent economic growth is particularly intriguing in the current context. Some would argue that strategic protection might allow for greater resilience to external shocks.

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[2] This figure may be misleading as Argentina's actual inflation rate is probably much higher than the official estimate. See: A. Cavallo, "Online and Official Price Indexes: Measuring Argentina's Inflation" (M.I.T., 2012).

Conclusion

The paper established significant links between innovation and import dependence on the one hand, and trade openness on the other. This helps cast some light on how different macroeconomic factors may lead to diverse trade policies. As conjectured by our two hypotheses, highly innovative economies tend to have low tariffs while non-innovative ones are more restrictive; and import dependence is negatively correlated with openness. This conclusion contributes to ongoing scholarly debates and allows for a better understanding of trade preferences. Indeed, as mentioned in the first part of this study, most of the existing literature on this subject adopts a domestic level of analysis and often fails to explain tariff differences between states. The results presented in the third section offer a more detailed picture of trade policies and their links with innovation and import dependence. Least developed countries with low levels of innovation, such as Malawi and Rwanda, are highly dependent on foreign imports and often adopt very high tariffs. Conversely, innovative industrialised nations in the Western world are generally characterised by open trade policies. A closer look at Nepal and Singapore, two cases at opposite ends of the statistical sample, illustrated these differences.

However, the empirical analysis also revealed a number of outliers. For instance, South Korea, Algeria and Iran are much more protectionist than our model would predict; conversely, a number of emerging economies – including Turkey and the Philippines – maintain remarkably low tariffs. The fourth section focused on the puzzle of Latin American trade policies: the approach chosen in this paper cannot account for protectionism in Latin America, nor can it explain the variance in tariff rates across the region. Other factors such as social structures, ideology and recent economic history seem to be more prevalent. Hence, although both hypotheses are confirmed by the data, the statistical model alone cannot explain tariff differences or predict trade policies with very much accuracy. Of course, all the factors highlighted in the first part of this study often determine trade preferences – regime type, politics and security concerns in particular. But the model also suffers from several shortcomings which may be addressed by future research. For example, the World Bank data on tariffs does not distinguish between agricultural and non-agricultural products. There can be a huge gap between those two types of imports, as we saw in the fourth

section on Latin America. Furthermore, the model does not include non-tariff barriers such as quotas, subsidies and other forms of trade distortion. Finally, a longitudinal study would better investigate the evolution of tariffs over time. It would help establish causal links and evaluate the impact of the recent financial crisis. All these issues could be investigated by future research on the subject. In any case, this paper shed light on the economic diversity of nations and its impact on commercial policies. It also leads us to question the viability of *one-size-fits-all* approaches to international trade.

