

Mega Regionals and the Developing Countries

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1 Introduction and Motivation

Since the stalling of the Doha Round – which was designed to be development friendly – the world is awash in mega regionals. Major negotiations currently underway include the Trans-Pacific Partnership (TPP), the Transatlantic Trade and Investment Partnership (TTIP), the Trade in Services Agreement (TISA), and the Regional Comprehensive Economic Partnership (RCEP), a negotiation that subsumes the China-Japan-Korea (CJK) negotiation, a mega regional in its own right, as well as the ASEAN Economic Community which is slated to come into force in 2016 and might be considered something of a mega regional as well.¹ In addition, a number of other FTAs involving the world's 10 largest economies (including bilaterals among various combinations of the United States, the EU, China, Japan, Korea, Canada, and Australia) have recently been concluded or are engaged.

These agreements are liberalizing trade and investment on a preferential basis amongst mainly more advanced economies – upper-middle-income countries or high-income countries. The above-mentioned negotiations include only two lower-income countries – Cambodia and Myanmar (RCEP) – and only six lower-middle-income countries (five in RCEP, plus Pakistan in the TISA). However, even in RCEP, which includes a significant number of developing economies, the main liberalization is amongst the more advanced countries, with the China-Japan-Korea (CJK) negotiation being by far the most important set of dyads. China-India and ASEAN-India on services are the major areas where RCEP would introduce new liberalization amongst developing economies (the ASEAN Economic Community being a deepening of an existing FTA).

Notably, apart from the China-India dyad within the RCEP, none of the mega regionals aim at liberalizing trade and investment amongst the BRICS countries: if India drops out of RCEP because it cannot risk liberalizing trade with China (which has to be considered a significant risk to that negotiation even with the change in government in India), then none of the mega regionals will involve BRICS dyads. Thus, while the BRICS, as a group, account for a comparable share of global GDP as the EU or the United States, and have formed their own club, complete with summits (the 6th BRICS summit will be held in Fortaleza, Brazil, on 15 July 2014, shortly after the conclusion of the FIFA World Cup), a development bank (which is to be launched this year), and a currency reserve facility, they have not come together as a trading bloc as such. There has been some movement in that direction through various bilaterals: Mercosur-India; Mercosur-SACU; the China-India 2008 Joint Study; the 2013 Joint Study for a Comprehensive Economic Cooperation Agreement between India and the Customs Union of Russia, Belarus, and Kazakhstan; and an initial probing of a China-Mercosur agreement, which, however, raised too many concerns within Mercosur to allow forward movement. However, notwithstanding their trade complementarities, a BRICS trade bloc has not emerged.

¹ One could add the Tri-Partite Agreement, which aims to link the African groups COMESA, EAC and SADC. However, the prospects for this agreement seem at best distant and rather slim.

How development-friendly is the current framework for trade and investment liberalization? I consider a number of features of the mega regionals that bear on this question: preference creation for trade in goods and services, regulatory competition/cooperation, rules of origin, preferential investment liberalization, intellectual property rights, disciplines on state-owned corporations, and financial sector regulation/exchange rate disciplines. To provide concrete quantitative and analytical insights I draw on a range of recent modelling studies on the TPP, the TISA, the RCEP, and other agreements amongst the world's largest economies.

The Mega Regionals

The **Trans-Pacific Partnership** (TPP) parties include **Australia, Brunei, Canada, Chile, Japan, Malaysia, Mexico, New Zealand, Peru, Singapore, the United States, and Vietnam**. The TPP economies are all members of APEC. TPP members have a combined population of about 800 million people, a combined GDP of US\$28 trillion,² imports of goods of US\$5.2 trillion³, and imports of commercial services of approximately US\$1.0 trillion.⁴

The **Trade in Services Agreement** (TISA) negotiating membership now consists of 23 parties: **Australia, Canada, Chile, Colombia, Costa Rica, the European Union, Hong Kong, Iceland, Israel, Japan, Liechtenstein, Mexico, New Zealand, Norway, Pakistan, Panama, Paraguay, Peru, Korea, Switzerland, Taiwan, Turkey, and the United States**. China and Uruguay have expressed interest in joining the negotiations. The negotiating parties, including the countries applying to accede, had a total population of 2.97 billion people and a combined GDP of more than \$58 trillion in 2013. In 2012, these countries' services exports were valued at about \$3.5 trillion.

