



ODI Emerging analysis

Assessing the restrictiveness of rules of origin in the AfCFTA

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Acronyms

AfCFTA	African Continental Free Trade Area
AfDB	African Development Bank
AH	Any Headings
CC	Chapter CTC
COMESA	Common Market for Eastern and Southern Africa
CTC	Change in Tariff Classification
CTH	Heading CTC
CTSH	Subheading CTC
ECOWAS	Economic Community of West African States
EU	European Union
FTA	free trade agreement
GDP	gross domestic product
GVC	global value chain
HS	Harmonised System
ITC	International Trade Centre
MFN	most-favoured nation
NAFTA	North American Free Trade Agreement
OECD	Organisation for Economic Co-operation and Development
RoOs	rules of origin
RoOs-RI	RoOs Restrictiveness Index
RVC	regional value chain
SADC	Southern African Development Community
SP	Specific Production Processing
TCA	Trade and Cooperation Agreement
UK	United Kingdom
US	United States
VA	Value Added
WO	Wholly Obtained

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Executive summary

The African Continental Free Trade Area (AfCFTA) provides African firms with tariff-free market access as long as they meet the rules of origins (RoOs) requirement specified in the Agreement. The primary aim of RoOs is to offer preferential tariff benefits exclusively to AfCFTA member countries while preventing trade deflection from non-member countries. However, stringent and costly RoOs can hinder trade among member countries, potentially affecting regional value chain (RVC) development and preference utilisation rates. Our main conclusion is that the AfCFTA has relatively restrictive RoOs, which reduce preference utilisation. Hence, AfCFTA implementers need to consider policies to lower the restrictiveness and costs of RoOs.

Several African countries have expressed an interest in understanding more about the role of rules of origin in the African Continental Free Trade Area in the global context of trade and industrial policy. This note responds to those demands by providing initial insights into this question.

As a first step in generating attention to the impact of RoOs in ACFTA, we develop an AfCFTA RoO restrictiveness index (RoOs-RI). The process of assigning a score to rules of origins for precise calculations of the restrictiveness of RoOs are debatable given the various approaches taken in the literature. Nevertheless, RoO restrictiveness indices offer valuable analytical insights into the challenges exporters and producers face, and how these vary across sectors.

The most commonly applied RoO is the option to choose between a Change in Tariff Classification (CTC) or Value Added (VA), which applies to 26% of products. The second most common rule is the option to choose CTC, VA or Specific Production Process (SP); this applies to 20% of products. The Wholly Obtained (WO) rule, which demands that a product be entirely produced within AfCFTA countries, is applied to 17% of products. WO is used predominantly for vegetable products (96%), animal products (100%), minerals (70%) and food, beverages, and tobacco (51%). Moreover, in 49% of HS 6-digit products, only one type of RoO is applied, whereas in 46% of HS 6-digit products, exporters can choose between one or two different types of RoOs. Three or more RoOs are combined in only 0.3% of cases.

We find that the restrictiveness of the completed AfCFTA RoOs is 3.8 on a scale between 1 (least restrictive) to 7 (most restrictive). Although not directly comparable, this is similar to in the Pan-Euro-

Mediterranean Convention, the North American Free Trade Agreement and other agreements. However, it appears more restrictive than in the Common Market for Eastern and Southern Africa (COMESA), UK–New Zealand and the EU–UK Trade and Cooperation Agreement. We also find that the AfCFTA’s regime-wide RoOs are more restrictive than those applied in the Pan-Euro, the Southern African Development Community (SADC), COMESA and the Economic Community of West African States (ECOWAS). Restrictive regime-wide rules also affect the preference utilisation of AfCFTA as well as the development of regional value chains (RVCs) and global value chains (GVCs).

RoO restrictiveness varies across sectors. The highest levels of restrictiveness are found in footwear and headgear, machinery and electrical equipment. Additionally, we find that the average restrictiveness of RoOs is higher for environmental goods compared with non-environmental goods. This may have negative implications for climate change adaptation and mitigation efforts.

The restrictiveness of RoOs has cost implications for firms, affecting their decisions to comply with the rules and claim preferential tariff treatment. This, in turn, influences AfCFTA preference utilisation rates and the development of RVCs and GVCs. AfCFTA incentivises firms to source inputs within Africa, offering duty savings if RoOs are met. However, if the cost of compliance exceeds the potential duty savings, firms lose the incentive to source inputs within the trade area. This can hinder RVC development.

Policies aimed at reducing restrictiveness and lowering costs encourage higher preference utilisation rates and facilitate RVC- and GVC-building. Some policy suggestions to reduce the costs and complexity associated with RoOs are as follows:

- Consider relaxing product-specific RoOs, especially in sectors critical for RVC/GVC development in Africa, such as textiles and automobiles. Relaxed RoOs encourage higher preference utilisation rates.
- Explore options for reducing RoO compliance costs, including the possibility of self-certification. The AfCFTA currently requires RoO certifications to be made by an approved exporter or a designated competent authority of the exporting state party. This can be costly and time-consuming for businesses, particularly small and medium-sized enterprises. The AfCFTA could allow for self-certification, such as the US African Growth and Opportunity Act or the EU’s Everything but Arms as this is the least cost-effective option for origin certification.
- Allow for duty drawbacks, which can enhance competitiveness and lower production costs. The currently AfCFTA does not explicitly allow duty drawbacks, which creates uncertainty for businesses and could make exports less competitive.

- Negotiations are still ongoing for most of textiles and selected agri-food and other sectors. Given the importance of these sectors for RVC development, consider the implications of RoOs for RVC when finalising RoOs for the textiles and automobile sectors. It will be key to agree on RoOs that encourage the utilisation of AfCFTA and the building of RVCs.

1 Introduction

Building strong regional value chains (RVCs) is critical to Africa's economic growth. The development of RVCs presents a substantial opportunity to foster intra-African trade and generate employment opportunities (OECD, 2022). It can help boost manufacturing value added on the continent, increase the consumption of African products, ramp up competitiveness and exports, and grow industries. This can help in producing more goods that are otherwise imported (Hartwich and Hammer, 2021). However, at the moment, Africa's trade with the rest of the world often surpasses that within the continent, indicating that Africa is less economically integrated than most other world regions (Krantz, 2022). The African Continental Free Trade Area (AfCFTA), which aims to bring together the 55 African countries with a population of approximately 1.3 billion people and a combined gross domestic product (GDP) of around \$ 3.4 trillion, can help develop RVCs by reducing tariff and non-tariff barriers to trade and investment.

