World Economy Brief

February 5, 2024 | Vol. 14 No. 04 | ISSN 2233-9140

Assessing ASEAN Economic Integration Progress and South Korea's Approach Focusing on TBT and SPS

Sungil KWAK, Executive Director, Center of Emerging Economy Studies (sikwak@kiep.go.kr)

I. Assessing ASEAN Economic Integration Progress and Key Country Cases: Focus on TBT and SPS

We evaluate the economic integration efforts within the ASEAN region, focusing on TBT and SPS. In 2020, ASEAN conducted a mid-term assessment of economic integration and produced the *"Mid-Term Review: ASEAN Economic Blueprint 2025"* in 2021. According to the results, ASEAN has achieved 54.1% of the sectoral work plans, with the remaining 34.2% currently underway and expected to be achieved without major problems. The ASEAN recognizes the need for regional integration to overcome the poly-crises facing the global economy. The ASEAN Comprehensive Recovery Framework (ACRF) views economic integration as a means of recovery from the COVID-19 pandemic and the related poly-crises. As a result, intra-ASEAN trade and investment have increased steadily since 2021.

A notable harmonization effort for non-tariff measures such as TBT and SPS in the ACRF is the development and application of the "Non-Tariff Measures Cost-Effectiveness Toolkit." This toolkit encourages individual ASEAN member states to assess both the implementation process and the cost-effectiveness of their non-tariff measures, thereby promoting harmonization. Additionally, the "Framework for Circular Economy for the ASEAN Economic Community," adopted by ASEAN in 2021, can be seen as an effort to harmonize regulations related to circular goods and services. While existing regulations in manufacturing sectors may require more time to harmonize because they are already in place, emerging sectors like circular goods and services can flexibly seek regulatory harmonization within the ASEAN region due to their ongoing establishment. By achieving standard harmonization and mutual recognition agreements for these sectors, South Korea and ASEAN can anticipate efficiency gains

and regional integration, resulting in trade facilitation effects between the two regions.

Furthermore, an analysis of TBT and SPS cases in Vietnam and Indonesia, key partners in the "Korea-ASEAN Solidarity Initiative (KASI)," aimed at assisting South Korean firms exporting goods to the ASEAN region. Indonesia still faces issues related to certification and testing, including 'halal' certification. Vietnam, despite its high level of integration into the global economy as evidenced by its high trade dependence, has not implemented high-level TBT and SPS measures due to the low technological competitiveness of its domestic and indigenous firms. However, there are concerns about the transparency and adequacy of the implementation process. Capacity building is urgently needed in Vietnam and Indonesia to ensure the transparent use of SPS and TBT for public purposes.

II. Regional Economic Integration Assessment through Similarity Analysis of TBT and SPS

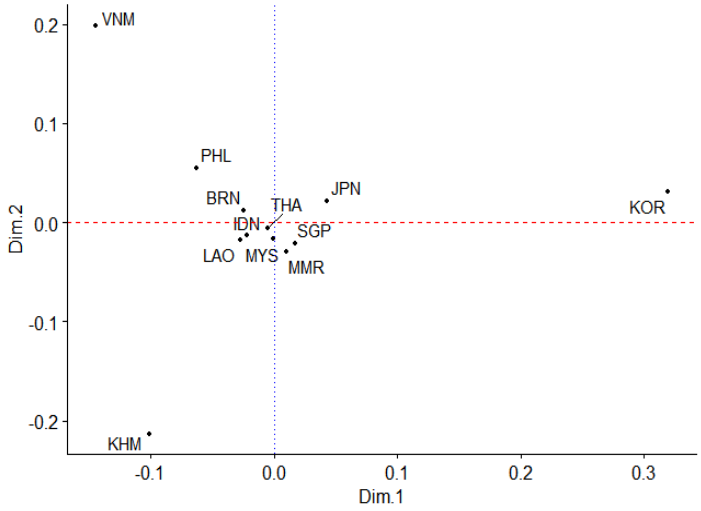
We first measured regulatory distances among ASEAN member states (AMS) from 2015 to 2018. During this period, we observed an increase in TBT and SPS regulatory distances among AMS increased as in Table 1, indicating a lack of regulatory harmonization within the ASEAN region. This can be attributed to the rapid economic growth, leading AMS to focus more on protecting their own citizens. It should be noted, however, that the data used in the study is only available up to 2018, making it impossible to compare with the more recent results. As discussed above, ASEAN has made harmonization efforts in response to the COVID-19 pandemic and polycrises. Therefore, it is expected that regulatory gaps will decrease as the 2025 integration target approaches.

