



The **E15** Initiative

STRENGTHENING THE GLOBAL TRADE AND INVESTMENT SYSTEM
FOR SUSTAINABLE DEVELOPMENT



**International Regulatory Cooperation,
a Trade-Facilitating Mechanism**

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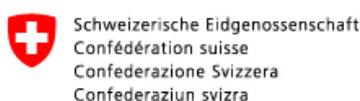
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ABSTRACT

The regulatory landscape of cross-border trade has to be improved in order to expand trade opportunities. Differences or incompatibilities in regulations across jurisdictions, however slight, can impede the trade in goods or services. Domestic regulations often translate into trade costs for businesses and affect all agents along the supply chain, from producers to consumers. This paper discusses trade-related international regulatory cooperation as a means to provide a balance between domestic regulatory activities and more open international trade. It addresses the potential effects of various types of regulatory cooperation initiatives by dissecting some of the elements that policymakers should gauge to reach an optimal regulatory decision: trade effects of regulatory heterogeneity and economic welfare benefits for society. It also looks more specifically at the role of transparency. This paper offers suggestions to contribute to practical decisions in the process of regulatory cooperation. First, countries should seek to bridge the gap of regulatory divergence through the lens of joint welfare by ensuring a balance between the welfare costs related to regulatory changes and the benefits resulting from reducing regulation-related trade costs. Domestic regulations, hence, should be conceived by taking into account the trade impact on trade partners. Countries should start by looking outwards to take into account the impacts of their domestic regulations across borders. There are many ways to undertake regulatory cooperation and each initiative hinges upon the degree of importance given to trade benefits and wider impacts on welfare.

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LIST OF ABBREVIATIONS

EU	European Union
HACCP	Hazard Analysis Critical Control Point
IRC	international regulatory cooperation
MRA	mutual recognition agreement
MRL	maximum residue limit
NTM	non-tariff measure
OECD	Organisation for Economic Co-operation and Development
RTA	regional trade agreement
TBT	technical barriers to trade
TTIP	Transatlantic Trade and Investment Partnership
TPP	Trans-Pacific Partnership
SPS	sanitary and phytosanitary
US	United States
WTO	World Trade Organization

INTRODUCTION

In order to expand trade opportunities it is necessary to improve the regulatory landscape of cross-border trade. With the increase in trade flows in global value chains and as markets become more integrated, differences or incompatibilities in regulations across jurisdictions, however slight, can impede the trade in goods or services. Domestic regulations often translate into trade costs for businesses and affect all agents along the supply chain, from producers to consumers.

Over the years the nature and content of the debate over trade policy has shifted, with more focus on regulatory goals such as the environment, health, and food safety. This shift is manifest in recent trade negotiations, such as the Trans-Pacific Partnership (TPP) and the Transatlantic Trade and Investment Partnership (TTIP), which emphasize regulatory disciplines and assign a more central role to institutional structures to address regulatory coherence.

Against this background of changing drivers for trade policy, this paper discusses trade-related international regulatory cooperation (IRC) as a means to provide a balance between domestic regulatory activities and more open international trade.¹ (It addresses the potential effects of various types of regulatory cooperation initiatives by dissecting some of the elements that policymakers should gauge to reach an optimal regulatory decision: trade effects of regulatory heterogeneity and economic welfare benefits for society. It also looks more specifically at the role of transparency.

The argument rests on two pillars—a) as countries address domestic policy objectives in different ways, the costs (and benefits) of making regulatory changes vary depending on the sectors and the regulatory systems; and b) the lack of coherence and compatibility among different regulatory systems can exacerbate trade costs.

We suggest that IRC aims at finding a suitable balance between the (welfare) costs related to changes to domestic regulation and the benefits resulting from reducing regulation-related trade costs. It follows that the design of an appropriate IRC mechanism (such as transparency, mutual recognition, alignment on international standards, and so on) should rely on the identification of all costs and benefits. Another Organisation for Economic Co-operation and Development (OECD) contribution to the E15 Regulatory Coherence Task Force examines and suggests a typology of IRC.² While enhanced trade represents only one of the relevant variables, which include effects on consumers, exporters, producers, or governments, other variables also need to enter into the equation, like the effects on societal concerns, be it environment, health, or consumer protection. A well-suited policy option that entails IRC mechanisms

is typically sector- and context-specific—what works in one sector may not apply to another; what works between a given set of trade partners may not work in a different constellation.

IRC can sometimes lead to adapting domestic regulations to make them more coherent between countries, and in other cases it may have to accept regulatory heterogeneity and aim to reduce trade costs that result from such diverging domestic regulatory approaches. It is worth bearing in mind that regulatory divergence may sometimes be the optimal solution, both from the domestic and from the global point of view.

