

Technological transformation and innovation for economic diversification and structural transformation in CDDCs

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Abstract

Commodity dependency is persistent, difficult to break out of it, and associated with lower productivity in the manufacturing sector. This paper discusses how technological change and innovation for economic diversification impact structural transformation in Commodity Dependent Countries (CDDCs). It uses measures of economic complexity as a proxy for the level of technological development to assess the status and evolution of technological development in CDDCs. It shows that they have made minimal gains in closing technological gaps in the past 25 years. The paper also discusses the impact of technological revolutions on developing countries and the opportunities and challenges that the technological waves of digitalization and Industry 4.0 pose for CDDCs. The paper proposes a strategy for technological transformation in CDDCs for economic diversification and structural transformation, focusing on the promotion of new products that have above-average complexity and building capacities for the deployment of the digital revolution and Industry 4.0.

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1. Introduction

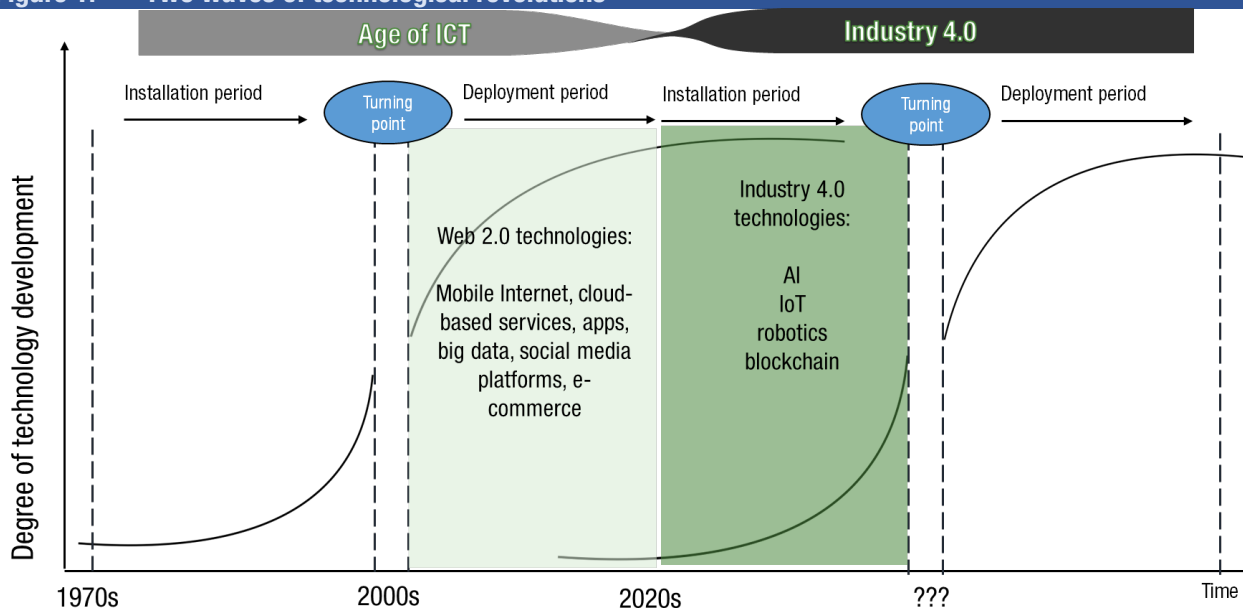
Commodity dependency is persistent, difficult to break out of it, and associated with lower productivity in the manufacturing sector. Therefore, any policy intervention to improve the technological capabilities in a CDDC to reduce the commodity dependency must focus on increasing labour productivity in the manufacturing sector. Productivity in typical CDDCs is also low in agriculture (and, comparatively, in services); thus, technological upgrading in these sectors could also play an important role.

This paper discusses how technological change and innovation for economic diversification impact structural transformation in CDDCs. The technological transformation of an economy happens through innovation; the production that is new to the country (product innovation) or the modification of production methods to increase productivity and reduce costs (process innovation).¹ Both forms of innovation trigger shifts in income, consumption, employment, and output, which result in the change of the structure of the economy – the relative shares of output and employment in different sectors. Technological change also affects the economic structure through input-output relations between sectors (e.g. change in final product prices due to change in prices of intermediate products). The process of creating new products that replace old ones, in the Schumpeterian process of creative destruction, and the long-term changes in the economy and society due to the emergence of new techno-economic paradigms, also impact the structure of economies.

Technological transformation results in structural transformation when innovation changes the economy's structure by moving employment and output from low to higher productivity sectors - associated with higher levels of technology. Although both process and product innovation can result in structural transformation, in CDDCs, process innovation (and the resulting increase in productivity) tend to result in lower prices of agricultural produce or low employment in fuel and mineral sectors. On the other hand, product innovation leads to economic diversification and the creation of new sectors with new opportunities for employment and further gains of productivity through subsequent learning by doing and process innovation. Thus, this paper focuses on the impact of technological change on structural transformation through product innovation and economic diversification.

What is the role of frontier technologies? They offer the possibility of new combinations (innovations). Some of these new technologies trigger new techno-economic paradigms.² The reason is the interplay between productive and financial capital, which give rise to the life cycle of a technological revolution, with an installation period followed by a deployment period. The duration of the life cycle of previous technological revolutions has taken 20 to 50 years, and the transition from installation to deployment phase was marked by financial booms and busts. Techno-economic paradigms require certain infrastructures (e.g. reliable electricity, ICT infrastructure) and institutions (e.g. laws and regulations), some of which must be provided by the Government. New technologies percolate through the economy by being combined with traditional technologies. This is a gradual process from core sectors in which the new technologies emerged to other sectors of the economy, and from the countries at the centre of the technological revolution to other countries.

Arguably, we are living through in the mature phase of the deployment period of the digital revolution, which is characterized by the Internet, mobile connectivity, and the so-called Web 2.0 technologies (e.g. Apps, social media, cloud computing, big data, etc.) (Figure 1). This techno-economic paradigm has resulted in the increasing share of GVCs in global production, reduction of communications and transaction costs, and the emergence of e-commerce, among other changes. However, while the digital revolution has already reached a mature phase in developed countries (having affected economies and societies), in many low and lower-middle-income developing countries, including many CDDCs, the digital revolution is still in an installation phase. In these countries, the digital revolution has not reached the most traditional sectors nor large shares of the population. Many researchers have suggested that we have now entered a new techno-economic paradigm, the 4th Industrial Revolution, characterized by frontier technologies such as AI, robots, blockchain and gene-editing, as well as cleaner and renewable energy technologies. The latter is critical to address the threat of climate change.

Figure 1. Two waves of technological revolutions

Source: Author based on Perez (2002).

