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A Study on the Value Added Criterion of Rules of Origin under FTAs with the US and EU: Focusing on Automotive Sector*

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Abstract

Purpose – This study deals with a strategic plan for meeting the value added criteria effectively, which is one of the methods of determining origin used in preferential trade such as FTA. Automobile products, one of the major Korean export items, were selected to give a practical use against the FTA requirements.
Design/methodology – This study is based on the value-added criteria of the Korea-US and Korea-EU FTAs that apply various value-added criteria. The Korea-US FTA adopts the RVC method based on the integration, deduction and net cost methods, while the MC method is employed in the Korea-EU FTA. The methodology used in this work is an extended literature review, analysis of the value-added criteria applied to automobile products under Korea-US and Korea-EU FTA with some secondary statistics.
Findings – Based on in - depth analysis of the value - added criteria requirements for automobile products stipulated in the Korea - US FTA and the Korea - EU FTA, two strategic considerations are suggested. First is 'appropriate value-added strategy' and the second is 'strategy of changing production and trade structure'. The second strategy is a bit used in Korea but this is not considered best if the first strategy is ignored or forgotten. The second one is meaningful when this becomes inevitable.
Research limitations/implications – This study is primarily designed to assist Korean auto mobile industry players exporting to EU and USA but this may help to auto part or material producers in FTA counter party territories being EU or USA as the preferential tariffs are applied on a inter region basis. A further research other than auto mobiles using other major FTAs might be followed later.
Originality/value – There has been so far little research on strategic factors to meet the value-added origin requirements. This study, therefore, is expected to contribute facilitating the decision of FTA origin and to improve the utilization of FTA by allowing exporting companies using value added criterion to more smoothly meet origin requirements. This will also enable the tax authorities to utilize the value-added criterion to validate effectively the origin of imports where preferential tariffs are applied.

Keywords: Determination of Origin, FTA, Origin, Tariff, Value-added Criterion
JEL Classifications: K34, N4, N70

1. Introduction

In order for a Free Trade Agreement (FTA) to contribute to the expansion of trade, it should be easy to apply preferential tariffs using import agreements.[1] The application of preferential tariffs is possible only if the origin of the goods to be imported is from an FTA agreement contracting country. In the FTA, the Rules of Origin (RoO) is usually applied

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according to each country's Wholly Obtained Criterion (WO), tariff change criterion, value added criterion, manufacturing process criterion or a mixture of such criteria.

There are a variety of factors to be considered in each criterion. In particular, the value-added standard is complex because the value of the originating or non - originating materials used in the production of the exporting goods are to be calculated and is determined by the proportion of the value (Chung Jae-Wan, 2018). There are various factors to be considered in meeting the requirements. As Korea is processing the structured trade, it is most likely that a large portion of the raw materials used for exported goods are non-originating materials. Therefore, it is necessary to strategically deal with the problem of satisfying the origin requirements in order to utilize the FTA effectively.[2]

This study is an in-depth analysis of how value-added criterion is calculated and its implications to address the strategic considerations and actions to be taken by exporters to meet the requirements in determining their origin.

The value-added criteria of the FTA rules of origin are decided by determining the value of the exported product and the value of the originating material or non-originating material employed for the production concerned. The judging method is divided into two types: RVC (Regional Value Contents Method), which requires value added in the region to be higher than a certain level, and MC (iMport Contents) Method, which requires the added value generated from offshore to be below a certain level. In the RVC method, there are 3 differing calculations;

First, the integration method which calculates the proportion of origin materials to the value of goods. Second, the deduction method which calculates the portion of value minus the value of non-originating materials to the value of goods. Third, the net cost method which calculates the ratio of net cost minus the value of non-originating material to net cost. Among the 15 FTAs that are currently in effect where these 3 value-added calculation methods are applied are automobile products of the Korea-US FTA and the Korea-EU FTA. The value-added criteria for the remaining FTAs are usually defined by one or both of these. Therefore, this study focuses on the value-added criterion for automobile products of Korea-US and Korea-EU FTA.[3] The recent research on the FTA's rules of origin are : Choi Byung-Kwon and Lee Byung-Moon (2015), Chung Jae-Wan (2015/2018), Kim Deok-Jong and Kim Hee-Ho (2017), Kim Gu-Tae and Park Hyung-Rae (2017), Kim Gyu-Rim and Na Hee-Ryang (2018), Kim Won-Ju and Kim Hak-Min (2018), Kwon Soon-Guk (2018), Lee Ji-Su (2015), Lim Mok-Sam and Lim Sung-Chul (2016), and studies related to value added criterion include Kim Kwan-Woo and Cho Chan-Hyuk (2014), Cho Sung-Jang and Cho Chan-Hyuk (2016), Kim Tae-In and Kim Seok-Tae (2012), but little research has been conducted on strategic factors to meet the value added origin requirements covered by this study. However, Chung Jae-wan (2018)'s study addressed the meaning and limitations of applying WTO Agreement on Customs Valuation in calculating value by applying the value added criterion in determining the country of origin, and this is a follow-up study.