DOMESTIC REGULATIONS AND TRADE

Domestic regulations seek to positively affect a society's welfare by addressing and resolving market imperfections and failures, such as information asymmetries or externalities. Some measures impede trade by creating barriers and increasing costs of production (for example, when a stricter environmental regulation requires more costly production processes) or of compliance (for example, conformity assessment and certification costs or other administrative costs). On the other hand, well-designed measures can encourage trade by providing further information or quality assurance to consumers. To the extent that a regulation increases consumer demand for a product by reducing information asymmetries or by providing quality assurance, the effect of the enhanced demand may outweigh the additional costs (van Tongeren et al. 2009). As a result, the regulation encourages trade.

The type of regulatory cooperation sought will differ depending on the relative importance of trade benefits on the one hand, and domestic welfare concerns on the other. Imposing the same rules on countries with different preferences could potentially cause a loss in social welfare relative to these objectives, even if such regulatory convergence would increase trade. This relative importance signals a determination of the degree of regulatory cooperation among countries. From an economic point of view, maximizing global welfare in such a context

1 For the purpose of this think-piece, regulatory cooperation is broadly defined and encompasses the four degrees of international coordination described in Hoekman and Mavroidis (2015).

2 Céline Kauffmann and Nick Malyshev, 2015. "International regulatory cooperation, a range of mechanisms" Think-Piece for the E15 Task Force on Regulatory Systems Coherence.

implies balancing the costs and benefits of country-specific regulations with the costs and benefits of regulatory heterogeneity in terms of trade frictions. Regulators and trade negotiators face different challenges in reaching an optimal choice that requires balancing domestic welfare and trade costs. For instance, if domestic regulators set rules without regard for trade effects, they may well end up with rules that achieve domestic regulatory objectives but impede trade. On the other hand, trade negotiators may want to reduce or remove regulatory heterogeneity to improve trade, but this may lead to a situation where the regulations do not achieve regulatory objectives. The questions then become: Where is the landing zone to strike such a balance? How do countries identify it and how can it be achieved?

Identifying the most promising type of cooperation requires balancing the regulatory objectives, the means used to achieve it, and the impacts on trade, and can become an optimal policy decision if the net gain to society is positive—for example, if harmonization has little or no negative effects on producers and consumers, but facilitates trade. This would require that countries initiate joint action to reduce regulatory differences and related trade costs.

IMPACTS OF REGULATORY HETEROGENEITY

Trade-related regulatory cooperation is relevant where domestic regulations create direct spillovers in trade markets that bear significant consequences for importers and exporters as well as consumers. Regulatory differences among countries whose domestic regulations affect consumers' ability to import goods or services or restrain producers' ability to export can result in reduced trade flows. At the same time, they create a loss in allocative efficiency.

Several empirical studies shed light on the trade impact of specific initiatives of regulatory cooperation such as harmonization, alignment on international standards, mutual recognition/equivalence, and transparency. Yet there is scarce evidence that supports the benefits of regulatory cooperation per se. The facts that demonstrate to what extent each of these different types of regulatory cooperation actually improves trade between countries are, however, unclear. Examining such studies, however, can help shed light on the potential benefits of regulatory cooperation.

COSTS OF REGULATORY HETEROGENEITY

Regulatory heterogeneity is generally found to decrease trade. The literature on harmonization, alignment on international standards, or mutual recognition suggests positive trade impacts (see, for example, Chen and Mattoo 2008, Foletti and Shingal 2014).

Several studies have explored the effect of regulatory heterogeneity on trade in services. These studies found large effects. Kox and Lejour (2005), studying services trade among European Union (EU) member states, demonstrated that if countries made more use of mutual recognition, trade could increase substantially. Likewise, Kox and Nordås (2007) studied 29 OECD countries and 68 partner countries and found that full harmonization could significantly increase services trade. These results were confirmed by Nordås and Kox (2009), who studied trade in services between 42 destination countries and 62 source countries. They estimate that harmonization or mutual recognition could increase services trade by 13 percent to 30 percent, depending on the country.

In agricultural trade, compliance with sanitary and phytosanitary (SPS) measures is crucial. Disdier et al. (2008) found that different technical regulations significantly slowed trade in some sub-sectors while well-designed regulations and conformity assessment procedures could have a positive impact on trade. Well-designed regulations can facilitate trade if they provide information to potential suppliers and overcome problems of informational asymmetry that would otherwise stifle exports (van Tongeren et al. 2009).