The **Transatlantic Trade and Investment Partnership** (TTIP) consists of the 28-member **European Union** and the **United States**. The two largest economies in the world account for 47% of global GDP in 2014, with bilateral trade of over US\$ 600 billion accounting for about one-fifth of each other's external exports.

The **Regional Comprehensive Economic Partnership** (RCEP) is a negotiation led by the Association of Southeast Asian Nations (ASEAN) aiming to enhance economic integration and cooperation within a group of participating states comprised of the ten members of ASEAN (**Brunei, Cambodia, Indonesia, Lao PDR, Malaysia, Myanmar, Philippines, Singapore, Thailand, and Viet Nam**) and six countries with which ASEAN has developed Free Trade Agreements (FTAs): **Australia, China, India, Japan, Korea, and New Zealand**. RCEP brings together economies that accounted for US\$21.2 trillion worth of GDP in 2012 or 28% of the global total, and 3.4 billion people or about 47% of the global total. In terms of global commerce, in 2012, RCEP member economies together accounted for the following:

- 29.0% of global goods imports and 28.7% of global goods exports;
- 15.0% of global inward foreign direct investment (FDI) stocks and 12.4% of global outward FDI stocks; and
- 25.0% of global commercial services imports and 20.7% of global commercial services exports.

Colour Code:

Blue: Low Income
Red: Lower-Middle Income
Tan: Upper-Middle Income
Green: High Income

² Estimated 2013 population and GDP from the IMF World Economic Outlook Database, October 2013.

³ International Trade Centre, "TradeMap: Merchandise imports," (2012)..

⁴ WTO, "Services Trade Database: Services imports," (2012).

2 Preference Creation and Trade Diversion

The exclusion of most developing countries from the mega regionals ironically mimics the direction in which the Doha Development Agenda was taking following the offer of a “round for free” to the least developed countries. However, it is far less good a deal for developing countries than any Doha Round scenario since not only do developing countries not obtain the benefits from own-liberalization but face preference erosion in the top 10 markets in the world.⁵ There is a strong presumption that the mega regionals are therefore not in the interests of developing countries. The question is: how big a deal is this?

The question of whether preferential trade agreements’ (PTAs) trade creation dominates trade diversion or vice versa has been long debated. The conventional wisdom at this point is that trade creation is the norm and trade diversion the exception, and that such trade diversion as occurs is fairly minor (Freund and Ornelas, 2010).⁶ Hoekman, Schiff and Goto (2006), however, report very significant variation from one PTA to the next as regards the increase in intra-PTA imports versus overall international trade.

Two considerations suggest that diversion is not likely to be insignificant. First, from the perspective of the firm, there is a “compression effect” from the presence of sunk costs of entering foreign markets; as a result, firms enter fewer markets than they otherwise would. By the same token, at least some firms that have options across different foreign markets and choose the PTA partner must be diverted by the PTA. Second, substitution elasticities across competing sources of imports are generally understood to be higher than between domestic products and foreign products (reflecting a “home bias” in consumer preferences). Accordingly, insofar as preferences induce substitution away from domestic products they are likely to have even more powerful effects in inducing substitution away from competing imports from third parties. This effect would be much stronger with high tariffs against third parties, as indicated by the Hoekman, Schiff and Goto (2006) results.

In various simulations of the TTP, TISA, RCEP and bilaterals amongst the major economies, under assumptions that seek to approximate “best guess” outcomes of these negotiations or published information concerning concluded negotiations, excluded economies consistently suffer welfare losses.⁷

Under the TTP “best guess” as to what the “landing zones” for the negotiations entails, the smaller developing economies that we lump into a “Rest of the World” group suffer losses of about -0.05% of GDP, commensurate with a welfare loss in absolute terms of about USD 7-8 billion. India experiences a welfare loss on the order of USD 3-4 billion, commensurate with a real GDP loss of about -0.03% to -0.04% of GDP. China’s losses are somewhat larger, ranging in the USD 17-18 billion area or about -0.05 to -0.06% of GDP.