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[1] Korea's trade with FTA partners accounted for 68 percent of its total trade in 2018, and the application rate of FTA preferential tariffs was 73.5 percent for exports and 75.3 percent for imports according to Korea Customs Service Statistics.

[2] 11.1 percent of the value-added criteria were applied mandatory and 28.0% was optional. Chung, Jae - Wan, A Study on the propriety of Product Specific Rule(PSR) under FTA, Journal of Korea Research Society for Customs, Vol. 15, Vol. 3, 2015, pp.7 ~ 38.

[3] The 15 FTAs concluded by the Republic of Korea apply the "prices actually paid or payable" rule in the case of Korea-India CEPA or Korea-EU FTA when calculating the value of exporting goods and originating materials or non-originating materials or "taxable prices" in the case of Korea-US FTA under tariff assessment agreement. See Chung Jae-Wan (2018).

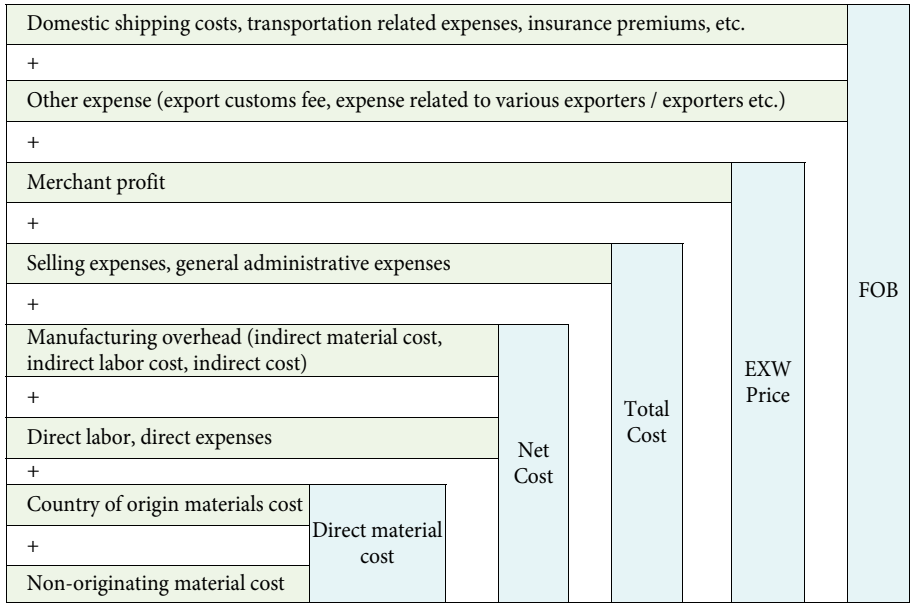
This study may contribute to facilitating the decision of origin of FTA and improving the utilization of FTA by allowing exporting companies using value added criteria to more smoothly meet origin requirements. In addition, it will also enable the tax authorities to apply the value-added criteria to more effectively validate the origin of imports where preferential tariffs are applied.

2. Value-added Standards Set by Korea-US and Korea-EU FTA

2.1. Meaning of Value Added as Decision Criterion of Origin

According to the dictionary, added value means 'new added value in the production process'. In other words, added value by each individual company comes out from total the products value minus the other companies' inputs in the production process. The added value includes part costs, direct and indirect manufacturing costs, selling and administrative expenses, profits, etc., in the course of the additional production process. The value added structure of exporting products is shown in Fig. 1.