Regulatory heterogeneity does not always impede trade. Using a gravity analysis, Winchester et al. (2012) assessed the impact of regulatory heterogeneity for agricultural and food products for the EU and nine of its major trade partners. They found that trade is significantly reduced when importing countries have stricter maximum residue limits (MRLs) for plant products than exporting countries, but for most other measures, due to their qualitative nature, the findings are inconclusive. Similarly, Drogué and DeMaria (2012) studied the effects of MRLs of pesticides on the trade in apples and pears among 40 countries. Their results show that reducing heterogeneity would increase the odds of trading, but regulatory distance does not impede trade for all country pairs.

Effects on exporters

Exporters incur several different types of regulation-related costs—for instance, costs to tailor their product (or their production process) to different national regulations or costs due to the duplication of testing, inspection, and certification for each of the export markets. Costs for gathering information and finding out about the applicable regulations when targeting a market can also be significant. Regulatory differences will also be reflected in the extensive and intensive margins and any changes in trade costs will impact the volume of exports and the export value of products. Regulatory cooperation can thus help exporters reduce or avoid unnecessary costs due to regulatory heterogeneity.

Identifying trade costs

For the purpose of this paper, we identify three categories of costs—specification costs (the actual costs of complying

with different sets of regulations), conformity assessment costs (costs involved in demonstrating conformity with these regulations), and information costs (costs related obtaining adequate information and transparency with respect to regulations and regulatory motivations, which affords greater predictability and avoids arbitrariness). To illustrate, specification costs are the costs related to markets that have different daytime running lamp regulations that vehicle manufacturers incur when exporting to different markets. Costs that toy producers must bear when required to comply with different safety testing requirements to enter a market would fall within the second category. For example, with respect to toy safety, the stability test for toys used by children aged 0 to 36 months differs across jurisdictions. When evaluating a new market, a business will need to know the regulations and standards of the envisaged market to make an informed business decision as to how to invest and compete in the new market. This entails costs for finding out, analyzing, and knowing the required information. There may be other costs that need to be added in the assessment, such as crossing the border costs (for example, costs related to customs formalities). These latter costs can best be identified by using the existing tools for trade facilitation, such as the OECD Trade Facilitating Indicators, which found that implementing the World Trade Organization (WTO) Trade Facilitation Agreement could reduce such trade costs by between 12.5 and 17.5 percent.³

Each type of cost can also be fixed or variable: regulatory heterogeneity may require a firm to incur fixed costs for each export market it wishes to enter. By contrast, some costs related to regulatory heterogeneity will be variable costs and will need to be incurred for every unit of the goods or services to be supplied. The two distinctions (between specification and conformity assessment costs and between fixed and variable costs) do not overlap. Specification costs may be fixed (for example, investing in new equipment) or variable (for example, using more expensive inputs). Likewise, conformity assessment costs may also be fixed or variable.

The relative importance of fixed and variable costs varies between sectors, with fixed costs likely to be especially important for services trade. Regulatory heterogeneity in services often takes the form of licences or qualification requirements, or other regulatory requirements that represent one-time costs without affecting the subsequent trade volume.

In general, increased fixed costs are likely to be more of a barrier for small- and medium-sized enterprises. For example, Fontagné et al. (2013) found that the effect of SPS measures will depend on the size of the firm, with smaller-sized firms generally being disadvantaged to a greater extent than larger firms. The smaller you are, the more difficult it is to jump the market entry hurdle. Since these measures increase fixed and variable costs, only highly productive firms will be able to enter the market with such measures. Larger firms can more easily adapt to additional costs incurred as a result of new measures (in this case SPS measures) and are more easily

able to incur these costs than smaller firms, as these costs represent a much more significant part of smaller firms' total costs.

Effects on extensive and intensive margins

Regulatory heterogeneity affects both the extensive margin (the decision by exporters to enter a market, that is, the likelihood of trade) and the intensive margin (the quantitative decision of how much to export) of trade.

Harmonization, for example, is found to have positive effects on the extensive margin. In this regard, Shepherd (2007) found that an increase in the number of standards in textiles and clothing, for instance, reduces export variety of a trading partner. Conversely, when EU standards align to international standards (for example, International Organization for Standardization), the author found a small increase in the variety of imports from trading partners. In addition, using a detailed database of United States (US) firm-level data, US trade data, and EU product standards, Reyes (2011, 2012) showed that aligning EU products on international standards increases US exports to the EU through an increase in the number of US firms entering the EU market. However, the number of exporting firms (including smaller firms) increases and the sales in existing firms (the intensive margin) declines. While fixed entry costs do not have an immediate impact on prices and volumes, they act as entry barriers for exporters. That is, instead of merely making products more expensive, they reduce the likelihood of exporting.