Factors that limit the deployment of these frontier technologies include failure to provide the required ICT infrastructure, lack of investment owing to the scarcity of financial resources, failure in building the required skills of the labour force, unfavourable institutional environment (failure to implement the required institutional change), among others.³

Against this backdrop, this paper proposes a two-pronged approach to promote technological transformation in CDDCs for economic diversification and structural transformation. First, CDDCs should promote economic diversification towards products that have above-average complexity (above average technological content). Second, CDDCs should promote the deployment of the digital revolution (current techno-economic paradigm) and preparing the environment for the deployment of the Industry 4.0 (next techno-economic paradigm).

The paper is structured as follows. The next section presents stylized facts related to technological change, diversification and structural transformation based on recent economic complexity literature. It shows that product innovation towards more complex products, and the resulting economic diversification, is essential for structural transformation. Section three discusses CDDCs' position in terms of the technological landscape, and the gaps to more technologically advanced countries. Section four discusses technological revolutions and their impact on CDDCs. Section five discusses the opportunities for CDDCs to further deploy the digital revolution and pave the way for the 4th Industrial revolution. Section six then discusses a strategy for diversification and structural transformation in CDDCs. Section seven concludes.

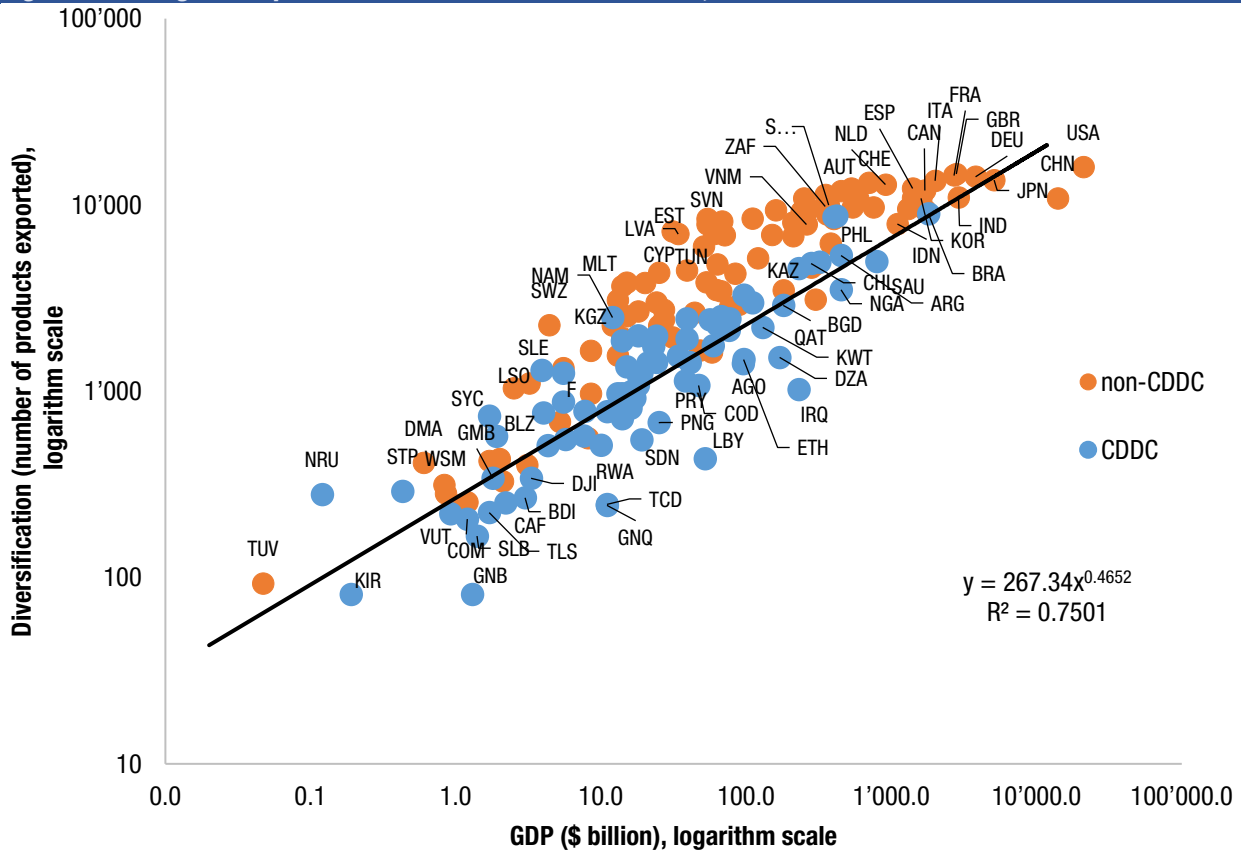
2. Stylized facts

Technological transformation of an economy happens through innovation; the production that is new to the country (product innovation) or the modification in the way that a product is produced to increase productivity and reduce costs (process innovation).⁴ Both forms of innovation trigger shifts in income, consumption, employment, and output, which result in the change of the structure of the economy – the relative shares of output and employment in different sectors. Technological transformation results in the structural transformation when innovation changes the structure of the economy by moving employment and output from low to higher productivity sectors - associated with higher levels of technology.

Product innovation is critical in this process by diversifying the economy, adding more productive sectors. With more jobs and production in higher productivity sectors, the size of the economy expands. Thus, diversification is associated with higher levels of the total GDP (Figure 2).⁵⁶ However, most CDDCs are less diversified than non-CDDCs at similar

levels of GDP - meaning that CDDCs can generate a higher output out of fewer sectors, which gives a hint about of the economic incentives that these countries face to stay in the state of commodity dependency.