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Appendix

COUNTRY	GDP PER CAPITA PPP (IN DOLLARS)	AVERAGE GROWTH RATE 2007-2011	GII SCORE	IMPORT DEPENDENCE	TTRI SCORE
Albania	*8944*	*4,7*	*30,4*	*2,60*	*7,4*
Algeria	*8715*	*2,7*	*24,4*	*,60*	*12,4*
Argentina	*17674*	*6,9*	*34,4*	*,84*	*11,4*
Australia	*39466*	*2,6*	*51,9*	*,89*	*3,2*
Bangladesh	*1788*	*6,2*	*26,1*	*1,33*	*11,3*
Benin	*1628*	*3,9*	*24,4*	*1,20*	*11,4*
Bolivia	*5130*	*4,7*	*25,8*	*,91*	*8,4*
Brazil	*11719*	*4,2*	*36,6*	*,86*	*9,3*
Burkina Faso	*1310*	*4,9*	*24,6*	*1,07*	*12,6*
Cambodia	*2372*	*6,0*	*23,4*	*1,30*	*9,1*
Cameroon	*2383*	*3,1*	*25,0*	*1,10*	*14,7*
Canada	*40541*	*1,2*	*56,9*	*1,00*	*3,7*
Chile	*17125*	*3,9*	*42,7*	*,87*	*6,0*
China	*8442*	*10,5*	*45,4*	*,92*	*5,3*
Côte d'Ivoire	*1803*	*1,1*	*22,6*	*,69*	*8,4*
Croatia	*20031*	*,0*	*40,7*	*1,66*	*4,0*
Ecuador	*8486*	*3,6*	*28,5*	*1,04*	*4,8*
Egypt	*6324*	*5,2*	*27,9*	*1,93*	*5,6*
El Salvador	*6877*	*1,1*	*29,5*	*1,84*	*5,8*
Ethiopia	*1116*	*9,7*	*23,3*	*3,00*	*13,0*
EU 27	*32828*	*2,8*	*45,5*	*1,10*	*4,1*
Ghana	*1884*	*8,3*	*29,6*	*1,20*	*9,0*
Guatemala	*4961*	*3,4*	*28,4*	*1,59*	*5,9*
Honduras	*4066*	*3,3*	*26,3*	*1,44*	*7,1*
Hong Kong	*49990*	*3,6*	*58,7*	*1,13*	*1,1*
Iceland	*37115*	*-,4*	*55,7*	*,85*	*2,5*
India	*3650*	*7,7*	*35,7*	*1,54*	*10,0*
Indonesia	*4668*	*5,9*	*28,1*	*,82*	*4,6*
Iran	*11479*	*3,9*	*27,3*	*,58*	*13,1*
Israel	*28007*	*6,6*	*56,0*	*1,14*	*1,8*
Japan	*34278*	*-,6*	*51,7*	*1,03*	*4,8*
Jordan	*6007*	*5,2*	*37,1*	*2,03*	*9,0*
Kazakhstan	*13189*	*5,6*	*31,9*	*,47*	*2,1*

Kenya	1718	4,2	28,9	2,34	8,2
Lebanon	14709	7,1	36,2	3,63	5,0
Madagascar	972	2,3	24,2	2,67	13,6
Malawi	918	6,8	25,4	1,85	20,5
Malaysia	15589	4,4	45,9	,79	4,1
Mali	1099	4,5	25,4	1,12	12,7
Mauritius	14523	4,5	39,2	1,95	3,1
Mexico	15340	1,5	32,9	1,00	12,7
Mongolia	4764	8,3	35,0	1,37	4,3
Nepal	1256	4,5	26,0	6,03	16,4
New Zealand	30108	,8	56,6	,95	3,6
Niger	732	4,3	18,6	1,69	11,9
Nigeria	2532	6,8	24,6	,67	11,4
Norway	57092	,6	56,4	,54	2,0
Pakistan	2763	3,5	23,1	1,41	12,5
Panama	15695	8,9	30,9	1,35	6,7
Peru	10318	7,0	34,1	,80	7,4
Philippines	4140	4,6	29,0	1,33	3,8
Russia	21358	2,9	37,9	,62	6,1
Rwanda	1251	7,3	27,9	3,68	16,2
Saudi Arabia	24434	3,5	39,3	,33	3,8
Senegal	1981	3,5	28,8	2,23	10,2
Singapore	61103	5,9	63,5	,88	,0
South Africa	11035	2,7	37,4	,98	6,6
South Korea	30206	3,5	53,9	,94	8,2
Sri Lanka	5620	6,5	29,1	1,96	6,8
Switzerland	47817	6,8	68,2	,94	1,3
Tanzania	1521	2,6	23,9	1,59	7,8
Thailand	8703	3,1	36,9	,89	6,6
Togo	1042	,6	20,5	1,61	11,0
T. & Tobago	25951	3,7	32,5	,61	4,4
Turkey	16885	2,0	34,1	1,62	1,5
UAE	48222	7,4	44,4	,73	3,0
Uganda	1354	,9	25,6	1,97	14,6
Ukraine	7251	6,1	36,1	1,20	4,2
Uruguay	15181	,5	35,1	1,11	6,4
USA	48442	,5	57,7	1,49	2,2
Zambia	1623	,7	26,4	,69	8,9