Examining SPS measures that are raised as specific trade concerns in the WTO SPS Committee, Fontagné et al. (2013) assessed their negative effects on extensive and intensive margins of trade by showing that these measures involve compliance costs that increase unit values and prohibit market entry.⁴ They also explore the effect of such SPS measures on a firm's decision to exit the restricted market.⁵ They found that restrictive SPS measures in fact enhance the probability of a firm leaving a market by 2 percent on average.

Foletti and Shingal (2014) found that harmonization leads to greater trade at both the intensive and extensive margins. Maintaining divergence in MRL standards is costly at the extensive margin. Regulatory heterogeneity is a greater impediment in the probability of exporting than in volumes.

3 | See <http://www.oecd.org/tad/facilitation/indicators.htm>.

4 | Note that their analysis cannot determine whether the effects of SPS measures on higher unit value are attributable to an increase in cost of production, an "upgrading of the product mix", or an increase in price given the loss in competition.

5 | The authors remark that the exiting of a market is not a termination of exports in general or in that specific market, but rather an indication that the firm has chosen to stop exporting to the market where the SPS measure is imposed.

They also found that harmonization of MRL regulation fosters decisions to export within the EU as well as agri-trade into the EU from developing countries.

Effects on producers in importing countries

Domestic producers who compete with imports may face more competition and lose market share as regulatory cooperation removes non-tariff barriers to trade. For instance, Liu and Yue (2012) argue that the EU decision to harmonize standards by adopting the Hazard Analysis Critical Control Point (HACCP) standard was a catalyst to imports of orange juice: the HACCP standard increased imports, decreased sales of domestic producers, and improved consumer welfare.

Another effect on producers concerns possible additional costs from a different standard. For instance, if regulatory cooperation takes the form of harmonization where previously a country did not have a standard, the new standard may imply new or higher costs for existing producers. In practice, harmonization of standards has often implied an increase in the stringency of standards and resulted in additional specification costs. This was the case, for instance, with the harmonization of MRLs for aflatoxin in the EU in 2002, which in practice meant that aflatoxin standards became more stringent in most countries (Xiong and Beghin 2011; Otsuki et al. 2001).

Effects on consumers

To the extent that the costs of regulatory heterogeneity are variable costs, regulatory cooperation will lower these costs and the effects on consumers will be similar to the effects of a tariff reduction: consumers will benefit from lower prices. However, if regulatory cooperation reduces fixed costs associated with international trade, there will be an effect on the extensive margin, and more varieties become available. Whether regulatory cooperation will indeed increase variety may depend on the type of regulatory collaboration activity undertaken.

In theory, reducing regulatory heterogeneity leads to lower prices for consumers. Lower variable costs should be passed on to consumers to some degree, while an increase in the number of firms in a market should lead to greater competition and lower mark-ups. Empirical evidence exists for this latter effect. Vancauteren (2013), studying mark-ups of food-processing firms in the Netherlands, estimated the effects of harmonization within the EU Single Market Programme. He found that an increase of 50 percent in the "sales-weighted coverage ratio" of EU harmonization of food regulations decreases mark-ups by 11.5 percent in the long run, indicating that harmonization intensifies competition.

In their study on the effect of non-tariff measures (NTMs), Cadot and Gourdon (2015) used prices to measure the impact of non-tariff measures and found that regional trade agreements (RTAs) with provisions related to harmonization

or mutual recognition agreements (MRAs) reduce the impact that NTMs generally have on price. Their study thus suggests that such regulatory cooperation initiatives reduce compliance costs. They also noted that MRAs on conformity assessment have the most significant effect. On the other hand, regulatory cooperation in the form of harmonization can also shrink varieties available.

Some effects on society

Regulatory cooperation can lead to a reduction in NTMs, but in case of harmonization or alignment to international standards it can also lead to an increase in the overall stringency of non-tariff barriers, with corresponding economic costs. It is important to take into account the effects of regulatory cooperation on the overall stringency of standards for a proper evaluation of the likely economic costs and benefits (see Li and Beghin 2012 and Disdier et al. 2008). No simple conclusions can be drawn from whether a more stringent regulation per se is good or bad for welfare or trade. A more stringent regulation can play multiple roles: it can act as a catalyst or a barrier to trade, it can be positive or negative for domestic welfare, and it can decrease trade while still improving welfare.

Some studies have examined approaches to provide an integrated assessment of welfare effects when standards resolve asymmetric information problems. For instance, van Tongeren et al. (2009) provide an analytical framework to measure welfare effects of NTMs that address externalities (see also Beghin et al. 2012; Disdier and Marette 2010).