Figure 2. Higher output is associated with diversification, 2019

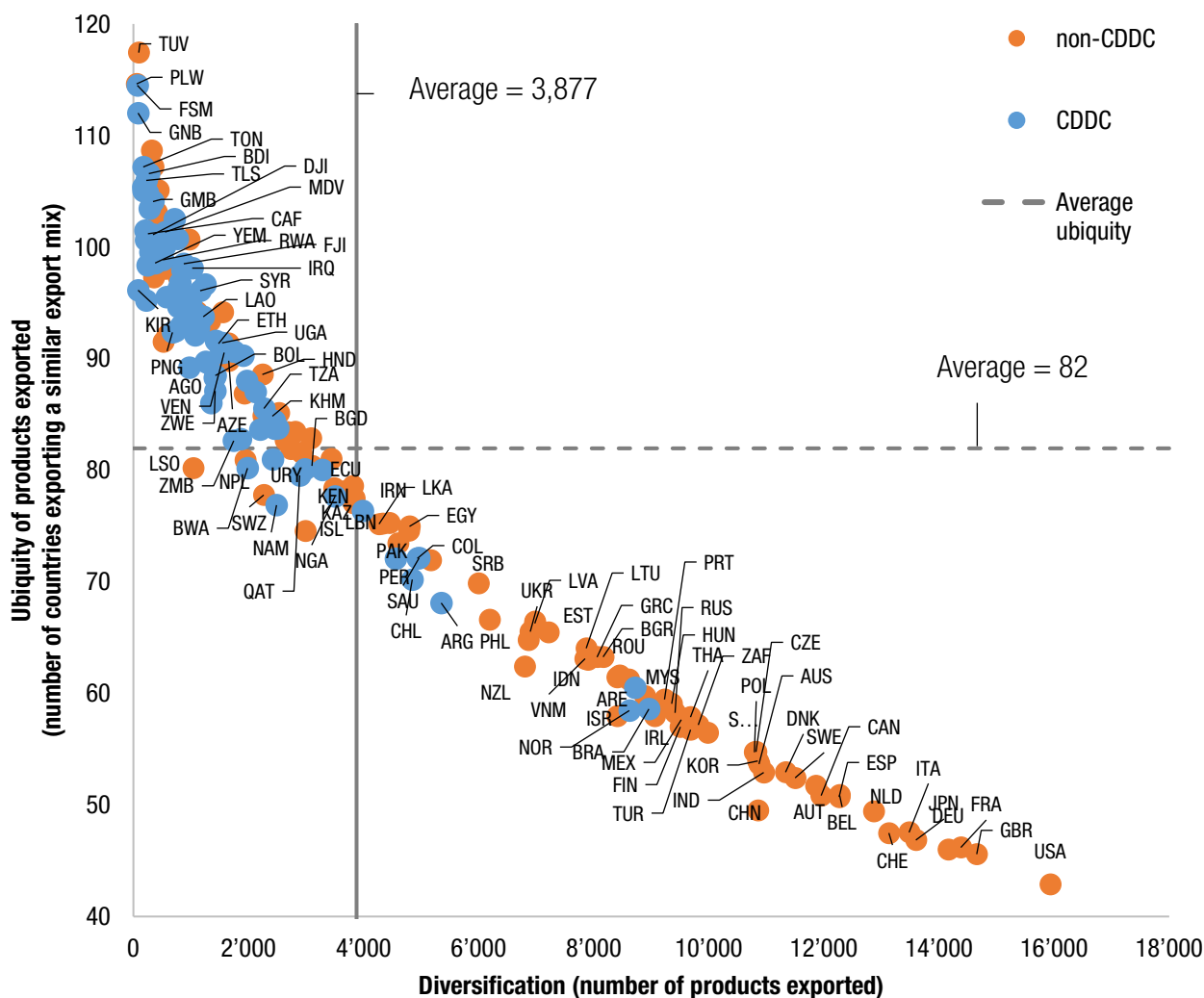


Source: Author based on Freire (2019) and data from UN COMTRADE.

Note: Number of products is based on SITC rev 3 5-digit data disaggregated by unit value as presented in Annex D – Data and methodology.

Each product requires specific technologies to be produced. These technologies are not limited to those within the firm or the farm; they encompass the whole chain required to produce and bring the product to the market. They include capital-embodied technologies such as machines, vehicles, buildings, and infrastructure, and labour-embodied technologies such as business models, operational procedures, and knowhow. Therefore, the more diversified an economy, the higher its technological level; and the higher the technological level of products, the fewer the countries that can produce and market them. Thus, higher diversification is also associated with lower competition in export markets. This relationship is illustrated in Figure 3 using trade data for the year 2019. In the figure, for each country represented by a dot, the horizontal axis shows its diversification and the vertical axis the number of countries exporting a similar basket of products. The vertical line in the graph represents the average diversification of countries in 2019 (3,877 products) based on trade data using SITC classification and considering differences in products based on unit price range. The horizontal line shows the average ubiquity of exports (how many countries export a similar basket of products of an “average” country). As the figure shows, most of the countries that are more diversified and face lower competition than the global average are non-CDDCs. The exceptions are Argentina, Brazil, Chile, Colombia, the Islamic Republic of Iran, Peru, Saudi Arabia, and the United Arab Emirates. Most of the CDDCs have levels of diversification that are below the global average and face competition for over 82 countries that export similar basket of products.

Figure 3. As economies diversify, they produce more exclusive products, 2019

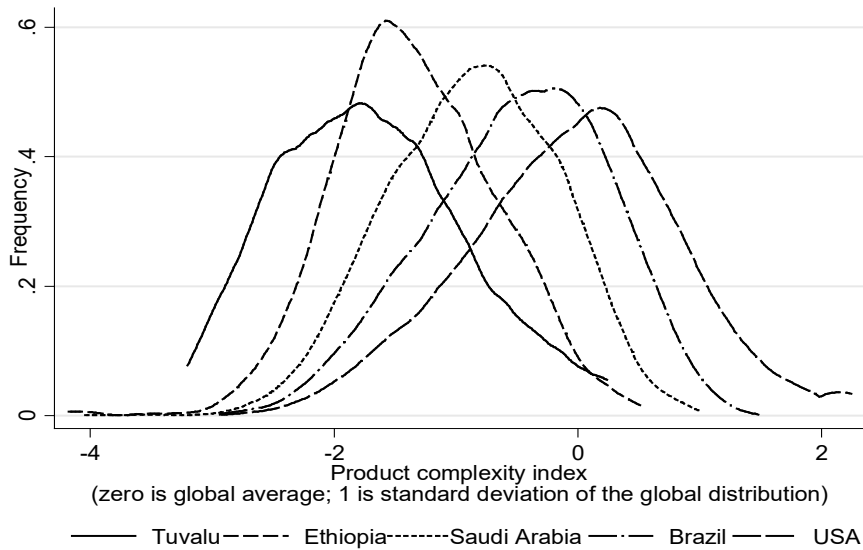


Source: Author based on Freire (2019) and data from UN COMTRADE.

Note: Number of products is based on SITC rev 3 5-digit data disaggregated by unit value as presented in Annex D – Data and methodology.

The information about the level of diversification and how common is the exports of the country can be used to compute indices of economic complexity that can serve as a proxy of the level of technologies and productive capacities in the economy.⁷ Indices are also used to estimate the level of technology that goes into the production of each product. More complex products are considered to require higher levels of technology. Countries produce products in a range of complexities; usually, the distribution of product complexity of the exports of a country has the shape of a normal distribution. Countries export products in a broad range of complexity. Figure 4 illustrates this point by showing how the distribution of the product complexity of countries overlap, even for countries with very different levels of technological and productive capacity. Development is associated with diversification towards products that have above-average complexity in the country (see Figure 5 for the example of Viet Nam).⁸

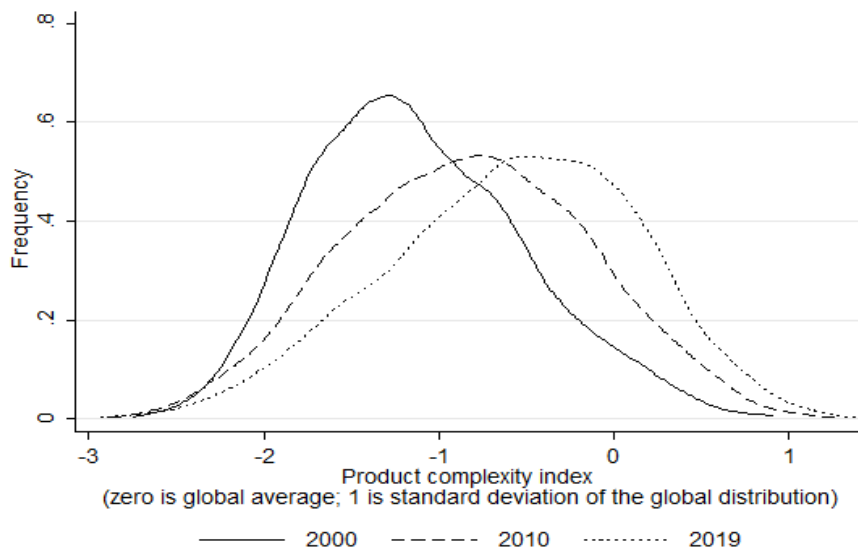
Figure 4. The complexity of the product-mix of selected countries (2019)



Source: Author based on Freire (2019) and data from UN COMTRADE.