⁵ See Kinnman and Lodefalk (2006) for an assessment of the value to developing countries of a “round for free” (answer: dubious), and Amiti and Romalis (2007) for an assessment of the importance to developing countries of MFN liberalization in the advanced countries, which speaks to the risks to developing countries of preferential liberalization exclusively within the advanced country group and the resulting trade diversion.

⁶ Methodological issues loom large in this area, most importantly taking into account the endogeneity of PTAs and the question of direction of causality. Baier and Bergstrand (2007) provide a good discussion of the issues.

⁷ Note: These simulations were conducted using a dynamic version of the GTAP model, modified to directly represent Mode 3 services trade by incorporating a foreign-owned representative firm in each services sector and to reflect the impact of liberalization of FDI. The simulations take into account tariff reductions, preference utilization, the cost of preference utilization, and the reduction of non-tariff barriers to goods, services and investment, as relevant to the negotiation in question. These studies will be forthcoming as a series by Dan Ciuriak and Jingliang Xiao.

Under TISA with only Mode 1 liberalized based on liberalization assumptions that follow Petri, Plummer and Zhai (2011), the impacts vary in their importance by country. For China, the negative impacts are generally negligible (about USD 4 billion or -0.01% of GDP in 2030), meaning that there is no great pressure on China to join the talks. Brazil experiences somewhat larger losses in percentage terms – -0.03% of GDP – consistent with welfare losses of about USD 1.2 billion. The Rest of the World – again mainly the smaller developing economies but in this case also including India – suffers welfare losses of about -0.05% of GDP and over USD 7 billion in absolute terms.

A high quality RCEP would have an even stronger diversionary impact. This flows directly from the fact that trade barriers against third parties are much higher in China, India, Korea and most of ASEAN as compared to the participants in the TPP. For those outside the deal (including the other BRICS and the developing world), preliminary calculations indicate welfare losses an order of magnitude higher than under TPP.

Considered in terms of the “domino theory” of regional trade agreements postulated by Baldwin (1995), whereby deals among major trading economies trigger additional deals as excluded economies seek to get inside the deal, the economies with the most to lose from a TPP concluded by the current 12 negotiating parties, are Korea and Taiwan. The fact that these two economies are most prominently mentioned as possibly acceding to the deal is thus no surprise. China also stands to lose quite significantly, which helps explain China’s active exploration of the implications of joining the deal.⁸ But most developing countries have no realistic possibility of joining.

Tentative conclusion: mega-regionals impose trade diversion costs on non-participants, which cumulatively start to look quite significant and there is little scope for them to mitigate the shocks. For development, the Doha Round was a much better deal.

3 Regulatory Competition/Cooperation

The outcome and consequence of the engagement of mega regionals on behind-the-border regulation is an open issue given the complexity of the international standard setting system and the fact that regulations both promote economic growth and trade (e.g., by enabling interoperability among products) yet can also serve as non-tariff barriers. In the latter regard, they can raise compliance costs, remove varieties from international trade, exclude countries from trade if compliance with foreign standards requires technological capabilities they lack, and otherwise distort trade by favouring some parties over others (see e.g., Guasch et al. 2007; 33).

The impact of standards on trade is further complicated because they do not act simply on quantities sold or the price of the goods (or services) involved; rather they result in qualitative changes in the goods on offer in the market place, reflecting choices of individual firms as to what to produce and individual consumers as to what to buy. Accordingly, the analysis of NTMs requires “detailed description and micro-level analysis in which responses of individual firms are investigated.” (Maskus et al., 2000; 34).

Finally, while on the surface the standard-setting system is clothed in the garb of universalism and objectivity, with appeal to scientific and empirical analysis, the reality is a complex weave of firms, coalitions of firms, and national regulators aligned with domestic industries jockeying for competitive advantage in national and

⁸ See Ciuriak (2010) for a discussion of the strength of trade diversion as a factor attenuating the domino effect in regional trade agreements.

global markets (see e.g., Quark, 2013). For example, in the field of automotive standards⁹, three major sets of standards dominate:

- the US Federal Motor Vehicle Safety Standards (FMVSS);
- the United Nations Economic Commission for Europe (UNECE) standards, which apply in Europe; and
- the Japanese Automotive Standards Organization (JASO) standards, which apply in Japan and incorporate elements of the US and EU frameworks, as well as made-in-Japan elements.