The AfCFTA contains rules of origin (RoOs) to limit the benefits of preferential tariff treatment exclusively to AfCFTA member countries. RoOs are a set of specific criteria to determine the country of origin of a product for preferential tariff treatment and aim to avoid trade deflection from a third country outside of the trade agreement. As a result, RoOs could influence producers' decision about where to source or choose from the most efficient input suppliers around the world (Krishna and Krueger, 1995). Therefore, the degree of restrictiveness of RoOs has a direct impact on individual firms' decisions to comply with the RoOs, which has implications for RVC creation. Reinsch et al. (2019) report that a balanced RoO can incentivise firms to make long-term supply chain decisions to locate operations within a free trade agreement (FTA) region to accrue preferential tariff treatment.¹ This is especially important for sectors in which the AfCFTA aims to create RVCs, such as textiles and automotives and has implications for the potential of developing RVCs.

A RoO restrictiveness index is a useful means of capturing the restrictiveness of RoOs (Estevadeordal and Suominen, 2005). As a first step in generating attention to the impact of AfCFTA RoOs on RVC development, in this paper we construct an AfCFTA RoOs Restrictiveness Index (RoOs-RI). This can be considered as an indicator of how demanding a given RoOs is for an exporter or

¹ See Krishna and Krueger (1995), Falvey and Reed (1998) and Ju and Krishna (1998) for a theoretical framework illustrating firms' behaviour on input sourcing and final good production decisions under an FTA.

producer. We also show the extent to which the restrictiveness of RoOs varies across sectors and whether the RoOs-RI is stricter in some sectors than in others and the implications for RVC development. The index we have developed is based on Estevadeordal (2000), Estevadeordal and Suominen (2005) and Cadot et al. (2006).

The rest of the report is structured as follows. Section 2 outlines the methodology and approaches used to score each RoO in the AfCFTA and to assign scores to close to 5,000 products. Section 3 presents statistics regarding the prevalence of different types of rules applied within the AfCFTA and the restrictiveness of the RoO index. Section 4 provides the finding discussion and policy implications. Section 5 concludes.

2 Rules of origin in the AfCFTA

This section reviews the main types of RoOs used in the AfCFTA and develops the RoOs-RI. Section 2.1 describes the main types of product-specific RoOs and assigns scores to each rule. Section 2.2 presents the AfCFTA regime-wide RoOs and assigns scores to each.

2.1 Product-specific RoOs

The product-specific RoOs under the AfCFTA determine the origin of the product at 6-digit HS code level. There are usually two broad types of product-specific RoO to determine the origin of the product: the Wholly Obtained rule and the Substantial Transformation criterion.

Wholly Obtained (WO): This rule is used to determine if a product is produced entirely from materials that are obtained within the country or region. It is mostly applied to natural resources and to products that are made entirely from materials that are obtained within the country or region. Mineral products extracted from the ground, plants and fruits harvested, live animals and products obtained from live animals are all typically considered to fall under WO.

Substantial Transformation: This rule requires products to undergo sufficient transformation to qualify for a preferential tariff under the AfCFTA. The most commonly applied RoOs under this category are Change in Tariff Classification (CTC), Value Added (VA), Specific Production Processing (SP), Any Headings (AH) and a combination of the any of the rules.²

- **Change in Tariff Classification (CTC):** This rule requires a product to undergo substantial transformation in production that can bring a change in tariff classification from non-originating materials used when exported as a final product. The CTC rule can be applied at the chapter (CC), heading (CTH) or subheading (CTSH) levels. CC is more restrictive to meet than CTH, which is more restrictive than CTSH.

²See for detailed application with examples for these rules. https://au.int/sites/default/files/documents/42397-doc-AfCFTA_RULES_OF_ORIGIN_MANUAL.pdf

- Value Added (VA): This rule sets a limit on the maximum non-originating value that can be used for an exported product. Under this rule, the maximum value of non-originating materials is defined.
- Specific Production Processing (SP): This is a rule that grants originating status to a good if it has undergone a specific production process. The SP rule specifies a set of production processes that must be undertaken in order for a good to be considered originating.
- Any Heading (AH): This rule allows the use of non-originating materials from any heading including the same heading and the product does not need to undergo a change in heading for such materials.

To develop the RoOs-RI, we assigned scores to more than 5,000 products at the six-digit HS level. We followed the approach used in the literature such as Estevadeordal (2000), Anson et al. (2005) and Cadot et al. (2006) to assign scores for each product.³ There are differences in scoring approach in the literature. Table 1 provides our scoring approach and compares it to selected studies.⁴

WO: Under the AfCFTA, the *WO* rule is used mainly in the agrifood sector, and mainly for products produced in the soil of the country. It is easier to meet these RoO requirements. Therefore, following Cadot et al. (2006), we assigned a score of 2 to *WO*.

CTC: Following the tradition in the literature, we assume that the RoOs based on change of chapter (ΔCC) are harder to comply with than those based on change of heading (ΔCTH), which are more restrictive than rules based on change of subheading ($\Delta CTSH$). We assigned a score of 6 for ΔCC , 4 for ΔCTH and 2 for $\Delta CTSH$. Both Estevadeordal (2000) and Cadot et al. (2006) used similar scores.

VA: Cadot et al. (2006) assigned a score of 4 to VA requirements of less than 40% and a score of 5 to VA requirements of 40% or more. Estevadeordal and Suominen (2005) assigned a score of 4 to VA requirements that allow up to 50% of non-originating inputs and a score of 5 to VA requirements that allow less than 50% of non-originating inputs. Under the AfCFTA, the VA requirements range from 15% to 80%. We assign a score of 5 when the maximum allowance for

³ Estevadeordal (2000) developed an index on the level of restrictiveness of North American Free Trade Agreement (NAFTA) RoOs, which ranged from 1 (least restrictive) to 7 (most restrictive). Based on Estevadeordal, Cadot et al. (2006) also developed an index on a scale of 1-7. We base our index on these and adjust the restrictiveness index to fit the AfCFTA. Our index also spans 1 to 7.