Note: Frequency in the y-axis represents the share of the number of product categories with a given complexity (x-axis) in total exports. In the x-axis, zero is the global average of product complexity and one is the standard deviation of the global distribution.

Figure 5. Increasing complexity of Viet Nam's products



Source: Author based on Freire (2019) and data from UN COMTRADE.

Note: Frequency in the y-axis represents the share of the number of product categories with a given complexity (x-axis) in total exports. In the x-axis, zero is the global average of product complexity and one is the standard deviation of the global distribution.

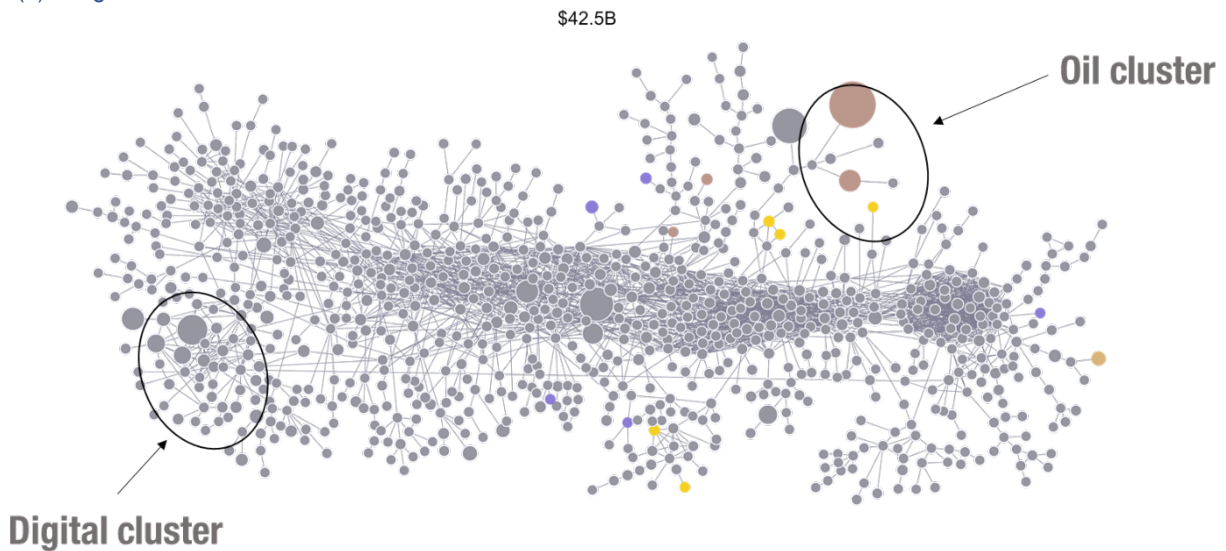
If innovation is critical for structural transformation, how to foster this process? First, it is essential to note that innovation is a combination of existing technologies in new configurations or economic activities. Therefore, innovation is path-dependent; it depends on the set of technologies that the economy has accumulated. New research that combines economics and physics has produced maps that illustrate that path dependency.⁹ These are the product space maps, as shown in Figure 6. Each dot represents a product, and they are connected to each other based on how likely they are to be exported together. These maps show that some products are better connected to other products; therefore, diversification to these products can facilitate further diversification in the future - for example, the production of machinery and electronics require technologies that can be the building blocks of production in many other sectors.

Other products are like dead ends - once a country reaches them, it is difficult to use the capabilities that they create to move to another type of production. And most of these products are commodities. The production of primary products usually involves technologies that offer fewer possibilities for further combinations, and thus diversification.

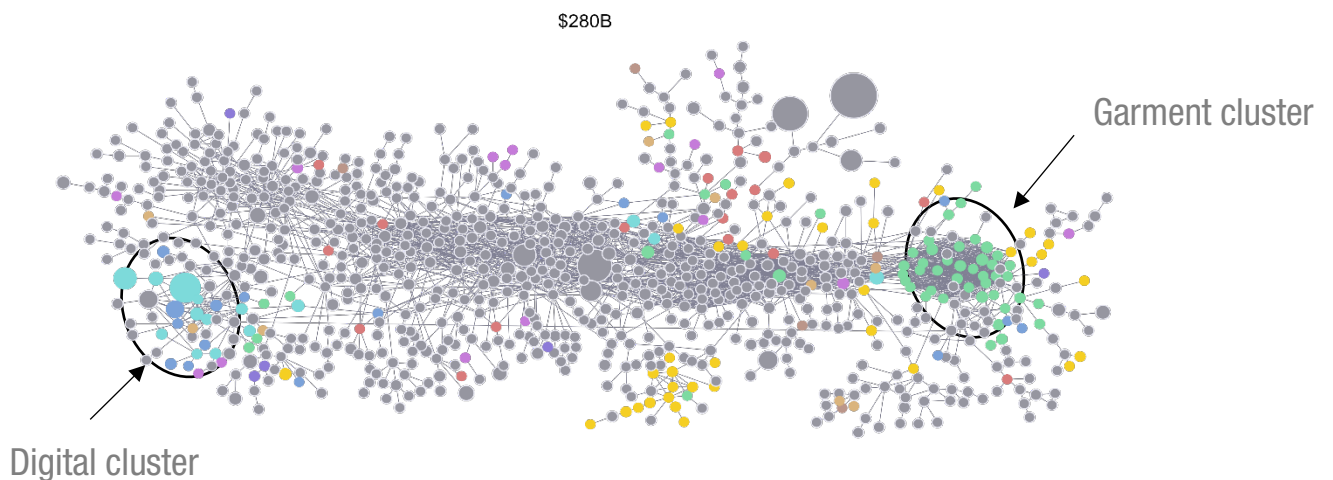
Figure 6 (A) shows the product space of Angola to illustrate the case of a CDDC. The products that Angola exports with a comparative advantage over other countries are coloured. The cluster of oil products, which Angola exports, is shown in the right; and computers and digital products, which the country does not export, is shown in the left. Note the distance between them. It shows that the technological and productive capabilities that exist today are not easily transferable to production in the digital cluster, without a more direct promotion of the state. Larger “jumps” in innovation, in which some of the technologies combined are not available in the economy and must be learned or transferred from abroad, require more support from Governments to facilitate innovation.