Table 1. Changes in Regulatory Distance among AMS

	SPS		TBT	
	2015	2018	2015	2018
Brunei	0.285	0.306	0.208	0.235
Indonesia	0.309	0.361	0.214	0.267
Cambodia	0.352	0.401	0.398	0.427
Lao	0.275	0.309	0.188	0.241
Myanmar	0.306	0.333	0.195	0.236
Malaysia	0.288	0.306	0.229	0.250
Philippine	0.342	0.376	0.262	0.306
Singapore	0.262	0.288	0.226	0.252
Thailand	0.332	0.350	0.205	0.231
Vietnam	0.446	0.392	0.314	0.441
Average	0.320	0.342	0.244	0.289

Source: UNCTAD NTM database.

Figure 1. Average TBT Regulatory Distance between South Korea, Japan, and ASEAN Member States (AMS)



Source: UNCTAD NTM database.

Note: KHM(Cambodia), VNM(Vietnam), PHL(Philippine), BRN(Brunei), LAO(Laos), IDN(Indonesia), JPN(Japan), THA(Thailand), Kor(Korea), MYS(Malaysia), MMR(Myanmar), SGP(Singapore)

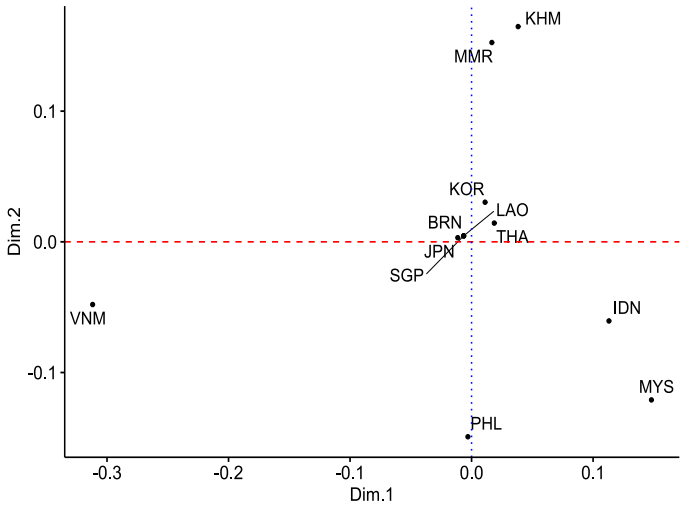
Second, using Multidimensional Scaling (MDS), TBT and SPS regulatory distances between South Korea and ASEAN are found to be greater than those between Japan and ASEAN as in Figure 1. When the average SPS regulatory distance index between South Korea, Japan, and ASEAN Member States (AMS) is plotted using MDS, South Korea is located further away from Japan and the AMS. This indicates that South Korea's SPS regulations appear to be heterogeneous compared to those of Japan and the AMS.

In terms of TBT, except for Vietnam and Cambodia, Japan and the AMS are close to each other, while South Korea is far from the AMS. This result can be attributed to Japan's historical contributions to ASEAN's institutional building through the activities of ERIA and ADB. South Korea needs to actively participate in projects aimed at strengthening institutional linkages between South Korea and ASEAN, in particular, in emerging sectors such as environmental and digital industries, in order to harmonize the SPS and TBT regulations in these new sectors.

Third, in industries closely linked to global value chains, the regulatory distances of TBT are shorter, but the distances of SPS between South Korea and ASEAN are relatively longer. In the MDS analysis of TBT as in Figure 2, the industries, such as automobiles and steel, in which South Korea has a comparative advantage in the ASEAN region are located closer to AMS and Japan. This suggests that increasing regulatory similarity between South Korea and AMS will potentially accelerate regional integration through expanded trade. On the other hand, industries highly affected by SPS, such as meat and fish products, and fruit and vegetable products, are found to

be far from South Korea and other AMS. This divergence can be attributed to significant differences in institutional arrangements in these sectors and income disparities between South Korea and the AMS.

Figure 2. Average TBT Regulatory Distance of Steel Industry



Source: UNCTAD NTM database.