⁴ The level of restrictiveness in meeting the same RoO requirements is not uniform across different exporters. For example, the specific production process rules may be more challenging for textile sector than chemical sectors. We aim to measure the average restrictiveness of RoO requirements.

non-originating materials is less than 40% (i.e. VA greater than 60%) of the product's value added and a score of 4 when the maximum allowance for non-originating materials is more than 40% (i.e. VA less than 60%).

SP: The degree of difficulty in complying with the SP rule can vary significantly from industry to industry. In Cadot et al. (2006), and also in Estevadeordal (2000) and Estevadeordal and Souminen (2004), the specific production process is called a technical requirement. We scored 4 for SP.

AH: We scored the AH rule with 1 as it permits incorporating non-originating materials from any heading. This rule is used only a few times in the AfCFTA.

Table 1: RoO scores across different studies

	Our score	Cadot et al. (2006)	Anson et al. (2005)	Estevadeordal and Suominen (2005)	Ayele et al. (2023)
WO	2	1	7	7	1
ΔCC	6	6	6	6	9
ΔCTH	4	4	4	4	6
ΔCTSH	2	2	2	2	3
VA	4 if VA<60% 5 if VA>60	4 if VA<40% 5 if VA>40	4 if VA<50% 5 if VA>50%	4 if VA<50% 5 if VA>50%	8 if VA>85% 6 if 85%<VA<60% 5 if 60%<VA<50% 3 if VA<50%
SP	4	2		7	6
AH	1	-	-	-	1
RoOs-RI scale (min-max)	1-7	1-7	1-7	1-7	1-10

In many cases, RoOs are combined with allowances or exceptions, which offer multiple options to meet RoOs or require a combination of two or more criteria. To score RoOs in these cases, we follow set principles, as follows.

Allowances or exceptions: When a RoO is accompanied by an allowance, a lower score is assigned to capture a reduced degree of restrictiveness. Conversely, if a RoO has an exception, we add 1 point to the score to account for the increased restrictiveness. This is similar to the scoring approach used by Cadot et al. (2006). For example, for HS-821110, the rule states 'Manufacture from materials of any heading except that of the product. However, knife blades of base metal may be used.' This represents a relaxation of the CTH rule. In such cases, we subtract 1 from the score of the main rule to reflect the allowance or relaxation.

Option of two or more RoOs: In some cases, firms have the option to meet origin by choosing more than one RoO. This allows firms the flexibility to meet RoO requirements by choosing from multiple options. Following Hayakawa et al. (2014), we use the average score of the two or more rules when firms have the option to meet more than one RoO.⁵ For example, in the AfCFTA, for product HS-5003, the RoO states that ‘Manufacture from materials of any heading except that of the product or carding or combing of silk waste.’ This means that in this product exporter can meet the RoO requirement either with a change in heading or by performing the specific production process.

Combination of rules: When a RoO requires a combination of two or more criteria, this introduces complexity into meeting RoOs. To account for this, we add 1 to the highest requirement among the two or three rules. A similar approach is followed in the literature (e.g. Cadot et al., 2006). For example, for HS-2305, the RoO states that ‘Manufacture from materials of any heading but materials of chapters 2, 3, 4, 10, 11, 12 and 17 used must be originating.’ The firm must meet both the CTH and the WO rules to qualify for a preferential tariff. The CTH rule receives a score of 4 and the WO rule a score of 2, and, since this rule requires a combination of the two, we select the higher value and add 1 for added restrictiveness, resulting in a score of 5.

2.2 Regime-wide rules of origin

Regime-wide RoOs are applied to all goods traded under the AfCFTA. They are not specific to a particular product. Some of the regime-wide RoOs provide flexibility to the product-specific RoOs, including de minimis (or tolerance), cumulation, roll-up, duty drawbacks and certification methods.

Relaxing regime-wide rules

Tolerance rule/de minimis: The de minimis rule relaxes RoOs as it allows the use of a small percentage of non-originating materials in production. This means that, even if a product is not eligible for preferential tariff treatment under product-specific RoO requirements, it may still be considered as originating under regime-wide de minimis RoO criteria. The AfCFTA RoOs allow for a tolerance level of up to 15% of the ex-work price of the final product.⁶

Absorption principle/roll-up: This principle provides flexibility to meet the RoOs as the value of non-originating materials presents in intermediate products that have already obtained originating status is disregarded when determining the value of non-originating materials.

⁵ Cadot et al. (2006) follow the approach that, when firms have the choice of selecting at least two RoOs, it is assumed that they will opt for the least restrictive option.

⁶ Note that the tolerance level does not apply to products falling within Chapters 50 through 63.

Cumulation: The cumulation rule allows producers in a free trade area to use inputs from other countries in the area without losing the preferential status of the final product. In bilateral cumulation, an originating input from one country is considered to be an originating input in another country without losing its origin status. In diagonal cumulation, originating inputs from each country are considered to originate from inputs in other countries. The AfCFTA allows diagonal cumulation. This means that all African countries are considered a single territory for origin determination. Any product that has obtained origin status in any part of the area covered by the AfCFTA will be considered as originating in another country when used as an input in producing another product (see AfCFTA Secretariat, 2022).

Restrictive regime-wide rules

Some regime-wide RoOs may increase the restrictiveness of the RoOs.

Insufficient production process to confer origin: Some working and processing operations are considered insufficient and have a minimal impact on the final product, and thereby do not confer originating status. These activities include measures aimed exclusively at preserving the product's quality during storage and transportation; breaking up or assembling packages; basic ironing; simple painting; straightforward packaging operations; printing marks, labels or logos; basic material mixing; simple assembly of article parts; and the slaughter of animals.