Figure 6. Product space map

(A) Angola



(B) Viet Nam



Source: Author based on Atlas of economic complexity (<http://atlas.cid.harvard.edu>).

Note: Each circle represents a product, and when it is connected to another circle, it means that the country that exports one product also exports the other.

Figure 6 (B) shows the case of Viet Nam as an example of a country that has been successful in diversifying its economy. Three decades ago, this country was at the same level of development as the world's least developed countries. Viet Nam has succeeded in increasing its technological and productive capacity to further industrialize its economy, expanding the production from agriculture and low value-added manufacturing such as garments to production in the digital cluster. Between 2005 and 2018, the country increased its high-tech exports from 6 to 35 per cent, while its exports of primary resources fell from 52 to 22 per cent.¹⁰ The push for industrialization began in the 1990s, with an industrial and trade policy that merged import substitution measures and export subsidies to promote an export-driven growth strategy, supported by strong foreign direct investment. Other policies have also contributed to the country's productive development, including the establishment of export processing and industrial zones, the development of urban infrastructure and education.¹¹

Innovation requires the exchange of knowledge among firms, research centres, universities, governments, consumers, which are the main actors of the national innovation systems. Firms (and their entrepreneurs) have the key role of taking the risk to innovate (bringing a new good or service to the market). Innovators need finance to get the resources to innovate. Thus, the decision to innovate depends on many factors, not only the availability and access to technology.

The global demand for new or improved products affects the incentives for innovation. High commodity prices, although short-lived in comparison of periods of low prices, create incentives in CDDCs to produce more of the same (remain commodity-dependent), reducing the incentives to innovate and diversify the economy. They also contribute to deindustrialization due to the tendency to overvalue the currency. In periods of low commodity prices, the challenges for diversification are the problems with the balance of payments that reduce the access to hard currency for importing capital goods, and the fiscal constraints of governments to provide the required complementary infrastructure and quality education for increasing the capacity of the economy for technological learning and innovation.

3. Technological landscape and gaps

This section presents the technological landscape and gaps characterizing most CDDCs in the three major commodity groups, namely agriculture, mining, and energy. The discussion focuses not only on commodity sectors but in all sectors of the economy, including in manufacturing and services, as well in relation to infrastructure.

What is the level of technology development in CDDCs? There are several ways to give a partial answer to this question, based, for example, on the level of labour productivity (output per worker), the export capacity of high-tech goods and digitally-enabled services, and infrastructure and human capacity to apply and use technology. Assessed against such measures, CDDCs have on average lower technological capacity than developed, transition and non-commodity dependent developing economies (Table 1).

Table 1. Selected indicators of technological development

Indicator	CDDCs	Non-CDEs	Transition economies	Developed economies
Output per worker (in PPP US\$ 2011) (2020)	26,388	38,466	34,565	89,354
Share in global merchandise exports (2019)	0.11%	0.60%	0.21%	1.39%
High-technology manufactures exports (% of total merchandise trade) (2019)	0.01%	0.88%	0.04%	1.22%
Digitally deliverable services exports (% of total service trade) (2019)	24%	25%	21%	44.53%
ICT Service Exports (% of service exports, BoP) (2017)	4.3%	7.9%	9.4%	9.5%

Indicator	CDDCs	Non-CDEs	Transition economies	Developed economies
Percentage of graduates from STEM programmes in tertiary education (2018)	6%	6%	17%	18%
Researchers in R&D (per million people) (2018)	118	712	1,097	5,153
PISA score in mathematics (2018)	404	429	432	494
Internet users (% of population) (2017)	36%	53%	59%	83.98%
Mean download speed (Mbps) (2020)	3.10	9.62	6.76	40.87

Source: Author based on data from UNCTAD Stat, ITU, UNESCO, ILO, WITS - World Bank and fastmetrics.

This section uses the measure of economic complexity as a proxy for the level of technological development of a country to assess the status and evolution of technological development in CDDCs. Table 2 shows the values for the CDDCs; a complete list with the index of economic complexity of 196 economies in 2019 is presented in Annex A. The index of economic complexity is measured from 0 to 100, where 100 indicates the economic complexity of the United States. The top CDDCs by this measure are Brazil (32.7), United Arab Emirate (29.7), and Argentina (14.9); while the countries with the lowest measure are Micronesia (Federated States of), Guinea-Bissau and Kiribati.

Table 2. Technological development of CDDCs, 2019 (index, US=100)

Brazil	32.7	Democratic Republic of the Congo	1.5
United Arab Emirates	29.7	Jamaica	1.4
Argentina	14.9	Brunei Darussalam	1.4
Chile	12.6	Iraq	1.4
Colombia	12.3	Gabon	1.3
Saudi Arabia	12.2	Niger	1.2
Peru	11.2	Fiji	1.2
Iran (Islamic Republic of)	9.1	Guinea	1.1
Nigeria	7.4	Burkina Faso	1.1
Kenya	6.6	Seychelles	1.1
Ecuador	6.0	Malawi	1.1
Qatar	5.8	Congo	1.1
Namibia	5.2	Papua New Guinea	1.0
Uruguay	4.9	Suriname	1.0
Oman	4.6	Benin	0.9
Ghana	4.6	Belize	0.8
Bahrain	4.5	Mauritania	0.7
Kuwait	4.0	Sudan	0.7
United Republic of Tanzania	4.0	Maldives	0.7
Botswana	3.9	Guyana	0.6
Myanmar	3.6	Rwanda	0.6
Madagascar	3.4	Libya	0.6
Senegal	3.3	Yemen	0.5
Zambia	3.2	Djibouti	0.4
Cameroon	3.0	Gambia	0.4

