
Economic Impact of the European Union's Removal of Technical Barriers to Trade

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1. Introduction

Expansion of the GATT regime and the consequent liberalization of trade worldwide are making it impossible for governments to resort to conventional barriers to trade, such as tariffs. As a result, nations are increasingly resorting to non-tariff barriers to trade, permitted by the World Trade Organization (WTO), to regulate imports. Technical barriers to trade (TBTs) refer to the discriminatory and overlapping application of technical rules, standards, and conformity assessment procedures across nations, thus presenting unnecessary obstacles to trade. The use of TBTs has been on a significant rise in all countries around the world, with those imposed by countries to which Korean companies export their goods raising the cost of Korean exports and weakening their competitiveness in the end. For South Korea and other similar nations that have achieved economic growth on the strength of their

exports, it is critical to gain a good understanding of the TBTs imposed by export destination countries, and craft effective trade policies based on analysis of their economic impact.

The European Union (EU) as a whole represents one of the largest trading partners for South Korea, and also leads the global trend regarding the use of TBTs. It is therefore of paramount importance for Korean policymakers to survey and understand the EU's TBTs, and come up with effective countermeasures accordingly.

The EU is a bloc of separate nations that enforce certain technical standards and certification criteria differently. The diversity of the TBTs adopted by these individual member states presents a further obstacle to Korean exporting companies. In analyzing the EU's TBTs, it is thus important to understand the policies implemented by the member states of the EU as a confederation of nation-states and the economic impacts this diversity generates. Such understanding is crucial to developing a strategic plan for countering and managing the EU-imposed TBTs.

In this study, we analyze the impact of decisions by different EU member states to loosen and lift TBTs on South Korea's exports to the region, with a view to finding and providing information necessary for better related policymaking. To this end, we first survey the current status of the TBTs imposed by the EU on imports from outside countries and regions, and the trend of lifting those TBTs that has been occurring. Next, we conceptualize a theory on the impact of this lifting on the prospects for Korean company exports and the Korean economy as a whole, and analyze the optimal tactics for a mutual recognition arrangement (MRA) between South Korea and the EU. Finally, we use a quantitative method to analyze

in detail how this lifting of TBTs will actually affect South Korea's exports to the region.

2. Technical Barriers to Trade with the EU

TBTs refer to all the obstacles that are imposed on international trade, in the form of technical rules, standards, and conformity assessment procedures, over and beyond the minimum requirements necessary to ensure the safety and environmental protection of trading countries. Governments worldwide today employ them to discriminate against imports because it is difficult to determine how widely or narrowly they are used and to quantify their exact impact.

According to the WTO's I-TIP database, of all trading regions, the EU had the greatest number of TBT notifications issued over the years 1995 through 2015, at 2,703. While the number of notifications issued by individual member states has been on a steady decline, the number issued by the regional bloc as a whole has continued to increase. The progress of economic integration within the EU appears to have accompanied the integration of technical regulations across the member states as well.

Exporting countries that feel that the TBTs imposed on their products are excessive or otherwise fail to cater to the ostensible purposes of regulation may file official complaints against those TBTs in the form of specific trade concerns (STCs). Again, the EU received the greatest number of STCs, at 224, over the years 1995 through 2015, followed by the United States at 197. The total number filed against the EU from other countries or regions amounted to four in 2015, suggesting that the EU, following China (which re-

ceived seven STC complaints that year), has the second-most rigid TBT regime in the world.

MRAs are the main means by which trading countries ameliorate the severe effects of TBTs with one another, and they are thus entered into for technology-intensive industries producing goods with relatively short life spans, such as machinery, electronics, information technology (IT), and automobiles, that are also more prone to the impact of TBTs than other industries. South Korea has so far entered into Asia-Pacific Economic Cooperation (APEC) Telecommunications Equipment (TEL) MRAs with the United States and Canada, as well as an MRA with Singapore as part of the free trade agreement (FTA) with that country. Of the world's developed economies, the EU has shown the greatest willingness to enter MRAs, so far entering seven in total, with the United States, Canada, Australia, New Zealand, Israel, Japan, and Switzerland.