A DUAL ROLE FOR TRANSPARENCY

At the level of countries, transparency has a dual role: it can be a mode of regulatory cooperation and a way to achieve deeper regulatory cooperation. By sharing information on regulations and regulatory preferences, countries diminish the gap between their divergences through awareness and better understanding of their trading partners' regulatory framework. Fostering greater transparency contributes to building trust and creating a slate for deeper regulatory cooperation. When conditions for more ambitious regulatory cooperation (for example, harmonization or mutual recognition) are absent or insufficient because of significant and core policy differences, countries should initiate dialogue and further transparency (coherence and consultation—what could also be regarded as a minimal degree of regulatory cooperation).

Increasing transparency and dialogue then becomes a stepping stone to greater cooperation in the longer term and, in turn, acts as a trade-facilitating lubricant. Lejarraga and Shepherd (2013) found that RTAs with transparency commitments increase trade flows by more than 1 percent for each transparency provision. Furthermore, Lejarraga et al. (2013) examined whether trade-enhancing impacts can

be attributed to obligations related to the improvement of transparency of NTMs in RTAs. Using a database of transparency commitments in more than 100 RTAs, the empirical analysis illustrates that such provisions trigger greater trade flows. It also points to the fact that horizontal transparency provisions create the largest trade effects, as opposed to sector-specific transparency measures contained in the agriculture, SPS, or technical barriers to trade (TBT) chapter. They concluded that transparency mechanisms for all non-tariff measures may be more effective than regulating transparency by sector or type of non-tariff measures.

In addition, transparency can help improve institutional arrangements and the business climate (Lejárraga 2013). Both these parameters foster a greater quantity and quality of trade. From a political economy perspective, transparency and further dialogue can contribute to lessening disputes and increasing coordination in trade relations. As Wijkström remarks in his think-piece,⁶ the TBT Committee acts as a catalyst for countries to share and exchange information.

Transaction costs can be reduced by sharing experience across agencies, regions or countries, exploiting already existing administrative networks, integrating government and private information, reducing the number of agencies, and using information technology (OECD 2013, 2007).)

For firms, access or better access to regulations of exporting markets will reduce the costs and time firms looking for new markets need to devote to inquiring into regulations, exemptions, and their application (the same can be said of firms already exporting to a country regarding any legislative amendment). Transparency first reduces monetary and time costs to investigate applied regulations, exemptions, and so on, for trading firms seeking to enter a new (foreign) market. Increasing predictability of the policy environment will also be part of a company's business decision to invest or export in a foreign market. Conceived as a market-entry cost, opacity, the lack of transparency, has the same economic effect as protectionism. Unsurprisingly, these costs to entry are more detrimental to small and medium-sized firms, and increase with regulatory heterogeneity.

A NEW INCENTIVE FOR WAYS FORWARD

Starting from a "blank sheet", that is, designing new regulations in an internationally collaborative way will typically be easier than attempting changes to well-established regulatory systems, where the transition costs

will be more evident to stakeholders and the benefits of change less obvious and probably unevenly distributed.

When direct spillovers in trade markets bear significant consequences for importers and exporters as well as consumers, regulatory cooperation opens up new horizons for linkages between trade negotiators and regulators and requires recasting certain elements of the discussion to reduce regulatory divergences creating unnecessary costs. It can also reduce the wedge between domestic and global welfare.

This paper offers suggestions to contribute to practical decisions in the process of regulatory cooperation. First, countries should seek to bridge the gap of regulatory divergence through the lens of joint welfare by ensuring a balance between the welfare costs related to regulatory changes and the benefits resulting from reducing regulation-related trade costs. Domestic regulations, hence, should be conceived by taking into account the trade impact on trade partners. Countries should start by looking outwards to take into account the impacts of their domestic regulations across borders. There are many ways to undertake regulatory cooperation and each initiative hinges upon the degree of importance given to trade benefits and wider impacts on welfare.

The empirical evidence on the relationship between regulatory cooperation and trade is scarce and mixed. Available studies resonate with the suggestion that regulatory heterogeneity can be relatively benign in some areas yet generate substantial trade costs in others. The choice of regulatory cooperation initiatives would be best undertaken in circumstances that trigger a positive net benefit where the costs of maintaining domestic regulations are high (that is, trade costs to change). Regulatory cooperation approaches also call attention to the required institutional arrangements and implementation capacities. There may be room to identify the institutional arrangements that are important for regulatory cooperation, as well other components that can provide impetus for each of the goals.

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