Fig. 1. Value-added Structure of Export Goods



The customs value determined by the customs valuation agreement basically equals the price of FOB, EXW and direct material costs in Fig. 1. But it also means the price value which is to be adjusted in consideration of 'actual paid or payable price' under FOB or EXW transaction. The costs associated with originating materials or non-originating materials are referred to as value rather than price. This is because they are added or subtracted in accordance with the customs valuation agreements and the rules of origin set forth in the FTA.

2.2. Value-Added Criteria and Exceptions for Automobile Products Stipulated in the Korea-US and Korea-EU FTA

The value-added criteria stipulated in FTAs concluded by Korea are all RVC[4] except for FTA with EU, EFTA and Turkey, which stipulate the integration, deduction or net cost method.

In the Korea-US FTA, (hereinafter KORUS FTA) the value-added criteria employ the integration and deduct method, however, in the case of automobiles[5], the net cost method also can be applied. The calculating method of value added is as shown in [Equation 1] to [Equation 3]. According to the origin standards under the KORUS FTA, the integration method shall be more than 35%, the deduction method for more than 55%, and the net cost method more than 35%.

[Equation 1] Regional value ratio by integration method = Value of origin materials (VOM)[6] / Adjustment value of goods (AV)[7] x 100
[Equation 2] Regional value ratio by the deduction method = [Adjustment value of goods (AV) – Non Originating Material Value (VNM)[8]]/ AV x 100
[Equation 3] Regional value-added ratio by net cost method = [Net Cost - Non Originating Material Value (VNM)] / AV x 100

In the case of the FTA with EU, EFTA and Turkey, the value added ratio is defined by the MC method[9]. In the MC method,[10] the ratio of offshore value is calculated as [Equation 4].

[Equation 4] Offshore value ratio (MC) = VNM/ AV[11] × 100

[4] In the RVC-based value-added standard, the regional value-added ratio is usually between 30 percent and 60 percent of the commodity price, which varies according to the FTA. In this method, the country of origin is recognized only when the specified proportion is added. This means that when higher specified proportion is required, the higher proportion of the use of the country of origin materials are to be satisfied.

[5] Automotive products subject to the net cost method in the KORUS FTA include the Piston Engine for Vehicles of 8407.31-8407.34; diesel engine or semi-diesel engine; parts of 8409; tractors and 10-person or above passenger cars; and cargo cars; chassis with engine 8706, body of 8707 and body parts and accessories of 8708. In this case, a product means any commodity, manufactured goods or materials, and materials including parts or raw materials mean goods used in the production of another product. See Article 6.22 (Definitions) of the KORUS FTA.

[6] Value of Originating Material (VOM): The value of the originating material used by the producer to produce the product.

[7] AV (Adjusted Value): The adjusted value of goods for determination of origin.

[8] VNM (Non Originating Material): The value of the non-originating material used by the producer to produce the product.

[9] Exceptionally, the Korea-Canada FTA may, at the option of the exporter or producer, apply the MC or RVC method for motor vehicle products from 8701 to 8708. Articles 3.4.2 to 6 of the Korea-Canada FTA

[10] In the MC method, the ratio of non-originating materials is normally set at 10% to 65% of the commodity price. In this case, the country of origin is only recognized if the value of non-original materials is included below the specified ratio.

[11] In the MC method, the value of a product represents factory value (Ex-Work) deducting all draw back domestic taxes.

The Korea-EU FTA recognizes origin if the product meets the criteria of full production or substantive modification. In the Korea-EU FTA, origin recognition by a substantive modification criterion is limited to cases where production[12] is made in the region exceeding the minimum processing standard[13] set forth in the Agreement. In the case of the origin of the auto mobiles under Korea-EU FTA, the piston engine of 8407.31 to 8407.34 and the automobile parts and accessories of 8708, the value of non-originating materials shall not contain more than 50% of EXW price. Chassis with engine, bodywork, cars under 8701 to 8707, that the value of non-originating materials shall not exceed 45% of EXW.

There are several exceptions to the application of the KORUS FTA and the Korea-EU FTA. Among them, cumulative and intermediate criteria are important.[14] Accumulation means that when determining the origin of an article, the inputs of the production process originating materials in the contracting state is considered to be their own. When the cumulative criteria are applied, it is relatively easy to recognize origin.[15]

The cumulative criteria for the KORUS and Korea-EU FTAs are set out in Article 6.5 of the KORUS FTA and Article 3 of the Protocol of Origin of Korea-EU FTA. On the other hand, intermediate goods regulation intends to correct the imbalance that arises when intermediate materials are procured from other companies in the region and when they are produced directly. The intermediate goods regulation method is used when goods are produced by the use of originating and non-originating materials satisfy the original standard. Roll Up method is used when goods meet the origin standard, then the entire material cost is recorded as origin source material cost. Roll Down method is used when the goods do not meet the origin standard, then the entire material cost is recorded as non-origin source material cost.