Each of these sets of standards has been promoted internationally by their originators as new countries entered into automobile production. Recently, the US automotive industry has ceased to promote FMVSS internationally and now is pushing for UNECE standards abroad to create, what would be in effect, a “two-standards world” (Wilber and Eichbrecht 2008). For a discussion of this issue specific to the ICT field see Shapiro and Varian (1999)

Competition law actually recognizes this feature (see e.g., the European Commission’s rules for co-operation between competitors in standards setting; European Commission, 2012) and considers it a valuable contribution of market forces to the development of efficient standards.

The most interesting mega regional in this regard is TTIP, since it includes the past and present regulatory standard setters in the global economy.

The European Union, which is now the world’s largest market and the world’s leader in terms of setting high quality standards, is arguably in the driver’s seat in the long run.

- “The E.U. is now the most significant trading partner for every continent except Australia. The ripple effects from this shift in economic power have been one of the great untold stories of the new century.”¹⁰
- “The European Union’s strategy to take the regulatory helm is evident in issues such as climate change, chemicals regulation, genetically modified organisms and antitrust regulation, for which Europe has adopted legislation or enforcement regimes that are stricter than those of the United States — and that, through the “California effect,” are forcing changes globally.”¹¹

The United States, which used to be the world’s regulation pace-setter, has largely ceded that role since its embrace of deregulation.

If one considers the concerns about TTIP raised by NGOs – which are most sensitive to the consequences of trade agreements for basic issues of health, environment, and food and product safety issues – the two areas where TTIP has raised red flags are food safety and chemicals regulation (Sierra Club, 2013). In both cases, the concerns are about downward harmonization by Europe to the United States. This is an unlikely outcome because, in both areas, EU should have no interest in fundamental reforms that would be seen as diluting its standards (and would have extreme political difficulty in implementing any agreement to that effect) and the US is unlikely to raise its standards in the face of industry resistance. Europe and the United States are far apart on fundamental aspects of the respective regulatory regimes in these areas and the effect of TTIP is likely to be in convergence of future regulations based on the consultative mechanisms that TTIP

⁹ For a detailed discussion of global automotive regulation and its impact on trade, see Popper et al. (2004).

¹⁰ Shapiro (October 2007).

¹¹ Stratfor Global Intelligence (17 January 2008).

is likely to put in place (which is clearly signaled in the EU's backgrounder on this aspect of the negotiations in respect of the chemicals regulatory framework see European Commission, May 2014).

Similarly, casual observation of the pace of formation of mutual recognition agreements (MRAs) pursuant to regulatory cooperation chapters suggests that glaciers melt faster. As background, the most far-reaching regulatory harmonization exercise outside of the EU's internal market has been arguably that between Canada and the United States. Those engaged in this exercise describe the progress as largely occurring during the "renewal cycle" of regulations when there is a chance to get out in front of the issue on both sides of the border to steer regulations towards a common end point, based on shared research and dialogue. Otherwise change is extremely difficult.

Another important consideration in the impact of mega regionals on international standards is that China is not part of any of the three major advanced mega regionals: TPP, TTIP or TISA. Yet China is rapidly acquiring the market clout and the capacity to become a rule maker as well. China's interest in rulemaking was in evidence as early as the mid-2000s (see, e.g., Bach, Newman, and Weber 2006). Moreover, China is trying to play in this space by developing independent standards (see Breznitz and Murphree 2013). While it has had little success so far (some of China's attempts were abandoned in the face of resistance by the market – see e.g., the discussion of China's attempt to develop an independent standard for wireless security in Lee and Oh, 2008), there should be little doubt as to China's staying power in areas which it considers of strategic importance.

Insofar as regulatory competition Balkanizes the global marketplace, the developing world can only lose, because its firms tend to be smaller shippers and tend to qualify their products for their major market (Wilson and Otsuki, 2004; 46). Different standards in third markets can drive them out of those markets. A good example of this dynamic emerged in the context of the EU's REACH regulations on chemicals. The EU's impact assessment concluded that the one-off costs of registration were sufficiently high that they could make lower volume substances (under 100 tonnes) unprofitable and subject to withdrawal from the market (Ciuriak, 2008). By the same token, low-volume exports, particularly by SMEs but even larger exporters with primary focus on other markets, would likely be shut down.