Prohibiting duty drawback: Duty drawbacks allow for the refund of customs duties on imported goods when these goods are reexported or used in the production of exported goods. The AfCFTA does not explicitly state whether or not duty drawbacks will be allowed. This creates uncertainty among businesses about whether they will be able to claim duty drawbacks under the AfCFTA. In addition, if duty drawbacks are not allowed, then firms have to choose between whether they want to benefit from the duty drawbacks or from the preferential tariff rates under the FTA. If they choose to claim duty drawbacks, they will not benefit from preferential tariff rates. This could make their exports less competitive. Permitting duty drawbacks allows businesses to reduce production costs and make exports more competitive. Estevadeordal and Suominen (2005) found that only nine out of 34 FTAs prohibited duty drawbacks. Eight FTAs explicitly allowed it and 16 FTAs did not mention it.

Method of certifying RoOs: The certification of RoOs imposes additional costs on traders. The more complicated the process of certifying origin, the more challenging it is and the more cost it adds. Among the different options available for origin certification, self-certification by exporters is the least cost-effective. However, under the AfCFTA, self-certification is not allowed, except for exporters for

consignments valued below \$5,000. Therefore, origin declarations should be made by an approved exporter (the designated competent authority of the exporting state party). Certain exemptions exist for goods that may need proof of origin certificates, such as small packages from private individuals or travel scenarios, as well as for products with a value not exceeding \$500 for small packages or \$1,200 for items forming part of a traveller's personal luggage, depending on the circumstances. The proof of origin remains valid for 12 months from the date of issuance in the exporting country.

Scoring regime-wide rules of origins

We developed a regime-wide RoOs-RI following Estevadeordal and Suominen (2005). The index is based on five components: de minimis, diagonal cumulation, full cumulation, drawback and self-certification. A score of 1 is assigned when the permitted level of de minimis is 5% or higher and 0 when it is less than 5%. In the AfCFTA, the de minimis is 15% and is thus scored 1. When RoO self-certification is permitted, it is scored 1; the score is 0 when it is not possible. Under the AfCFTA, self-certification is not allowed, so the score is 0. If drawback is allowed, we score it as 1; the score is 0 when it is explicitly barred. It is not allowed in the AfCFTA so it is scored 0. Diagonal cumulation is scored 1 when it is allowed between all member states of the FTA and 0 when it is not allowed. As it is allowed in the AfCFTA, this is scored 1. Finally, if full cumulation is allowed, it is scored 1; otherwise, it scores 0.

Table 2 presents the summary. The regime-wide RoO score ranges from 0 to a maximum of 5. Adding all this up, the facilitation index score for the regime-wide AfCFTA RoOs is therefore 2.

Table 2: Summary of regime-wide RoO scoring

Regime-wide RoOs	Ours
De minimis	1
Rules of origin self-certification	0
Drawback	0
Diagonal cumulation	1
Full cumulation	0
Score	2

3 Analysis of RoO restrictiveness

3.1 Introduction

More than 80% of the tariff lines in the AfCFTA have agreed-upon RoOs but there are still over 900 products for which these rules have not been finalised. Textiles and animal and animal products are the two sectors with the highest concentration of outstanding products that still need product-specific RoO agreements. Table 3 shows the distribution of these outstanding products by broad sectors.

Table 3: Number of products with no RoO agreement

HS section	HS2	#HS6 products
Textiles	50–63	566
Animals and animal products	01–05	235
Foodstuffs, beverages, and tobacco	16–24	75
Animal and vegetable fats and oils	15	20
Leather	41–43	20
Vegetable products	06–14	3
Total		919

3.2 Distribution of rules of origin

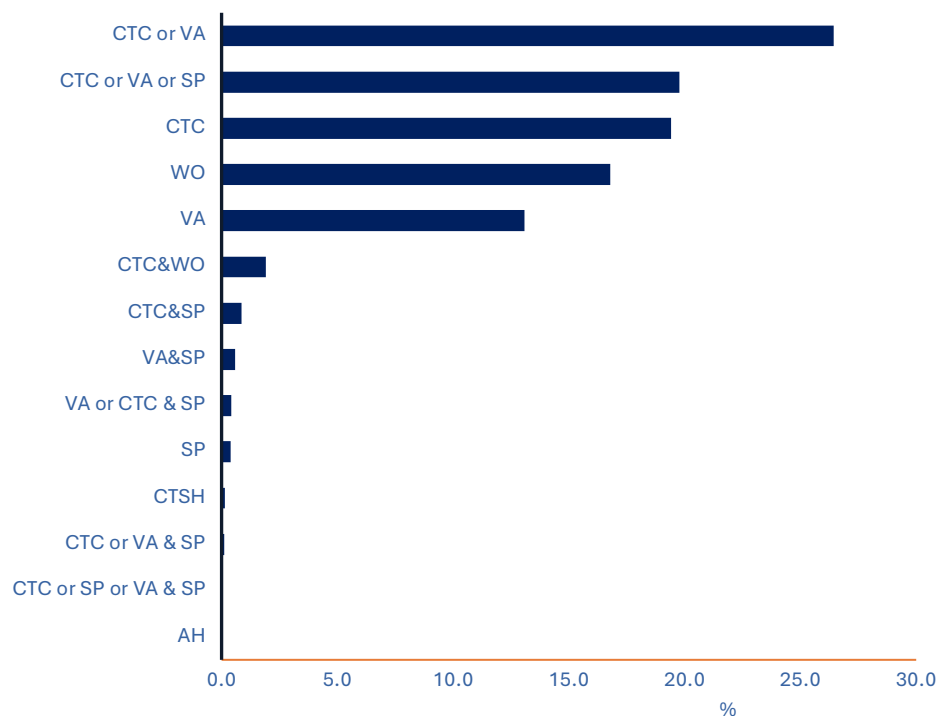
Error! Reference source not found.1 shows the distribution of RoOs in the AfCFTA when applied at the 6-digit product level. The most commonly applied RoO is the option to choose between CTC or VA . This rule covers around 26% of all products. Of the three most applied CTC rules, the change in heading is the most widely used. The change in chapter heading, which is the most difficult to meet, has not been applied in the AfCFTA. Only a few products require the change in subheading.

The option to choose between CTC, VA and SP, which covers 19.8% of products, is also widely applied in the AfCFTA. This rule is applied mainly in the chemicals and leather sectors.

The CTC as a standalone RoO is the third most widely applied rule in the AfCFTA, covering 19.4% of products. This rule is concentrated mainly in the metals sector, which covers HS72–83.