In FTA, there are cases where the intermediate product regulation is set separately specifying the scope of application and the designation of the applicable item. However, in some cases the roll up is recognized in the originating rule even if the intermediate product regulation is not introduced. In determining the price of self-produced materials, the KORUS FTA requires that all the costs incurred in the production of materials be summed up, as a result, it is reflected in the Roll Up method. The Korea-EU FTA also has similar Roll Up regulations.

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[12] In the Korea-EU FTA, commodities are products that are being produced even if they are intended to be used as materials in other production processes in the future. Material means any raw material, component or part used in the production of a product, and commodity means the material, product or good. Article 1 of Protocol of Origin of Korea-EU (Definition)

[13] Insufficient work or processing listed in the agreement includes preservation processes to ensure that the product remains in good condition while transported and stored, dismantling and assembling the package, washing, cleaning and removing dust, rust, oil, paint or other covers, ironing or pressing of the fabric, stripping and polishing of grain and rice, and polishing parts or abrasions. Article 3 of Protocol of Origin of the Korea-EU FTA.

[14] Special provisions that may affect the calculation of value added on a value added basis include indirect materials in addition to the cumulative and intermediate goods criteria. Indirect material means an item that is not physically bound to the final product but is used in production. Indirect materials are included in the manufacturing overhead rather than counted in the cost of materials when applying the value added standard, which has the effect of increasing value in the region. See Articles 6.12 and 6.22 of the KORUS FTA, Articles 10 of the Protocol of Origin of the Korea-EU FTA and Joint Declaration on Explanatory Note.

[15] The regulations for offshore processing, which are regarded as regional products under certain conditions, are also subject to special criteria that affect the value of value added criteria, but the KORUS and Korea-EU FTA only requires 'Korean Peninsula External Processing Zone Committee' to be set up for discussion at a later date.

3. Strategic Considerations for Calculating Fair value in RVC Standards

3.1. Direction of Strategic Approach to Meet Value Added Value Origin Standards

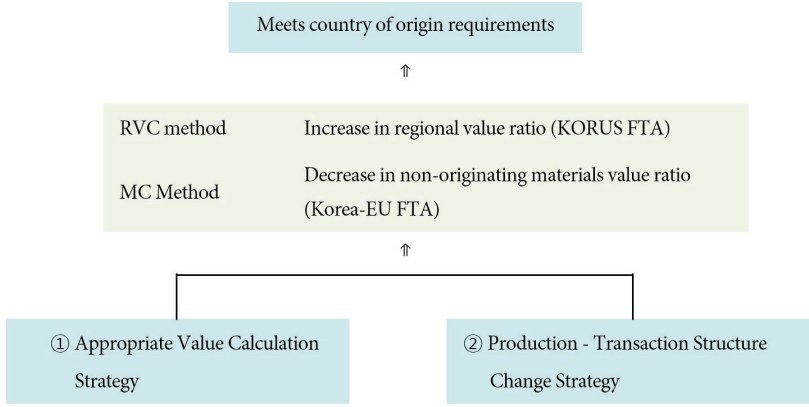
The traders shall be able to prove their goods are following FTA regulation and conduct strategic approach when their goods are likely out of FTA compliance. The basic direction of the strategic approach under the value added criterion is to increase regional value ratio in case of RVC method and to lower the value ratio of the non-originating material in case of MC method. The strategy framework for meeting the requirements of originating goods according to these directions is as follows.

(1) Appropriate Value Calculation Strategy: to maximize the value of materials used in the production of exported goods under the existing production method

(2) Production-Transaction Structure Change Strategy: to change the production-transaction structure of the product to favor the requirements of the origin goods.