On the other hand, to the extent that the consultative mechanisms set up under mega regionals bias standards setting in the future towards the interests of the participants, developing countries also are at risk of not having their specific concerns taken into account (Quark 2013 provides a good description of this issue in the context of cotton fibre standards setting).

Tentative conclusion: the impact of mega-regionals on standards setting bears further analysis since the impact is unclear on a priori grounds and anecdotal evidence suggests that standards formed in narrow coalitions can have negative consequences for those outside the coalition – which in this case includes most developing countries.

4 Rules of Origin

Rules of origin (ROOs) are the linchpin that tie a regional trade agreement together and drive regional integration. At the same time, they serve to deepen the impacts of preferences because of their role in redirecting trade in intermediate inputs.

ROOs are also costly to use for trading firms. The costs include both variable costs (the need to source from higher-cost preferential zone suppliers in order to qualify goods as “originating”), and deadweight administrative costs, which include keeping track of inputs and properly documenting the contribution of each input to the value of the final product, the retention of documentation proving the origin of goods (for US GSP purposes, this is five years while for EU GSP purposes it is three years – for firms that ship to both the US and the EU, the stricter US rule becomes the operative one), and the costs associated with obtaining necessary documentation from third parties. For example, Kunimoto and Sawchuck (2006, 280) comment as follows: “... firms who could not get sufficient numbers of certificates of origin from their suppliers chose MFN and paid duty rather than claiming NAFTA status.” Additional costs can be generated by the need to demonstrate that goods transhipped through third countries remain under customs supervision during such transit and do not enter the domestic market or undergo processing in the transit country (Brenton 2010, 172). The costs in this case can include the time and costs generated by practical problems, such as obtaining necessary supporting documents from foreign border agencies or logistics providers. These costs rise with the degree of processing as the number of inputs increases (see e.g., Hakobyan, 2012).

Because there are fixed costs, the unit costs of ROOs fall with the size of transactions, thus favouring larger exporters. Kawai and Wignaraja (2010, 12) comment on this effect in a sample of Asian exporters: “FTAs entail large fixed costs—e.g., learning about FTA provisions, tailoring business plans to complex tariff schedules, and obtaining certificates of origin—and larger firms are better able to muster the requisite financial and human resources than small- and medium-size enterprises.” Brenton (2010, 172) emphasizes the “sophisticated and expensive accounting procedures [needed] to show precisely the geographic breakdown of the inputs.”

The under-utilization of preferences also diminishes the impact of preferential trade agreements compared to expectations; further, when the cost of utilizing the preferences is factored into the evaluation, the welfare gains from liberalization are materially reduced (Ciuriak and Xiao, 2014a). By reducing income gains, while intensifying trade diversion, ROOs in the mega regionals work doubly to reduce welfare for third countries.

However, even when developing countries are on the inside of preferential agreements, the same cost factors militate against realizing the hoped-for gains. For example, the European Commission acknowledged that former GSP ROOs were

“considered too stringent to allow developing countries to really benefit from the preferential market access offered by the EU. A correlation was indeed proven between the stringency of the rules of origin and the utilisation rates of the tariff preferences. In addition, product specific rules were considered too complicated. Lastly, compliance was considered too costly and burdensome, both for exporters and administrations” (European Commission 2012b, 27)

Accordingly, even when developing countries are on the inside of a mega regional, the benefits to their exporters may be less than anticipated.

By the same token, liberalizing ROOs has a great positive impact on excluded parties (e.g., see Ciuriak and Xiao, 2014b, forthcoming). This should be a major focus for the international trade community. Further, Ciuriak and Bienen (2014, forthcoming) argue for a substantial increase in the de minimis threshold for waiver of certificates of origin under a “presumption of origin” rule, coupled with risk-based methods to enforce the overall PTA preference regime, in order to boost SME participation in PTAs and make these instruments more development-friendly.