Note: KHM(Cambodia), VNM(Vietnam), PHL(Philippine), BRN(Brunei), LAO(Laos), IDN(Indonesia), JPN(Japan), THA(Thailand), Kor(Korea), MYS(Malaysia), MMR(Myanmar), SGP(Singapore)

Table 2. TBT Regulatory Distance (RD) by Industry between ASEAN and Korea

Industry	RD
Mineral Product	0.467
Chemicals & Allied Industries	0.573
Plastics/Rubbers	0.297
Raw Hides, Skins, Leather, Furs	0.331
Wood	0.398
Wood Products	0.219
Textile	0.287
Footwear/Headgear	0.327
Stone	0.239
Pearl	0.593
Metals	0.300
Machinery/Electrical	0.511
Transportation	0.342
Optical/Clocks/Musical Instruments	0.446
Arms/Ammunition	0.232
Furniture/Toy	0.397
Work of Art	0.211

Source: UNCTAD NTM database.

Fourth, the average regulatory index of TBT between South Korea and each AMS shows significant differences, especially in high-technology industries such as chemicals and machinery as in Table 2. On the other hand, low-technology industries such as plastics/rubber and textiles/apparel have shorter TBT regulatory distances on average. Therefore, it can be assumed that the likelihood of TBT-related problems affecting South Korea's exports to the ASEAN region is low for low-tech industries such as textiles/apparel and plastics/rubber. However, in high-technology industries like chemicals and machinery, South Korea's exporters are more likely to encounter TBT-related problems. This finding is consistent with the previous AHP analysis.

Fifth, countries classified as high-income countries, such as Singapore and Brunei, have shorter regulatory distances than South Korea. However, significant regulatory differences are observed between South Korea and Cambodia, a low-income country. This is consistent with previous research suggesting a higher degree of regulatory similarity among countries with similar income levels. Therefore, Singapore can be seen as a valuable focal point for South Korea to harmonize regulations with ASEAN member states.

III. Analysis of the Trade Effects of ASEAN TBT/SPS Measures

Here we estimate the impact of TBT and SPS of ASEAN member states on the exports of 213 exporting countries to the ASEAN region from 1996 to 2021, using gravity models with fixed effects. The results of the estimation can be summarized into three main points.

First, non-tariff barriers in the ASEAN region do not significantly affect the exports of countries to Southeast Asia as a whole. However, exports from OECD countries are significantly negatively affected by ASEAN TBT measures, while exports from non-OECD countries are significantly negatively affected by ASEAN SPS measures. This is consistent with the fact that ASEAN TBT measures are primarily targeted at advanced countries, which is consistent with the stylized facts presented earlier. Moreover, it is evident that ASEAN TBT measures became a significant barrier to exports from advanced countries to the ASEAN region in the 2010s. This aligns with the stylized facts earlier that shows an increase in Specific Trade Concern (STC) cases raised by advanced countries regarding ASEAN TBT measures in the 2010s. Therefore, South Korea, as an OECD country, needs to focus more on developing policies to address TBT rather than SPS.

Second, SPS is found to be a significant barrier in the continental ASEAN countries. This is due to the fact that countries located in the continental part of the ASEAN region, such as Cambodia, Laos, Myanmar, and Vietnam, have relatively less developed industrial structures compared to the maritime part. In the 2010s, TBT served as a significant trade barrier in the ASEAN maritime region.

Table 3. Estimation Results (1996~2021)

Variable	Internal Trade of ASEAN		Import of Maritime Region		Import of Continental Region	
	(1)	(2)	(3)	(4)	(5)	(6)
$\ln GDP_{it-1}$	0.746	0.747	1.111***	1.111***	0.697**	0.695**
	(0.551)	(0.549)	(0.184)	(0.184)	(0.331)	(0.332)
$\ln GDP_{jt-1}$	0.615	0.623	-0.052	-0.049	3.250***	3.298***
	(0.868)	(0.867)	(0.263)	(0.262)	(0.483)	(0.493)
$\ln(1+TAR_{ijt-1})$	-0.173*	-0.166*	-0.081**	-0.081**	-0.053	-0.058
	(0.095)	(0.096)	(0.041)	(0.041)	(0.059)	(0.059)
$\ln(1+NTM_{it-1})$	-0.068		-0.023		-0.213***	
	(0.071)		(0.029)		(0.046)	
$\ln(1+TBT_{it-1})$		-0.067		-0.008		-0.081
		(0.054)		(0.023)		(0.054)
$\ln(1+SPS_{it-1})$		-0.008		-0.041		-0.236***
		(0.05)		(0.025)		(0.048)
R^2	0.572	0.574	0.42	0.42	0.322	0.318
Obs.	1,606	1,606	16,824	16,824	8,072	8,072
F-stat.	14.48***	14.40***	24.47***	23.85***	14.65***	16.49***

Note: *, **, and *** represent 10%, 5%, 1% of significant levels respectively. lnGDP_{it-1} and lnGDP_{jt-1} represent respectively country i's and country j's GDP. TAR_{ijt} represents the tariff rate of country j to country i. NTM_{ijt} represents the total number of TBT/SPS notification.