The change in production structure Fig. 2 is to change the level of processing and country of raw materials which are judged to be non-originating in the existing product structure. The producing country adjust the use of the cumulative standard by changing the production place to FTA partner country or Korea. Changes in the level of processing can be achieved by importing non-originating materials into the territory of the domestic or FTA partner country or further processing of the imported raw materials to the degree of origin requirement as stipulated in the FTA by applying the cumulative standard.[16]

Fig. 2. Basic Direction of the Strategy of Satisfying the Requirements of Origin Goods in the Application of Value Added Origin



Meanwhile, changes in the transaction structure to change non-original materials into raw materials could be amended when exporters raise raw materials offshore rather than directly producing them in the region. This is possible through the modification of the counterparty

[16] The EU supports processing through import and export of raw materials by having inward processing and outward processing systems through the EU Community Customs Act and the same enforcement rules (Chae Hyung-Bok, 2003).

to procure non-original materials and the adjustment of the transaction payment. The aim of counterparty is to change the source of non-original materials sourced from offshore to domestic or to the exporting FTA territories. Adjustment of the transaction payment adds as much as possible the cost of installation, assembly, royalties, commission, etc. after the import to the exported product, and therefore make it the amount to be paid or payable, taking advantage of the fact that the tariff assessment agreement applies to the out- put value of the exported product.

3.2. Factors for Consideration for the Appropriation of Value Calculation Method and Correct Value of Adjustment Value

The RVC value added criteria defined in the FTAs of the world are based on integration, deduction or net cost method or mixed. In the case of the integration method and deduction method; the value of the originating materials and non-originating materials used in the product and the adjusted value are essential elements, and in case of net cost; appropriate value of the originating materials and non-originating materials to net cost is important. When applying the RVC method, it is necessary to first analyze which method is favorable to meet the requirements of the origin and then asses the outcome by considering the result.

In addition, the adjusted value[17] used in the denominator or deduction formula in both the integration and deduction method are used for calculation of export goods and value of materials. To calculate the adjustment value;

- Evaluation method shall be determined according to the customs valuation agreement.
- Actual transaction price to be calculated by adding or deducting to/from "actual paid or payable price".
- Alternative price shall be calculated according to the method specified

The price calculated by the above methods deducting international transportation costs are equal to the FOB-based transaction price. Considering the RVC value-added calculation method and the adjusted value calculation method, the measures for calculating the appropriate value of Fig. 2 are summarized as Table 1.

Table 1. Selection and Adjustment of Value Calculation Method and Action

	Measures for calculating appropriate value	**Resources**	**Significance of action**
Choice of method in Value Calculation	Comparing and analyzing the advantages of integration, deduction, and net cost method. In particular, if it is difficult to meet the country of origin criteria by the integration method, it is necessary to examine whether the criteria of origin are satisfied by the deduction method and the net cost method. ⇒ Select or change the calculation method.	Article 6.2 of KORUS FTA	Can meet the criteria of origin by changing the calculation method.

[17] The value of the adjustment herein is the value determined under Articles 1 to 8, 15 of the Agreement on Tariff Assessment and, if necessary, adjusted to exclude all expenses, charges or expenses incurred for the transport, insurance and related services involved in the international transport of goods from the exporting country to the import destination. Articles 6.2.1 and 6.3(b) and 6.22 of the KORUS FTA.

Table 1. (Continued)

	Measures for calculating appropriate value	Resources	Significance of action
Adjusted value	Is the adjusted value of the exporting goods different from "paid or payable price" for declaration?[18] Is the price based on customs FOB standard? Is the indirect payment cost and the additive factor amount both included? ⇒ Add missed indirect costs or additive factor.	Article 6.22 of KORUS FTA Articles 1 and 8 of Customs Valuation Agreement	Indirect payment costs and added factor increase RVC rate when added.
Same above	Check whether it is necessary to calculate the adjusted value of the exporting goods by substitute price instead of the actual transaction price when applying the integration and deduction method? ⇒ Compare the substitute and actual price with review of actual transaction price requirements.	Article 6.22 of KORUS FTA Article 8 of Customs Valuation Agreement	RVC ratios increase when alternative prices were adopted. Prevention of validation risk in case of wrong evaluation method.