5 Investment Liberalization

Investment liberalization in preferential agreements are often highly controversial, especially if they include investor-state dispute settlement (ISDS). This is an interesting area with a possibly unexpected twist.

On the hand, there are many unsettled issues concerning ISDS which raise concerns, as enumerated recently by UNCTAD (2013) and summarized by Nicolson, Birks, and Bellamy (2013) as follows:

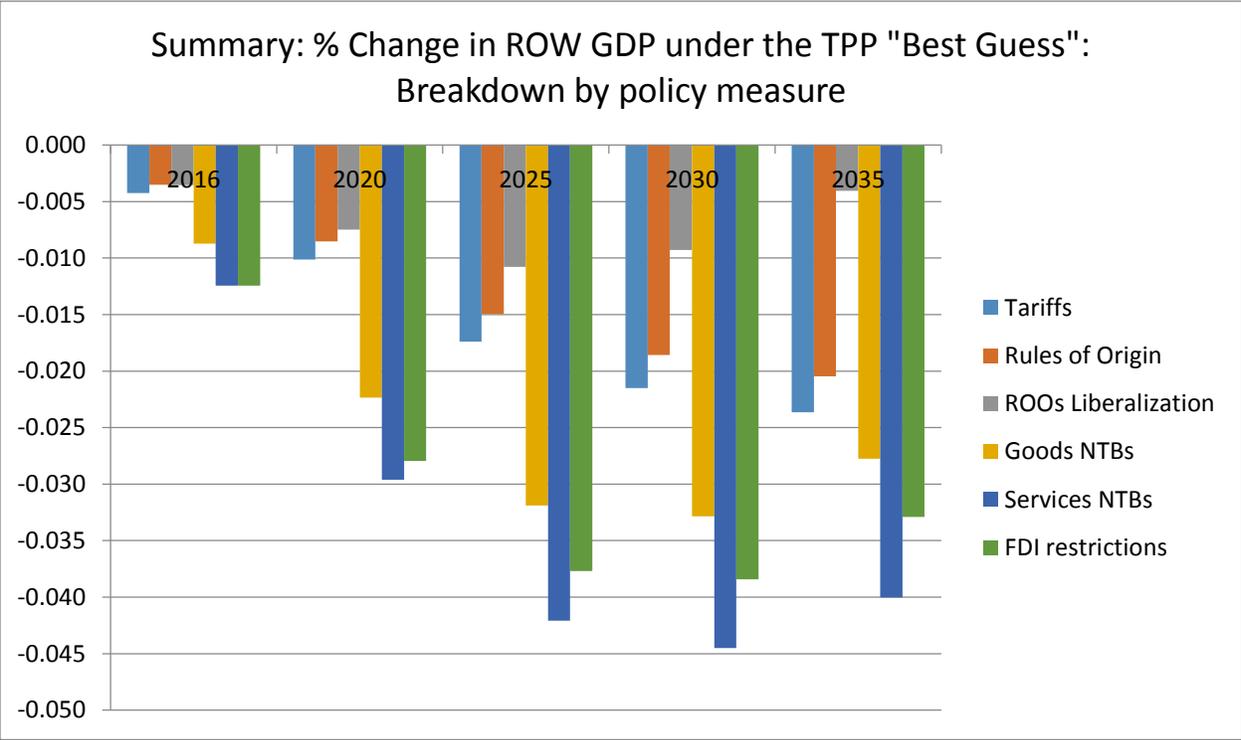
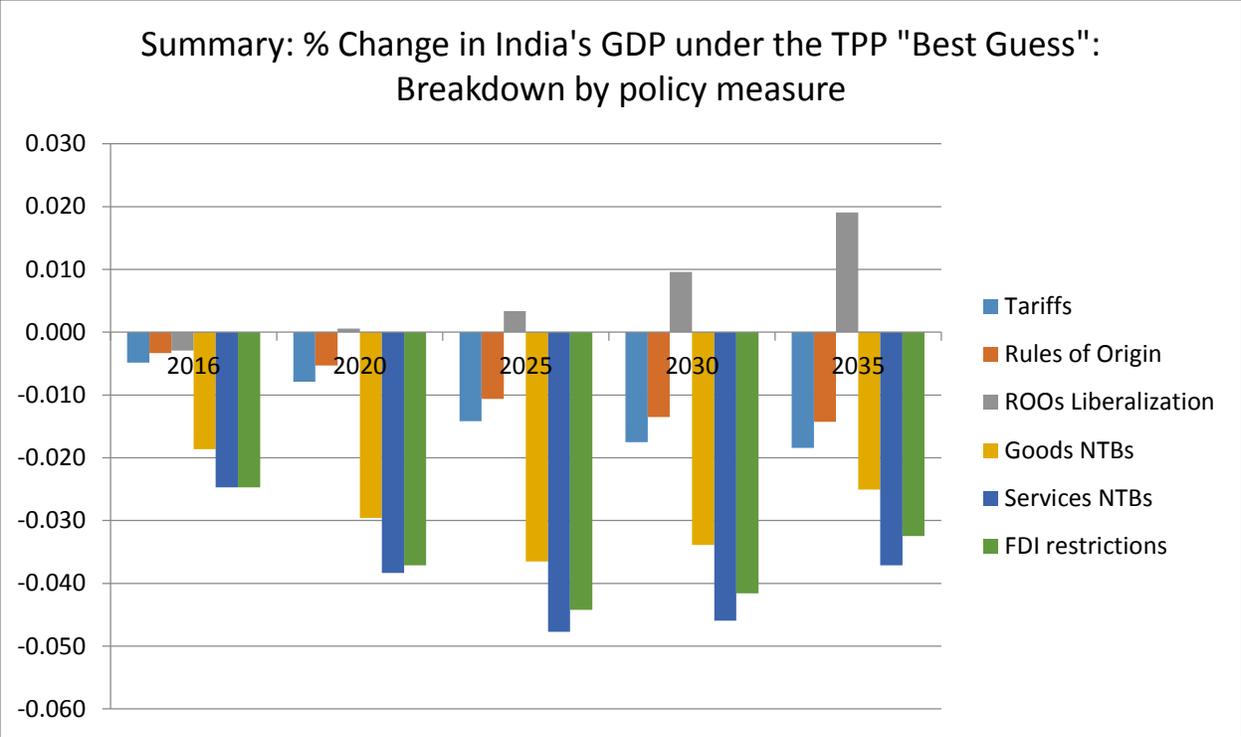
- Questions about the **legitimacy** of privately appointed arbitrators deciding questions that have consequences for a state's policies and finances (for funding defences of claims and potentially paying significant sums in damages awards and costs) and a potential chilling effect on regulation;
- Concerns about **transparency** of proceedings given that, despite some improvements, proceedings with important public policy consequences may be confidential;
- Concerns about corporations “gaming” the system through “**nationality planning**” to facilitate access to ISDS;
- Concerns about the **inconsistency** of arbitral decisions in cases involving similar facts or provisions, which leads to uncertainty and a lack of predictability;
- The fact that **erroneous decisions** cannot easily be reviewed or overturned;
- The reality that many stakeholders perceive arbitrators to be **biased**, or predisposed to side with a particular party, particularly given their rotating role as arbitrators and advocates and their incentive to be reappointed;
- The high **cost** of engaging in ISDS, averaging US\$8 million per case, which is of particular concern to small and medium enterprises and developing-country governments; and
- The **time-consuming** nature of ISDS, where arbitrations may take several years to conclude.