WO is applied to 16.8% of products. It is widely applied in vegetable products (96%), animal and animal products (100%), minerals (70%) and foodstuffs, beverage and tobacco (51%). The VA rules are used in 13% of cases, mainly for machinery and electrical equipment (64%). The rule is also applied for the transport equipment sector.

Figure 1: Distribution of RoOs under the AfCFTA (%)



Source: Own calculation

Table 4 present the distribution of major RoO categories across broad sectors. The CTC or VA or SP is applied primarily to the chemical sector while CTC as a standalone rule is in the metal sector. The WO rule is dominant in agrifood. The VA rule as a standalone rule is applied to primarily machinery and electrical equipment. The CTC or VA rule is also widely applied to this sector.

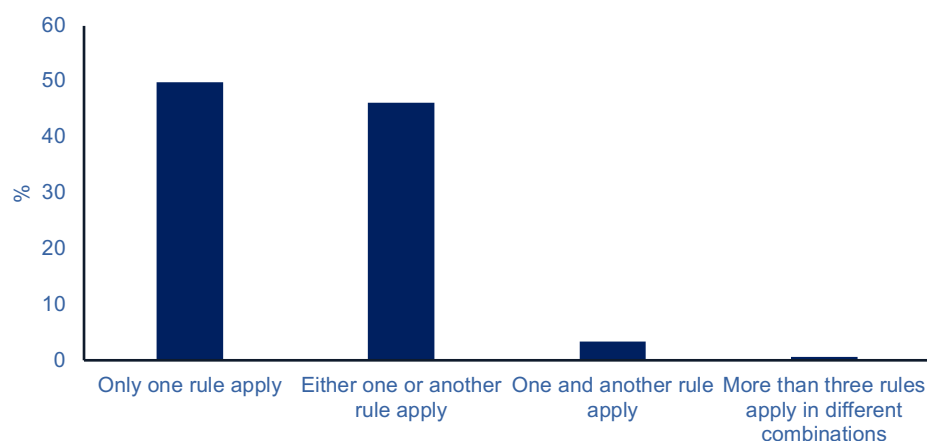
Table 4: RoO distribution by sectors (number of HS6 products)

	CTC or VA	WO	CTC	CTC or VA or SP	VA	CTC & WO	CTC & SP	VA & SP	Others
Animal and vegetable fats and oils		23	5						
Animals and animal products		136							
Arms and ammunitions	18								
Art and antiques	7								
Ceramic and glass	63	10	70				2		6
Chemicals				863	5				
Foodstuffs, beverages and tobacco	8	71	6		3	51			
Footwear and headgear			16			23			
Gold and pearls	29	14							1
Leather	12	35	2						
Machinery and electrical equipment	275	1	5		500				
Metals	67	2	486				5		3
Minerals	19	109		20					
Miscellaneous manufacturing	90	1			31				
Plastics and rubber	194	9							6
Precision tools	210								
Textile	4	5	184		3		32	1	8
Transport equipment	56				43			25	19
Vegetable products		293	12						
Wood	7	41	62			11			
Wood pulp products	122		19						
Total	1,181	750	867	883	585	85	39	26	52

Source: Own calculation

Error! Reference source not found. provides an alternative perspective on RoOs by examining the number of rules applied per product under the AfCFTA. It reveals that, in 49% of the HS 6-digit products, only one type of rule is applied. In 46% of the HS 6-digit products, either one or another type of rule is applicable, providing flexibility to exporters to choose. The combination of three or more rules is observed in a mere 0.29% of the cases. This is a very strict rule that requires exporters to meet a high threshold of requirements in order to qualify for preferential treatment.

Table 5 presents the distribution of RoOs applied by broad sectors (HS sections). The sector where more than three rules apply in different combinations is transport.

Figure 2: Distribution of the number of RoOs

Source: Own calculation

Table 5: Distribution of the number and type of RoOs, by HS section (%)

Section	Only one rule applies	Either one or another rule applies	One and another rule apply	More than three rules apply in different combinations
Animal and vegetable fats and oils	100.0	0.0	0.0	0.0
Animals and animal products	100.0	0.0	0.0	0.0
Arms and ammunitions	0.0	100.0	0.0	0.0
Art and antiques	0.0	100.0	0.0	0.0
Ceramic and glass	57.0	41.7	1.3	0.0
Chemicals	0.6	99.4	0.0	0.0
Foodstuffs, beverages and tobacco	57.6	5.8	36.7	0.0
Footwear and headgear	41.0	0.0	59.0	0.0
Gold and pearls	45.3	54.7	0.0	0.0
Leather	75.5	24.5	0.0	0.0
Machinery and electrical equipment	64.8	35.2	0.0	0.0
Metals	87.2	11.9	0.9	0.0
Minerals	73.6	26.4	0.0	0.0
Miscellaneous manufacturing	26.2	73.8	0.0	0.0
Plastics and rubber	7.2	92.8	0.0	0.0
Precision tools	0.0	100.0	0.0	0.0
Textile	81.0	1.7	13.9	3.4
Transport equipment	30.1	39.2	17.5	13.3
Vegetable products	100.0	0.0	0.0	0.0
Wood	85.1	5.8	9.1	0.0
Wood pulp products	13.5	86.5	0.0	0.0