The FTA between South Korea and the EU, effective as of July 1, 2011, requires both parties to make efforts toward ameliorating TBTs against the other's imports. The agreement emphasizes joint cooperation to that effect, in terms of mutual recognition and cooperation over accommodating each other's technical systems, standards, rules, and conformity assessment procedures. The agreement also requires the parties to comply with international standards and satisfy the duty of transparency. In assessing the conformity of goods imported from each other, the two parties are to adopt and enforce grounds for mutual recognition, and make efforts to ensure the equivalency of their technical standards.

Even within the EU, each member state seeking to export its goods to other member states must satisfy the TBTs imposed by

those importing member states. This has served to interfere with free trade within the region. With its aspiration toward becoming a single, integrated market, the EU strives to eliminate these TBTs, approaching the task in mainly two ways: first by encouraging MRAs, and second, through harmonization when attempts to reach MRAs fail. MRAs within the EU require that the goods legitimately produced and distributed in a single member state ought to be freely circulated to other member states as well. The harmonization approach is further divided between the old and new approaches, with the old approach involving specification of the characteristics of products and production processes in detail so as to provide common ground for technological harmonization. The new approach takes a lighter and less cumbersome take on harmonization, requiring specification of the core required information only, and leaving it at the discretion of the producers to decide how best they can satisfy these specified conditions.

3. Theoretical Review of the EU's TBTs

In Chapter 3, we conceptualize and theoretically analyze how the EU member states' move toward loosening or lifting TBTs would affect the prospects for Korea's economy and its exports. To this end, we identify and simplify the characteristic features of these TBTs within the EU, and devise a framework for theoretical analysis on the economic effects of such features, with a view to identifying implications for an MRA between South Korea and the EU.

One key problem with analyzing the economic impact of the EU's TBTs is the fact that they exert an impact on the economy

via diverse channels and mechanisms. It was thus necessary for us to confine our analysis to the TBTs that make the cost of trade higher for other countries than for one's own country. In analyzing their economic impact, it is also important to take into account the internal arrangements between member states toward reducing or eliminating TBT. The EU recommends three types or arrangements to this end: namely, national treatment, complete harmonization, and mutual recognition. The effects of the same TBTs can differ quite significantly depending on which of these three approaches to arrangement is in place. The impacts of all three types of arrangement therefore merit analysis.

In this study, we analyze how these three different types of arrangement found within the EU would affect South Korea's economy and exports. We start off by assuming that each of the EU member states and South Korea have equal-sized markets and equal costs of marginal production. Next, we analyze how the lifting of TBTs within the EU would affect South Korea's economy and exports, with a view to identifying optimal tactics for an MRA between South Korea and the EU. Our analysis reveals that the TBTs imposed by EU member states on imports from South Korea would have the severest impact under a national treatment arrangement, and less so under complete harmonization and mutual recognition, in that order. The benefits to South Korea would be maximized under a mutual recognition arrangement, followed by national treatment and complete harmonization arrangements, in that order. The model of analysis we use also reveals that Korea can best promote its own interests by prioritizing the reaching of an MRA on goods subject to complete harmonization rather

than on goods subject to national treatment or mutual recognition. Korea should also prioritize goods subject to mutual recognition ahead of those subject to national treatment.

In an effort to understand the reality that Korean exporters face in trading with the EU, we proceed to analyze how the decline of TBTs within the region would affect South Korea's trade and economy, and the optimal tactics needed for an MRA, in the face of asymmetry in terms of market size and technological level. Again, as with the scenario assuming symmetry, the benefits to South Korea would be maximized under mutual recognition, followed by national treatment and complete harmonization, in that order. The larger the gap in market size, however, the smaller the gap between the effects of complete harmonization and national treatment, and the wider the gap between the effects of national treatment and mutual recognition on Korea. Widening asymmetry in the cost of marginal production also serves to increase the gap between the effects of mutual recognition and national treatment on Korea. Even under the assumption of asymmetry, mutual recognition should be the first and foremost choice of Korean policymakers. Yet the smaller the disparity in market size and the greater the disparity in costs of marginal production, the greater the difference in the effects of complete harmonization and mutual recognition, and the greater the difference in the effects of mutual recognition and national treatment within the EU on the Korean economy.