Given the relative development in the maritime region compared to the continental region, there is a significant potential for more active use of TBT measures based on technological advantages. Therefore, there is a need to proactively develop appropriate strategies for this situation. This finding aligns with local expert interviews, which indicated that it may be challenging for domestic firms to raise TBT to a high level in countries that are still in the process of development, such as Vietnam

Third, overall, it is revealed that ASEAN's TBT and SPS measures do not have a significant impact on intra-ASEAN trade. However, they had a statistically significant negative impact on intra-ASEAN trade in the 2010s as in Table 3. This suggests that regulatory harmonization and standardization will be crucial for the expansion of intra-ASEAN trade in the future ASEAN economic integration process. Indeed, ASEAN's efforts for regulatory harmonization and standardization have been ongoing, especially since the COVID-19 pandemic.

Moreover, given the high similarity between AMS regulations and institutions and those of Japan, South Korea, which aspires to be a global pivot state, should actively engage in improving AMS's regulations and institutions, especially in emerging sectors such as the digital economy and environmental goods within the ASEAN region. Such efforts can enhance

not only trade but also South Korea's standing in the international community.

IV. Policy Suggestions

Based on the research results above, this study presents four policy directions:

1. **Strengthening Cooperation for Regulatory Harmonization in ASEAN:** It is essential to strengthen cooperation for regulatory harmonization with the ASEAN member states (AMD). The local scholar meetings held in Vietnam and Indonesia also stressed the need for capacity building among TBT and SPS officials in the ASEAN region. As future trade between the two regions is expected to revolve mainly around high-tech industries, proactive efforts are needed to harmonize technical regulations. This will help reduce regulatory disparities between the two regions. As seen earlier, ASEAN's regulations for traditional manufacturing industries were already similar to Japan's. South Korea should focus on regulatory harmonization in emerging sectors such as the digital economy and environmental industries.

2. **Consideration of a South Korea-ASEAN Joint Certification Center:** The second policy direction is to consider the establishment of a joint South Korea-ASEAN certification center to facilitate flexible responses. This is crucial because the impact of TBT/SPS on exports may vary by product, time, and country. The results of the study highlight the regulatory differences between the maritime and continental parts of the ASEAN region, which affect South Korea's exports to the region differently. By setting up an ASEAN-based certification center, with Singapore as a potential hub due to its closest regulatory distance to South Korea, and by strengthening the network with other ASEAN member states, more flexible responses to changes in AMS's TBT/SPS policies can be achieved.

3. **Proposal for the Establishment of an ASEAN Integrated Standard Accreditation System:** The third policy direction proposes the establishment of an ASEAN Integrated Standard Accreditation System. This is a challenging proposal, given the diverse geographical, economic, social, and cultural characteristics of ten ASEAN member states. However, it could be piloted initially for general safety standard requirements for electrical and electronic products or for new products without established regulations. If successful, it could be gradually expanded. The creation of a working group for this purpose, with South Korea's participation, could promote regulatory harmonization between South Korea and the ASEAN member states.

4. **Strengthening the linkages among the National Trade Repositories of 10 ASEAN Member States**: The fourth policy direction highlights the need to support the strengthening of linkages between the National Trade Repository (NTR) of 10 ASEAN Member States (AMS) and the ASEAN Trade Repository (ATR). A trade repository serves as an information repository that collects information on each country's tariff and non-tariff

measures. Due to the significant development gap among the 10 AMS, there are differences in the capacity to operate national trade repositories. To ensure the effective consolidation of information from national repositories into the ASEAN Trade Repository, it is necessary to develop and improve the capacity to manage and operate these national repositories. With proper data aggregation, the utility of the current ASEAN Trade Repository can be enhanced and it can lead to more active research in this area. KIEP