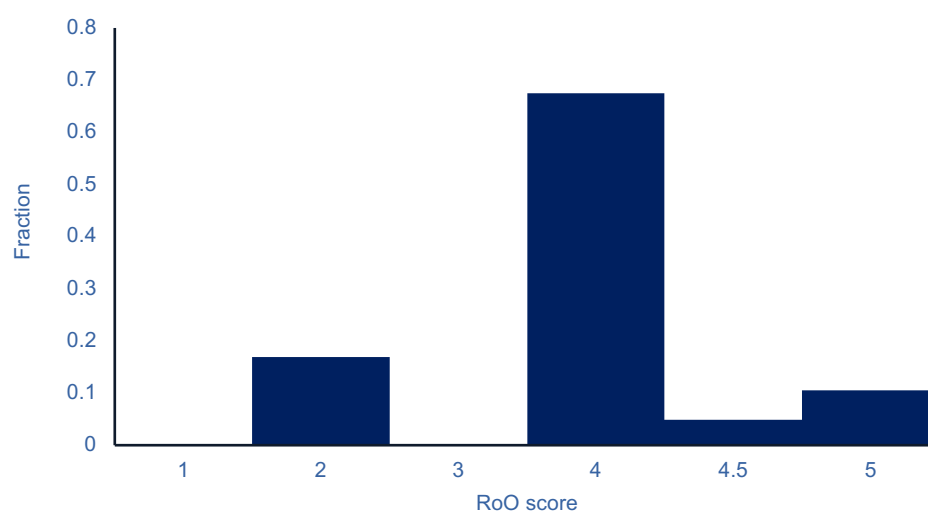
Source: Own calculation

3.3 RoOs-restrictiveness score

In Section 2, we discussed the procedures and approaches used to assign scores to nearly 5,000 products. In this section, we present an analysis of the restrictiveness of the AfCFTA RoOs.

Error! Reference source not found. provides an overview of the distribution of our RoOs-RI of the AfCFTA. Most values are concentrated at 4, followed by 2 and then 4.5 and 5. The frequent occurrence of the value 4 is attributed mainly to the prevalence of RoO that provide the option to choose between CTC, VA and SP.

Figure 3: RoOs-RI distribution



Source: Own calculation

The average AfCFTA RoOs-RI is 3.8 on a scale of 1–7, which indicates moderate restrictiveness. It is not straightforward to compare the restrictiveness of RoOs across different preferential trade agreements because the scoring and details differ. However, a comparative study by Estevadeordal and Suominen (2005) found that the restrictiveness index of the North American Free Trade Agreement (NAFTA) was 5.1, the Pan-Euro-Mediterranean countries was 4.5. The score is 7 for SADC and , 5 for COMESA and 2 for ECOWAS (UNCTAD, 2019). On a 1–10 scale, the RoOs restrictiveness score for the UK–EU Trade and Cooperation Agreement (TCA) was 4.32, that for the UK–Australia FTA was 4.19, that for the UK–Japan FTA was 4.47 and that for the UK–New Zealand FTA was 3.71 (Ayele et al., 2023).

Table 6: Average RoO restrictiveness scores across trade agreements

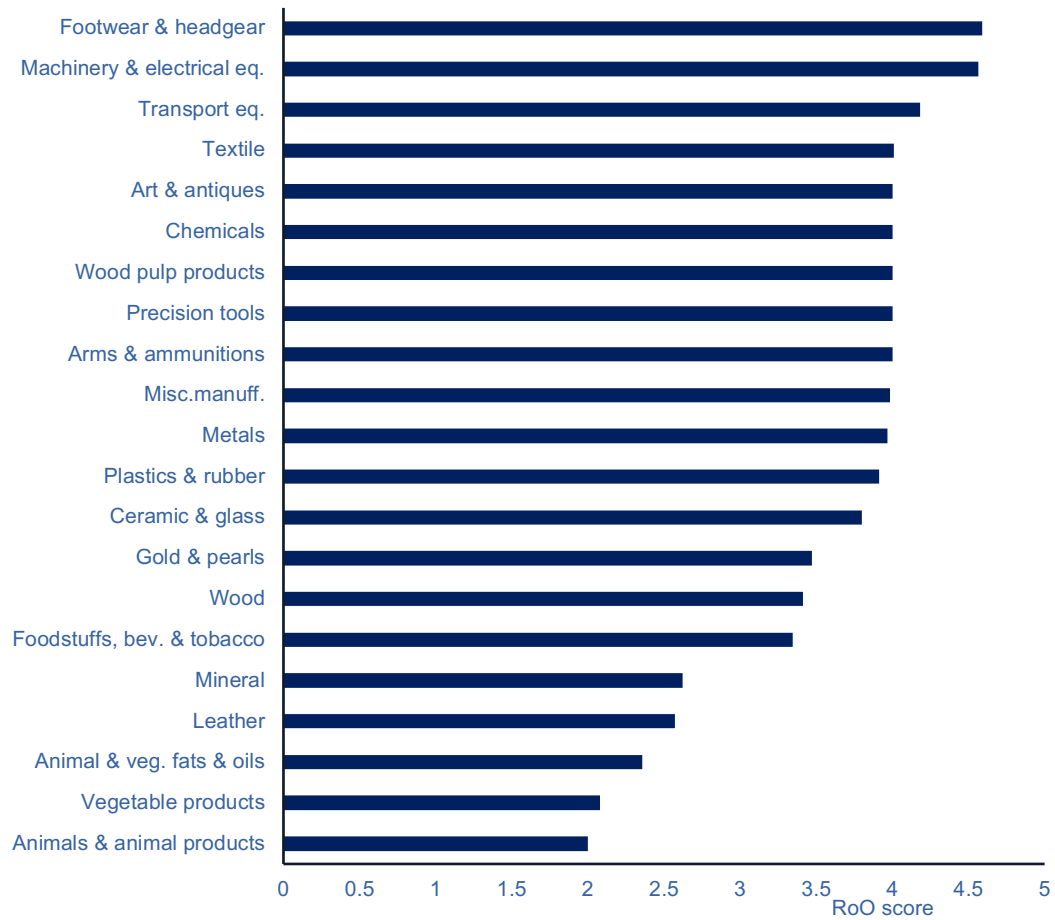
Trade agreement	Scale	Average restrictiveness score
AfCFTA	1–7	3.8
NAFTA	1–7	5.7
SADC	1–7	7
COMESA	1–7	5
ECOWAS	1–7	2
Pan-Euro-Mediterranean countries	1–7	4.5
UK–EU TCA	1–10	4.32
UK–Australia	1–10	4.19
UK–Japan	1–10	4.47
UK–New Zealand	1–10	3.71

Source: Estevadeordal and Suominen (2005) for NAFTA and Pan-Euro-Mediterranean countries; Ayele et al. (2023) for UK–EU, UK–Australia, UK–Japan and UK–New Zealand; UNCTAD (2019) for SADC, COMESA and ECOWAS.