On the positive side, investment liberalization increases the flow of FDI, which tends to be more efficient capital than the capital that it displaces; this frees capital for other investments – including, in principle, in the developing world (Ciuriak and Xiao, 2014a).

6 Overview of TPP Impacts on Developing Countries by Issue Area

The two figures below provide a graphic view of the relative importance – and direction of impact – of the major issue areas being negotiated in the TPP for developing countries in general (as proxied by the Rest of the World group in Ciuriak and Xiao, 2014), and on India in particular. As can be seen:

- Trade diversion induces negative impacts
- Taking into account under-utilization of preferences and the cost of utilizing preferences, these diversionary impacts are reduced
- Liberalizing ROOs works to further offset the negative impacts of trade diversion by making global sourcing more feasible.
- The biggest impacts come from reduction of goods NTBs – this works primarily by increasing efficiency in the participating countries – the pro-competitive effect of PTAs. Since developing countries are not exposed to this, their global competitiveness suffers.
- Impacts from services liberalization are smaller on third countries because the scale of cross-border trade in services is much smaller and not an area of comparative advantage for most developing countries – for India, however, which does have a comparative advantage in services, the effect is proportionately greater.
- Investment liberalization within the TPP softens the negative effect of trade diversion by freeing up global capital for re-investment.



Source: Ciuriak and Xiao (2014b).

7 Policy Space and the International Market Regulatory Framework: Are high quality trade rules low quality growth rules?

A key feature of the TPP in particular is that it seeks to develop what many describe as “high quality” rules in areas such as intellectual property rights, disciplines on state-owned corporations, and financial sector regulation/exchange rate disciplines.

While time and space do not permit elaboration on these themes in any detail, it may be observed that the intellectual framework that supports the direction that the TPP takes represents the consensus that emerged during the supply side era. During this era:

- World per capita income growth declined from 2.6% during the era of Keynesianism to 1.8% during the supply era.¹²
- This slowdown occurred despite the most rapid technological advance in human history – since technology is the main source of per capita income growth, policy must have been particularly misguided to achieve the low rate of return that was ultimately achieved, particularly in view of the unprecedented interest in the metrics of innovation– which can be dated to Bayh-Dole in 1980.
- The widespread failure to achieve meaningful technological convergence despite the most conducive technological environment for the spread of technology ever witnessed: unparalleled trade, travel, and communications through the Internet.¹³
- The massive financialization of the economy, which can be directly linked to the recurrent mega financial crises of the last several decades.

High quality trade rules seek to prevent knowledge spillovers, which are a major source of growth, constrain development policy space, and reinforce the financial framework that has proved so unstable and is a major source of growth drag. So it is legitimate to ask the question: are high quality trade rules low quality growth rules?¹⁴

8 Conclusion and discussion

No mega regional has ever succeeded. Ghosts of mega regionals past include the Free Trade Area of the Americas (FTAA) and the Free Trade Area of the Asia Pacific (FTAAP). If any of TTP, TTIP, TISA, or RCEP were to be brought to a successful conclusion, it would be the first mega-regional agreement to do so.

Overall, the review of the issues above suggests that an inconclusive outcome to these mega regionals would likely be in the general interest of the developing world – a successful conclusion to the Doha Round (albeit not necessarily with the questionable “round for free” feature) would have been better.

In terms of features of the mega regionals that help offset the negative effects on developing countries, liberalizing rules of origin (by making goods more tradable generally), and investment liberalization (by

¹² Maddison, “GDP per capita, 1990 International GK\$” (2010). The series runs to 2010. The Maddison series can be easily extended to 2013 for individual countries but not for the world.

¹³ See in this regard the discussion of “convergence clubs” in Dowrick and Delong (2003). While some of the countries listed as dropping out of the convergence club in the postwar era appear to have rejoined it (e.g., Chile), in Africa, where recent years have seen improved growth performance, the technological level of industry remains stubbornly backward (see, e.g., Bienen and Ciuriak, 2014, forthcoming).

¹⁴ This question is taken up in Ciuriak and Curtis (2014).

increasing the efficiency of capital utilization and thus freeing up capital for investment worldwide) should be considered as particularly important features to be included in the mega regionals.

This does not necessarily lead to the conclusion that the negotiating efforts in these fora are of no positive benefit to developing countries: insofar as they serve to chip away at the problems that stalled the Doha Round, they may in fact end up facilitating conclusion of that round. In this regard, it may be noted that the gestation period for a new Round appears to roughly follow the Fibonacci sequence, whereby each new Round takes as much time as the previous two to reach a conclusion. The intuition behind this feature is that each Round successively takes off the table a range of easier issues and leaves only the harder issues for future Rounds to resolve.

Trade Rounds and the Fibonacci Sequence

	Time Elapsed between GATT/WTO Trade Rounds	Fibonacci Sequence
1947	1	1
1949	2	1
1951	2	2
1956	5	3
1962	6	5
1967	5	8
1979	12	13
1994	15	21
ETA for the Doha Round	2021	2028

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