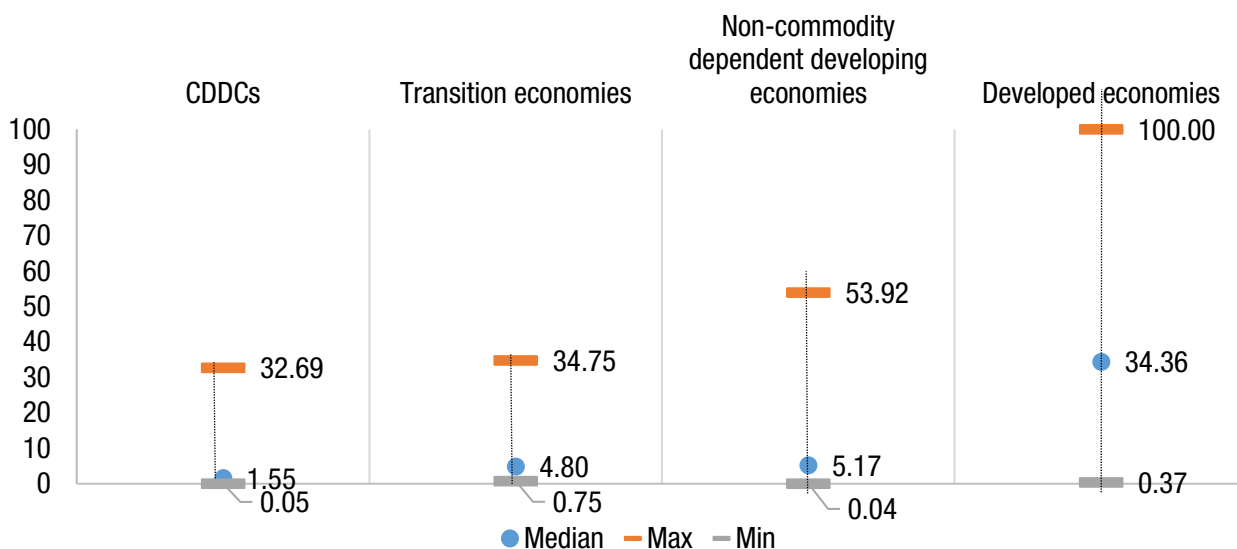
Technological transformation and innovation for economic diversification and structural transformation in CDDCs

Cote d'Ivoire	2.8	Sao Tome and Principe	0.3
Venezuela	2.5	Nauru	0.3
Algeria	2.4	Central African Republic	0.3
Zimbabwe	2.4	Equatorial Guinea	0.3
Bolivia	2.4	Burundi	0.3
Uganda	2.4	Vanuatu	0.3
Angola	2.3	Chad	0.3
Trinidad and Tobago	2.3	Somalia	0.3
Ethiopia	2.2	Comoros	0.2
Mozambique	2.2	Timor-Leste	0.2
Sierra Leone	2.1	Eritrea	0.2
Afghanistan	1.9	Solomon Islands	0.2
Lao People's Democratic Republic	1.8	Tonga	0.2
Togo	1.8	South Sudan	0.1
Paraguay	1.8	Kiribati	0.1
Syrian Arab Republic	1.7	Guinea-Bissau	0.1
Mali	1.6	Micronesia (Federated States of)	0.0
Mongolia	1.5		

Source: Author based on Freire (2019) and data from UN COMTRADE.

The levels of technological development of CDDCs are in general low when compared with the United States, but this is also true for most other countries. Figure 7 shows the comparison of the level of the technological capacity of CDDCs and other country groupings. The list of countries that are part of each group is presented in Annex B. In each country group, there is a large range of values of the index, and the average is not a good summary measure because there are outliers with higher values that push the measure up. The median for CDDCs (1.55) is lower than for the other groups, followed by transition economies (4.8), non-commodity dependent developing economies (non-CDDCs) (5.17), and developed economies (34.36). A similar pattern is seen for the higher values within each group: CDDCs (32.69), transition economies (34.75), non-CDDCs (53.92) and developed economies (100). It is striking that economies with the lower values of technological and productive capacities in each of these groupings have similarly low levels, even for the group of developed economies. But in the case of the latter, these are economies with smaller populations that have reached a higher level of GDP per capita due to services such as finance and tourism.

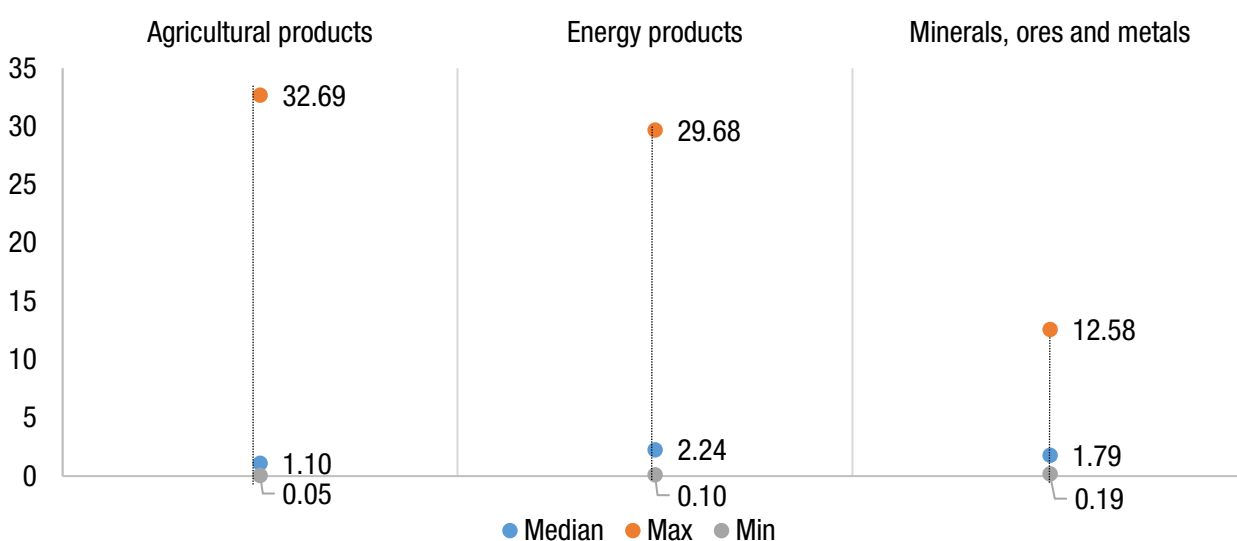
Figure 7. Technological development of CDDCs and other groups of countries
(index, US=100)



Source: Author based on Freire (2019) and data from UN COMTRADE.

Among the CDDCs, countries that are more reliant of agricultural product exports usually have lower technological level, followed by mining and then by energy products (Figure 8). This reflects the fact that mining and energy sectors are more capital-intensive activities when compared to agriculture. However, the range of values of the technological level of agricultural and energy CDDCs is larger than that for mining CDDCs, which may be the result of a smaller set of mining CDDCs (10 countries) when compared with the other two CDDCs groupings. Therefore, in general, there is no systematic advantage or disadvantage in any type of commodity dependency. Most CDDCs have similarly low levels of technological development.