3.4 RoO restrictiveness across sectors

Error! Reference source not found. present the average level of restrictiveness of RoOs disaggregated by broad sectors. The footwear and headgear sector and the machinery and electrical equipment sector, on average, exhibit the highest degree of RoO restrictiveness. This is attributed primarily to the presence of tariff lines within these sectors that are subject to a combination of CTC and WHO rules, or solely the CTC rule in the footwear and headgear sector and the relatively higher VA requirement in the machinery and equipment sector. Transport equipment and textiles have the next highest RoO restrictiveness scores. In contrast, the animals and animal products sector is the least restrictive, with a significant number of tariff lines falling under the WO rule.

Figure 4: RoO restrictiveness by broad sectors



Source: Own calculation

4 Discussion and policy implications

4.1 RoOs and global value chains

An FTA among countries reduces tariffs provided that firms meet the RoO requirements. Augier et al. (2005) argue that RoOs affect trade and global value chains (GVCs) through two channels. First, RoOs impose administrative burdens on exporters, thereby diminishing the benefits of trade expansion. Second, they may force firms to change their suppliers to meet RoO requirements. A firm must decide whether to comply with the RoO requirements to claim preferential tariff treatment or pay the most-favoured nation (MFN) tariff, based on a cost–benefit analysis. If the cost of compliance to claim a preferential tariff is higher than the potential duty savings, it cancels out the benefits of the duty savings, and firms may opt to not use the FTA. A lower FTA utilisation implies that less trade occurs in the value added between FTA member countries A and B and there is diminishing participation in GVCs. In simpler terms, stringent RoO requirements hinder engagement in GVC activities.

With respect to the second channel, RoOs in FTAs may cause firms to switch suppliers from a non-FTA member country to an FTA member country as the preferential tariffs alter the relative price of importing goods from partners. On the other hand, RoOs can also lead FTA-based firms to prefer to source inputs domestically to meet RoO requirements. This means stringent RoOs can cause firms to reduce their imports from another member country, thus directly undermining backward integration, and to have a large proportion of country A's value added to become embedded in exports to country B (Thang et al., 2021).

Meeting RoOs has costs. Cadot et al. (2006) estimated that the compliance costs associated with the RoOs under NAFTA were 6.8% of the goods' value, while under Pan-Euro-Mediterranean they were 8%. Carrère and de Melo (2004) found the costs of different RoOs varied between 2.3% and 4.6% depending on the type of rule and whether it applied to final or intermediate goods that Mexico exported to the US in 2001. Anson et al. (2005) found that the compliance cost of the RoOs for Mexican exporters was, on average, 6% in ad valorem

equivalent, undoing the 4% tariff preference for several tariff lines. These figures show that the cost of RoO compliance is not trivial.

Empirically, Thang et al. (2021) examine the impact of RoOs on 61 countries' participation in GVCs. They find a negative relationship between RoO restrictiveness and both backward and forward participation in GVCs. They suggest that, for a country to increase its participation in international production networks, adopting less restrictive RoOs in FTA is important. Head et al. (2022) examine whether stricter RoOs promote production. In their model, firms can source a continuum of inputs from both within and outside the FTA and choose whether to comply with the RoOs or pay a tariff penalty. They find that a stricter content requirement initially expands regional part sourcing but contracts when set at levels above a certain threshold. Stricter RoOs initially lead to more regional part sourcing but this effect eventually reverses when the RoOs become too strict. In other words, they suggest that RoOs have a Laffer curve-type effect. In a similar vein, Reinsch et al. (2019) argue that, if the RoOs are too difficult or expensive to comply with, firms may simply choose to ignore them and pay the higher tariffs instead. This can lead to a decrease in trade and economic integration within the free trade region.

All these show that the restrictiveness of the AfCFTA RoOs has implications not only for the preference utilisation of the agreement but also for the creation of RVCs, which, in turn, has implications for industrialisation. This is especially important for GVCs since inputs cross borders multiple times.

There are a couple of sectors in which the AfCFTA can help African countries build RVCs. The textiles and apparel sector is one of the main sectors identified as a prime candidate for RVC development in Africa. The production process here involves several steps, including sourcing raw materials, processing these to yarn through spinning, converting the spun raw materials to fabric, fabric inspection, stitching, fabric spreading, cutting, bundling and sewing (Nayak and Padhye, 2018). These production processes can be performed regionally, and they contain the potential to contribute to Africa's industrial transformation.

Globally, the textiles and apparel sector generates \$1.7 trillion and employs more than 300 million people, but Africa accounts for only 1% of this.⁷ Successful implementation of the AfCFTA will encourage improvements here. Currently, African firms' involvement in the apparel production process in Africa is limited primarily to suppliers of raw materials or engaging in low-value assembly activities (see Agarwal et al. 2023a for more analysis on the implications of the AfCFTA and RoOs for the textiles and apparel industry in Africa).

⁷ www.gatsbyafrica.org.uk/textiles-apparel/

The automotives sector also has potential with regard to the development of RVCs in Africa. It can play a pivotal role in advancing industrial development across numerous African nations and holds the promise of elevating millions from poverty. The sector was valued at \$30.4 billion in 2021 and is predicted to grow to \$42.1 billion in 2027 (Agrawal et al., 2023b). The expansion and progress of the automotives industry is expected to generate positive ripple effects across related sectors of the economy. For example, under the AfCFTA, the sector has the potential to contribute Nigeria's economic transformation (Agrawal et al., 2023a). However, the continent is a major net importer of vehicles and parts, and the sector currently sources only 3% of its inputs from Africa (ITC, 2022). The previous section showed that the RoOs for the machinery and electrical equipment sector and the transport equipment sector are relatively higher. As discussed earlier, stricter RoOs mean that firms must source from Africa or carry out significant processing in order to qualify for preferential tariff treatment. On the other hand, if the RoOs are too strict and the cost of meeting the requirements is high, firms may be willing to pay the MFN tariff and source outside of Africa.

The development of strong RVCs can help reduce poverty in Africa by creating employment opportunities, increasing exports that add value and substituting imports. RVCs create more jobs as most of the production, processing and distribution will be based on the continent. In addition, Africa's exports to the rest of the world are still dominated by unprocessed raw materials with little value addition. Strong RVCs can help firms add more value in production, which can lead to more earnings from exporting. It will also create more jobs. Meanwhile, in some sectors, such as textiles and apparel, women are disproportionately represented. For example, the African Development Bank (AfDB) reports that almost 80% of the workers employed in Ethiopia's apparel sector are women (AfDB, 2018). As a result, the development of strong RVCs in these sectors could have a significant impact on poverty reduction for women.