3.3. Consideration Factors for Calculation of Value of Origin Materials

Value of the material is an important factor in the decision of origin. The value of materials in the KORUS FTA is the value adjusted for customs valuation agreements, whether originating materials and non-originating materials are imported or produced domestically which is put into production of a particular product. The self-produced materials are the sum of all costs incurred in production plus the amount equivalent to the profit added during the normal course of trade (Article 6.3 of the KORUS FTA). However, the cost listed in Table 2 and Table 3 is to be added or deducted to the cost when they are not included in the value of the originating and non -originating materials. It is to be noted that the tariffs, insurance premiums, etc. are applicable only when they are incurred by the parties between the territories of the Parties.[19]

Table 2. Further Adjustment of Value of Origin Materials: Adjustment in Addition to the Value of the Material (Article 6.4 of the KORUS FTA)

- Freight, insurance, packing and all other costs[20] incurred in the carriage of the material to the territories of the parties or incurred in the territory of either Party.
- Duties, taxes and customs duties on materials paid or payable in the territory of either Party.
- The cost of waste or damage resulting from the use of the material in the production of the commodity minus the value of any debris or by-products that can be recycled.

[18] In making an export declaration in accordance with the provisions of the Customs Law, it shall be reported at "the price actually paid or payable" rather than the taxable price determined under the Customs Evaluation Agreement. This price is understood as "the price actually paid or payable" when the 1st method is applied in the customs assessment. Article 246 Article 3 of the Customs Enforcement Ordinanc.

[19] The parties to the KORUS FTA are of course Korea and the United States.

[20] Transportation costs include all types of freight transport, including inland freight transport costs incurred within the territory of either party, regardless of the mode of transport. See article 6.4 and note 22 of the KORUS FTA.

Table 3. Further Adjustment of Non-originating Material Value: Adjustment by Subtracting Value of Material Value (Article 6.4 of KORUS FTA)

- Freight, insurance, packing and all other costs incurred in the carriage of the material to the territories of the parties or incurred in the territory of either Party.
- Duties, taxes and customs duties on materials paid or payable in the territory of either Party.
- The cost of waste or damage resulting from the use of the material in the production of the commodity minus the value of any debris or by-products that can be recycled.
- The cost of originating materials used in the production of non-originating materials in the territory of a Party.

The additional adjustment of the value means that costs such as international transportation costs or insurance premiums, domestic transportation and insurance costs[21] and customs duties, fees and taxes are added on FOB price. It is optional to add the costs listed in Table 2 to the value of originating materials and to subtract the costs listed in Table 3 from the value of non-originating materials. However, adding or subtracting these amounts has the positive effect of increasing the regional value-added ratio regardless of the integration, deduction and net cost methods.

4. Strategies for Calculating Appropriate Value in MC Standards

4.1. Consideration for Proper Calculation of Factory Price Which is Value of Product

In the Korea –EU FTA, the ex-works price of a product for value added is defined as "the price paid or payable to the producer for the product delivered in the producer factory in the party in which the final operation or processing is performed".[22] The price shall include the value of all materials used and shall be calculated by deducting all internal taxes that are refunded or refundable when the goods are exported. The Korea-EU FTA stipulates that the WTO Customs Valuation Agreement can be incorporated, with some modification if needed,[23] into the agreement, so that the "price paid or payable to the producer" is interpreted: the price which is paid or payable to the seller from buyer. This factory price calculated for the determination of origin is similar to the Incoterms 2010 EXW.[24] In the factory price calculation, the internal tax is deducted but customs duty is not.

On the other hand, even if the factory price is similar to the EXW-based price, this price is

[21] The inclusion of freight, insurance and all other costs incurred in transporting the material between the party countries to the producer's location is particularly meaningful because the USA adopts FOB in the application of the Tariff Assessment Agreement.

[22] Article 1 of Protocol of Origin of Korea-EU FTA

[23] "The Agreement on the Implementation of Article 7 of the 1994 GATT, contained in Annex 1 to the World Trade Organization, is incorporated into the Agreement and becomes part of it by making necessary changes. The reservations and options set forth in Articles 20 of the Tariff Evaluation Agreement and Annex 3, paragraphs 2 through 4, shall not apply. " Article 2.12 of the Korea-EU FTA (Trade Customs Assessment) Article 1 of the Protocol of Origin under Korea- EU FTA

[24] The INCOTERMS (2010) condition does not specify the nature of the transaction price. However, without the normal operating principles of the market in the transaction and the amount that the purchaser has to pay indirectly, the factory price of the Korea-EU FTA would be virtually the same as the transaction price on the EXW basis.

naturally different[25] from the FOB export price listed on the export declaration certificate issued under the Customs Act. The fact that domestic taxes were allowed to be deducted from the calculation of factory prices, but customs duties were not mentioned in the deduction list, is related to banning tariff refunds on exporting goods as a double benefit when the EU enters into an FTA.