Figure 8. Technological development by type of commodity dependency
(index, US=100)

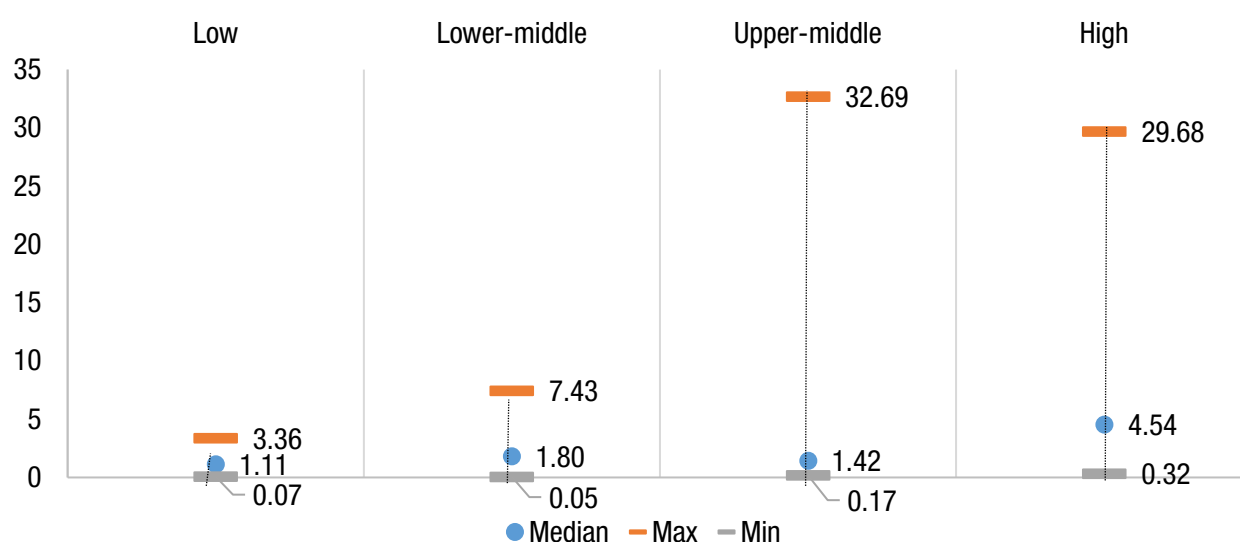


Source: Author based on Freire (2019) and data from UN COMTRADE.

There is also little difference between median CDDCs that are low (1.11), lower-middle (1.80), and upper-middle-income (1.42) (Figure 9). CDDCs that are high-income countries generally have higher technology levels, but the median country still has a low level of the index (4.54). Brazil (32.69) and some other upper-middle-income countries have higher levels

of the index. Therefore, there is no strong association between the level of income per capita and the technological level of countries. As mentioned in the Introduction, the stronger association is between diversification (thus technological level) and the total GDP of the country. Economies with a smaller population can reach a higher level of GDP per capita at lower levels of technological development in production.

Figure 9. Comparison of technological development by the level of income of CDDCs (index, US=100)



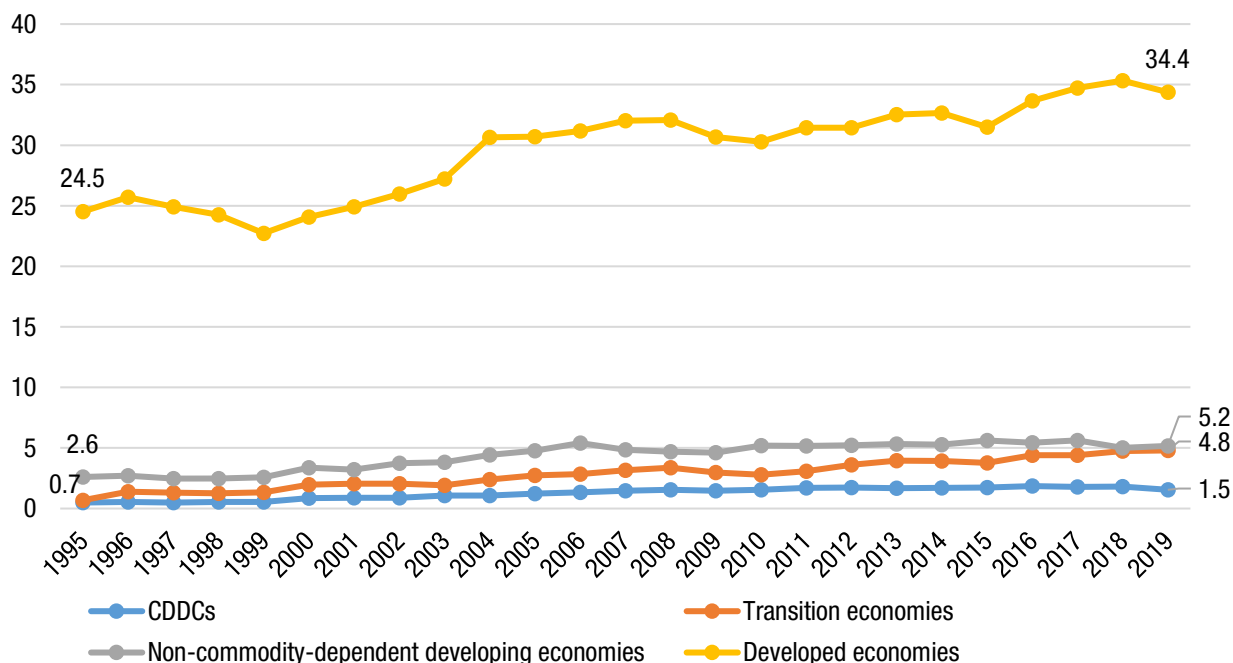
Source: Author based on Freire (2019) and data from UN COMTRADE.

In the past 25 years, CDDCs have made very small gains in terms of technological development when measured against the technological frontier, represented by the United States (Figure 10). It is important to note that this measuring rod also has changed over time. Therefore, any gain, even small ones, represent a reduction in the technological gap even in the face of technological improvements at the frontier. The challenge is the slow pace of such improvements. In 1995, the median CDDC had the technological level at 0.7, and in 2019, the median value was 1.5. Transition economies made faster gains in this period. The median transition economy in 1995 had the same level of technological development of the median CDDC, but in 2019 the median value was 4.8 – much closer to the technological level of the median non-CDDC (5.2). Developed economies made more significant gains – the median value of that group in 1995 was 24.5, and it increased to 34.4 in 2019.

Among the CDDCs, technological development was slower for countries that rely on agricultural exports when compared with energy and mineral products (Figure 11). In 1995, the median agricultural CDDC had the technological level of 0.4, and the median in 2019 was 1.1, while in the same period the median for mining CDDCs increase from 0.6 to 1.8 and energy CDDCs increased from 0.7 to 2.2. The three sub-groups of CDDCs had a faster increase in the technological level in the first half of the 2000s. Since the 2007-8 financial crisis, the level of technological development has maintained stable and has decreased in mining CDDCs from the highest level of 2.6 in 2010. This shows that for some CDDCs the period of commodity price boom during the early 2000s was associated not only with higher gains in exports of commodities but was also a period of economic diversification and increasing technological development.

Many countries were able to make higher gains in technological development since 1995 (Figure 12). Among the CDDCs, Brazil, the United Arab Emirates, Saudi Arabia, Peru, and the Islamic Republic of Iran had greater progress. Again, these countries experienced a faster increase in technological development during the commodity boom (2000 to 2007 period). Among the transition economies, the Russian Federation and Ukraine followed a similar pattern. Progress was higher among the fast-growing non-CDDCs – China, India, Turkey, Mexico and Viet Nam, as well as the developed countries – Czech Republic, Poland, Slovakia, Bulgaria and Lithuania. Viet Nam and Lithuania made remarkable progress considering the initial low levels of technological development.