Africa is vulnerable to the impacts of climate change. Trade can play a dual role in both mitigating the effects of climate change and supporting the continent's transition to a sustainable and green future. The AfCFTA can support this. For this, we also examine whether the RoOs-RI varies between environmentally friendly traded goods and non-environmental goods. To do this, we use the list of environmental goods at the HS6 level provided by the International Monetary Fund. This classifies traded products at 6-digit level as either environmental goods or non-environmental goods. In total, there are 222 environmental products. We then merge these products with our RoO restrictiveness scores. We find that the average restrictiveness of RoO is higher for environmental goods (4.27) than for non-environmental goods (3.76). This suggests that RoO may be a barrier to trade in environmental goods.

4.2 Policy implications

We show that the AfCFTA RoOs are moderately restrictive, with different levels of restrictiveness across sectors. The restrictiveness of the RoOs has cost implications for firms, which can affect their decisions to comply with the rules and claim preferential tariff treatment. This, in turn, can affect AfCFTA preference utilisation rates, and the development of RVCs/GVCs. Policies that reduce restrictiveness and reduce costs encourage higher preference utilisation rates as well as building RVCs. These include the following:

- *Allow greater relaxation in product-specific rule RoOs.* The RoOs for most textile products are still under development, and it will be important to relax these rules to build RVCs and encourage higher utilisation rates. The textiles and apparel sector is one of the prime candidates for RVC development in Africa. Automotives is another such sector. RoOs for the machinery and electrical equipment sector and the transport equipment sector are relatively higher. As well as relaxing the RoOs, it may be worth considering reducing the costs associated with compliance, such as those related to administration and certification.
- *Allow self-certification of rules of origin.* The AfCFTA currently requires RoO certification to be carried out by an approved exporter or a designated competent authority of the exporting state party. This can be costly and time-consuming for businesses, particularly small and medium-sized enterprises. For example, Muluvi et al. (2012) show that the process of obtaining a certificate of origin in the East African Community is difficult, time-consuming and costly for exporting firms. To reduce these costs, the AfCFTA could allow for self-certification. Self-certification is the least cost-effective option for origin certification but is currently not allowed under the AfCFTA, except for consignments valued below \$5,000. Allowing for self-certification would reduce the costs associated with RoOs for traders, which would help facilitate trade within the AfCFTA and encourage preference utilisation as well as the building of RVCs. For example, both the US African Growth and Opportunity Act and the EU's Everything But Arms trade agreements permit self-certification of RoOs (Signé and Madden, 2021).
- *Allow provision for duty drawback.* Duty drawbacks allow firms to reclaim tariffs paid on non-originating imported goods from non-free trade member countries when those goods are reexported or used in the production of exported goods under preferential tariffs in the FTA. The AfCFTA does not explicitly state whether or not duty drawbacks will be allowed. This creates some uncertainty among businesses about whether

they will be able to claim duty drawbacks under the FTA. In addition, if duty drawbacks are not allowed, businesses must choose between whether to claim duty drawbacks or benefit from the preferential tariff rates under the FTA. If they choose to claim duty drawbacks, they will not be able to benefit from preferential tariff rates. This could make their exports less competitive. Therefore, there is a need for the AfCFTA first to clarify and second to allow for the provision of duty drawback.

- *On negotiation and implementation of the AfCFTA.* RoOs have already been agreed on for more than 80% of tariff lines under the AfCFTA. Negotiations are still ongoing for textiles, automotives and other selected sectors. Given the importance of these sectors for RVC development, it is important to consider the implications of RoOs for such RVCs when finalising them. If RoOs for these sectors are complex or too costly, firms will find it difficult to comply and instead may decide to trade with or source from partners outside the AfCFTA. Therefore, it is important to agree on RoOs that encourage the utilisation of AfCFTA and the building of RVCs. In addition to less complicated and restrictive RoOs, it will be important to reduce the costs associated with implementation, such as RoO certification, to encourage firms to utilise the AfCFTA.

5 Conclusion

The degree of restrictiveness of RoOs has an impact on individual firms' decision to comply with these under the AfCFTA, which has implication for RVC creation. A firm must decide whether to meet the RoO requirements and claim preferential tariff treatment or whether to pay the MFN tariff. This decision is likely based on a cost–benefit analysis of the two options. The costs of compliance include the administrative costs of documentation and certification as well as the costs of sourcing inputs from within the AfCFTA region. The benefits of compliance include the ability to claim preferential tariffs, which can reduce the cost of exporting to other AfCFTA countries.

If the cost of compliance to claim preferential tariffs is higher than the potential duty saving, then firms may decide not to apply for preferential tariff treatment and end up paying a non-preferential tariff. This can create problems in creating RVCs. Firms that are willing to pay non-preferential tariffs have no incentive to source from local content. This can have a negative impact on RVC creation, as firms may be less likely to source inputs from within the region if they do not have an incentive to do so. Ineffective RVC creation can lead to missed opportunities for economic growth and development.

On the other hand, if RoOs are too lenient, firms may have little incentive to source inputs within the AfCFTA region. This can also create a problem for building strong regional value chains, as firms may not have incentives to source within AfCFTA region. Reinsch et al. (2019) argue that RoOs should be strict enough to ensure that firms have a meaningful incentive to source inputs from within the AfCFTA region but not be so strict that they discourage firms from participating in the AfCFTA. In other words, RoOs should strike a balance between encouraging regional integration and preventing trade deflection. The optimal level of restrictiveness of RoOs is a complex issue, and there is no easy answer. However, it is important to consider the potential impact of RoOs on regional integration and trade deflection when designing or update the AfCFTA RoOs.

There are a couple of sectors in which the AfCFTA can help African countries build RVCs. The textiles and apparel sector is one of the prime candidates here. The production process here involves several steps that can be performed regionally, and this means the sector holds some potential with regard to Africa's industrial transformation.

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