The EU bans tariff refunds in the country-of-origin model of the PAN-EURO FTA, and most of them did not allow tariff refunds when they signed FTAs with other countries, such as Mexico, Chile, EFTA and Israel, prior to the Korea-EU FTA. (European Parliament, 2011).

PAN-EURO FTA was created in 1997 on the basis of the EEA agreement (1994) between the EC, the EFTA countries, the CEEC (Central Eastern European Countries) and the Baltic States. It was then widened to Slovenia and to industrial products originating in Turkey (1999). The system was also enlarged to the Faroe Islands. In 2005, it was enlarged to the participants in the Barcelona Process resulting in the creation of a pan-Euro-Mediterranean cumulation system of origin allowing for the application of diagonal cumulating between the EU, EFTA States, Turkey, and the countries which signed the Barcelona Declaration, the Western Balkans and the Faroe Islands. It is based on a network of Free Trade Agreements having identical origin protocols. Those origin protocols are being replaced by a reference to the Regional Convention on pan-Euro-Mediterranean preferential rules of origin (PEM Convention) where "no-drawback" rule applies, in principle, in preferential trade within the pan-Euro-Med zone.

At the end of the FTA talks with Korea, the biggest issue was whether to allow tariff refunds for export goods, but the EU accepted Korea's request and allowed the application of the Korea tariff refund system. However, if one of the parties request the tariff refund, five years after the agreement's effectuation, they could discuss it again. (Jang, Keun-Ho, 2017).

In addition, it was concluded that a regulation could limit tariff refunds to as much as 5 percent, if necessary (Article 15 of the Korean-EU country of origin). Against this backdrop, tariffs were excluded from the deduction list. Currently, Korea refund the domestic tax at the tax office in accordance with the provisions of the Value-Added Tax Act and the Local Tax Act. And it is refunded[26] at the Customs office for other individual consumption and liquor tax, transportation and energy environment tax, education tax, and rural special taxes in accordance with the provisions of the Tariff Special Refund Act. If the internal tax is deducted, the value ratio of the non-originating material of the exporting commodity increases.

Considering the method of calculating the factory price, the measures for calculating the appropriate value of Fig. 2 are explained in the Table 4 below.

4.2. Consideration Factors for the Proper Calculation of the Value of Non-Originating Materials Used in the Production of the Product

The value of a non-originating material in an EU-FTA is "the customs value at the time of importation of the non-originating material used or, if not known or ascertainable, the initial confirmation made within the EU Party or within the Republic of Korea". The value of the

[25] However, in practice, in the implementation of procedures for verification of country of origin or in the application of the Korea-EU FTA, the actual country of origin certificate is sometimes treated as the price of the export product. In this case, there is an error that results in a lower value ratio of the non-original materials than is legally calculated (Kim Tae-In and Kim Seok-Tae, 2012).

[26] In accounting, tariff refunds received from customs after the export of goods are not subject to VAT taxation, and are treated as a deduction of the cost of sales (the same in accordance with Article 69 of IFRS) (Kim Kyom-Soon and Chung Jae-Wan, 2018).