4. Empirical Analysis of the EU's TBTs

In this chapter, we analyze, using a gravity model, the effects

of the TBTs that the EU imposes on imports from the rest of the world and the effects of the decline of TBTs among the EU member states on South Korea's exports to the EU. We first review the existing literature on TBTs before launching our empirical analysis. There are an increasing number of empirical studies that attempt to analyze the effects of TBTs on trade using gravity models. While there are studies that have already analyzed the impact of the EU's TBTs on South Korea's exports, there is yet no study, prior to this one, analyzing the effects of the decline of TBTs among the EU member states on South Korea's exports. This study expands the gravity model to include the variables of both TBTs in general and the changing TBT-related measures by the EU member states. As a result, we discover that the EU's TBTs could affect South Korea's future exports in both positive and negative directions. Moreover, we find that the lifting of TBTs by EU member states under mutual recognition would result in more benefits for Korea's exports than the lifting of TBTs by these member states under harmonization. Our findings suggest that South Korean policymakers, in deciding on trade policy measures, ought to consider the specific types of measures that individual EU member states adopt toward reducing or eliminating TBTs among themselves.

5. Conclusion

The findings of our analysis suggest the following policy implications.

First, the Korean government needs to devise policy measures in response to the EU member states' move to reduce or lift TBTs

among themselves. Both our theoretical and empirical analyses reveal that this lifting of TBTs through mutual recognition serves to increase Korea's exports to the EU than would be the case under harmonization. In deciding on future trade policy measures, Korean policymakers therefore need to consider the specific approach that the EU member states adopt toward lifting TBTs.

Second, it is crucial to eliminate TBTs that stand in the way of South Korea's exports to the EU as a whole. It is especially important for South Korea to enter an MRA with the EU in order to overcome the disadvantages it has in relation to other EU member states that are also lifting TBTs against one another through mutual recognition. Our analysis reveals that, except for the goods subject to national treatment that cannot be negotiated under MRAs, complete harmonization and mutual recognition that can make their way into South Korea's MRA with the EU can increase for the former both its exports and total social benefit. In order for South Korea to overcome these TBTs, it is therefore critical for the government to sign and enter into MRAs with the EU on as many fields or industries as possible. In addition, Korean policymakers need to consider and actively adopt all other policy measures that can generate effects equivalent to those obtained under MRAs.

Third, Korean policymakers should also decide how to best and most strategically make use of MRAs in response to the lifting of TBTs within the EU. Our theoretical analysis implies that South Korea's priorities with respect to such MRAs ought to change in response to the specific approaches that the EU member states take toward reducing TBTs against one another. With other conditions held as equal, South Korea should first aim to reach MRAs on

goods subject to complete harmonization than on goods subject to national treatment or mutual recognition among the EU member states. South Korea should also prioritize goods subject to mutual recognition than those subject to national treatment. The smaller the gap in market size and the greater the disparity in the cost of marginal production between South Korea and the EU, the greater the difference in the effects of complete harmonization and mutual recognition, and the smaller the difference in the effects of mutual recognition and national treatment on South Korea's total social benefit under an MRA between it and the EU. Korean policymakers thus need to take all these findings into account so as to ensure that the most strategic MRAs are reached with the EU.

Fourth, the Korean government needs to create and maintain a database on measures adopted by EU member states to reduce TBTs as well as the details of MRAs between South Korea and the EU. Varying types of quantitative information are needed to ensure thorough analysis of how the lifting of these TBTs within the EU will affect the prospects for South Korea's exports. The lack of extensive, systematic information on the progress that has been made in South Korea's MRAs with the EU also prevents useful quantitative analysis. It is therefore important for Korean policymakers and researchers to gather these quantitative types of data and use them to develop new indicators of trade performance between South Korea and the EU. The development of such a database and new indicators will enable Korean policymakers to ascertain the overall trend in TBTs between the EU member states and help them make better and more informed decisions regarding Korea's trade with the EU.