Table 4. Measures for Proper Calculation of Factory Price under Korea-EU FTA

Measures for calculating appropriate value	Resources	Significance of Action
At calculating the factory price, whether the price paid is reflected. ⇒ Make sure to include it when missed	– Article 1 of Korea-EU Protocol – Customs Valuation Agreement Article 1	– Decrease MC rate when missed payment amount is included.
Whether the costs after import is properly reflected in the invoice? ⇒ Include it in the invoice.	– Notes on Article 1 of Customs Evaluation Agreement Annex I	– Decrease MC rate when inconsistent cost is included.
Is the tax for refunded or refundable is deducted in calculating the factory price? ⇒ If deducted, make sure to include it	– Article 1 of Korea-EU Protocol	– Decrease MC rate when refunded (refundable) tax is exempted.
In the case of trading under conditions other than EXW, whether all transaction costs not belong to EXW are excluded? ⇒ Exclude if not excluded.	– Article 1 of Korea-EU Protocol – Article 1 of Customs – Evaluation Agreement	– The MC rate increases when the irrelevant amount is excluded. – Prepare Verification Risk
Is the factory price calculated based on the time of export declaration with FEX rate at that time? ⇒ Correct the mistake when the declaration time and FEX rate are mistaken.	– Article 10 of the Customs Exemption Law Enforcement Rules – Article 9 of the Customs Valuation Agreement	– The factory price might be changed. – Prepare Verification Risk
Is the transport cost & expenses before the shipment is deducted from the export declaration price (FOB basis)? ⇒ If not deducted, take measures to deduct.	– Article 1 of Korea-EU Protocol	– Prepare Verification Risk in relation to adequacy of the factory price
Whether all the value of the originating materials or non-originating materials are included? ⇒ Include missing material values, if any	– Article 1 of Korea-EU Protocol	– The MC rate decreases or rises when all the missing material values are included.
Whether all domestic taxes refunded or refundable are deducted? Whether the VAT and local excise tax as well as individual consumption tax, liquor tax, education tax, rural special tax, and transportation energy and the environmental tax according to the Special Refund Act are deducted? ⇒ Deduct if they were not deducted.	– Article 1 of Korea-EU Protocol	– MC rate decreases if it was not deducted. – Prepare Verification Risk

originating material refers to the value applied by making the necessary changes to the value of such non-originating materials.[27] The customs value here means CIF value which includes insurance premium related to international transportation. This price concept is different from the factory price which is based on "price actual paid or payable".

[27] Protocol of Origin (g, h) of Korea-EU FTA.

If the customs value at the time of import is not known or cannot be confirmed with respect to non-originating materials, the first verifiable price paid in relation to the purchase of the material in the country shall be adjusted in accordance with the customs valuation agreement principle.[28] The calculation of the non-originating material value may be calculated by deducting the value of the originating material produced at the factory price of the exported product. The value of the originating material at this time includes all the costs incurred in the production of the material and the amount of profit equal to the added profit in the normal course of trade.

5. Conclusion

When the value-added criterion is applied to determine the origin, the requirements of the country of origin will vary depending on how the value of the originating materials or non-originating materials that are put into the production of products is calculated. Even direct costs and direct labor, manufacturing overhead, selling expenses, general and administrative expenses, and producer's margin are closely related to the value of the product, value of products and material costs are particularly meaningful because it can affect the amount according to the calculation method. Among the 15 FTAs concluded by Korea, some FTAs set clear calculation whilst some are not clear in evaluating product value and materials in respect of added value criteria but it is certain that the value should be calculated in accordance with the principles of the customs valuation agreement.

However, not all of the customs valuation agreements are uniformly applied to the output, and the scope of the customs valuation agreement differs according to the FTA, and ranges of amounts to be added or deducted from the calculated value are different. Therefore, it is likely that errors rise in country of origin certification and risk increases in post-verification consequently. In this study, based on an in-depth analysis of the value-added criteria calculation method, a strategic modification is suggested when the requirements of the product to be determined for origin are not satisfied or there is possibility in this regard. Strategic attempts can be made through two tracks: a strategy of calculating appropriate value and a strategy of production-trading structure change.

To calculate the appropriate value, increasing the value of origin materials or lowering the value of non - origin materials and increasing the value of products are suggested. By changing the costs such as direct expenses, manufacturing overhead cost, general management costs and the margin, desired results can be obtained, however, this way seems unrealistic due to change of the transaction price itself. The strategy of production - transaction structure change is already being used by many companies but most FTA cases studies have shown that exporters are simply dependent on this strategy. It is preferable to first use the strategy of calculating appropriate value introduced in this study, and secondly strategy of production - transaction structure change if this is inevitable.

The value added standard is widely applied in automobile products such as automobiles and auto parts, which are one of the main export goods, according to the FTA concluded by Korea. However, in practice, it is also known that companies face difficulties in satisfying the requirements, and the preferential tariffs are often recovered due to failure of verification by

[28] The first verifiable price paid in connection with the purchase of the material here is interpreted as meaning the price first to be traded at a price that can be identified when the product has been traded in the country several times since it was imported. Such prices may be identified in BWT transactions. This price means "settled in accordance with the Customs Assessment Agreement" (see paragraph 2 of the Joint Declaration on the Explanatory Note), so it means the value calculated according to the principles of the Customs Assessment Agreement.

importing country customs authorities. The results of this study are expected to contribute to the expansion of exports through the use of FTA by making it easier and more accurate to determine the origin of the FTA.

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