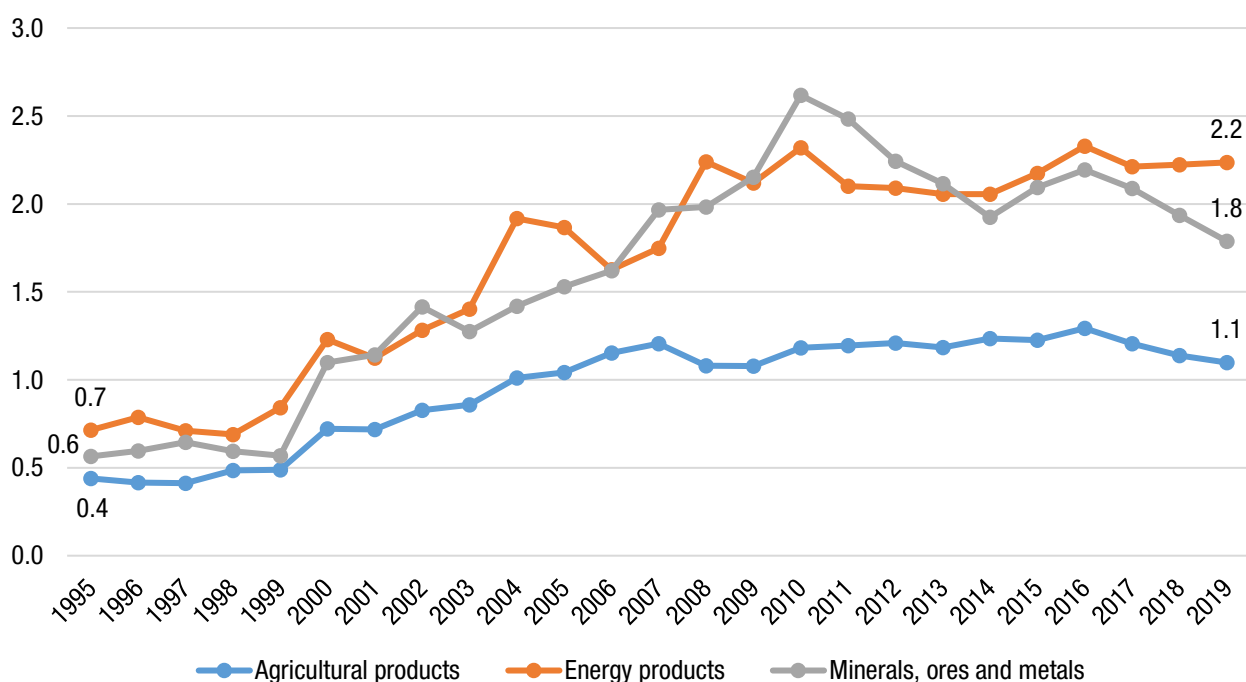
Figure 10. Evolution of technological development of median CDDCs and other country groupings, 1995-2019
(index, US=100)



Source: Author based on Freire (2019) and data from UN COMTRADE.

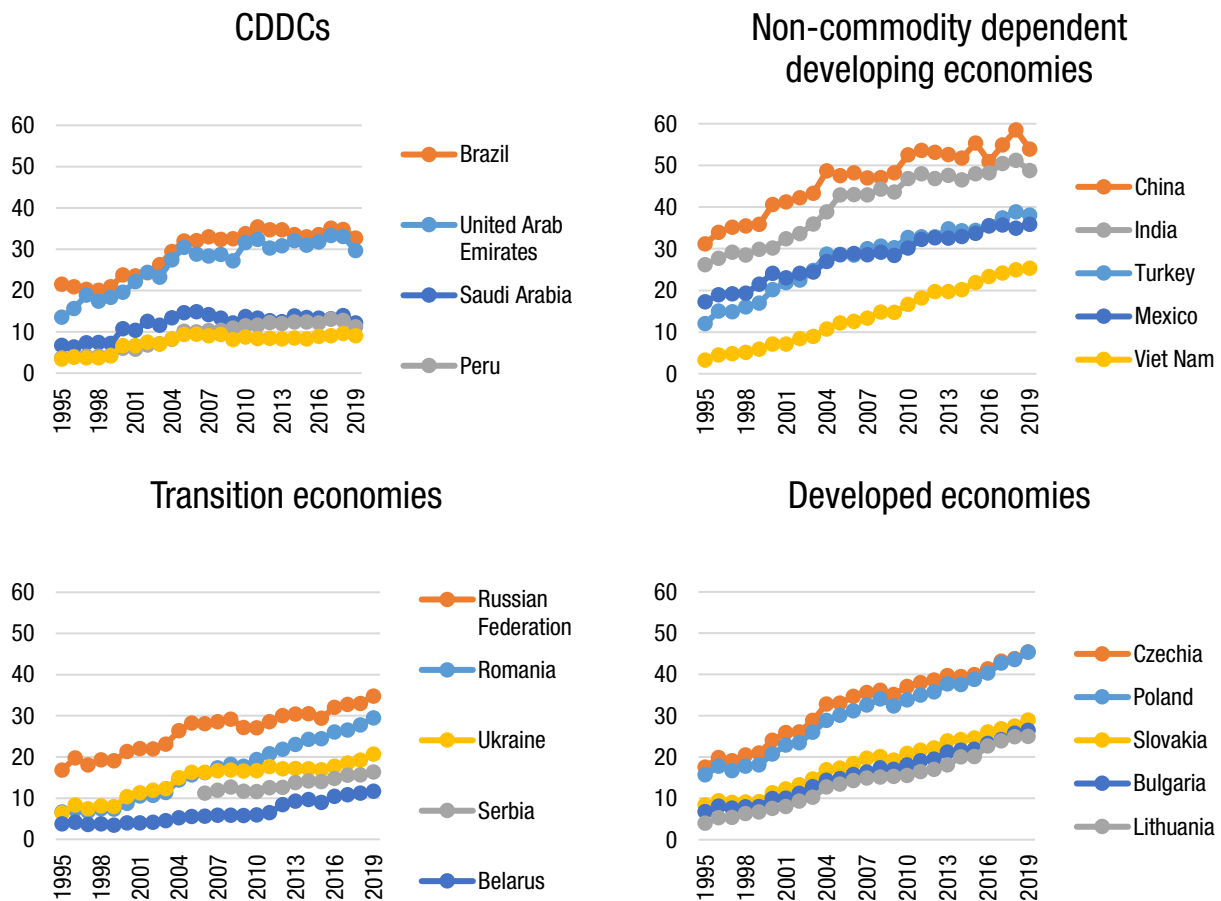
Note: The countries that comprise each country grouping are the countries listed in Annex B. There was no adjustment for changes in the composition of the groups during this period.

Figure 11. Evolution of technological development of median CDDC by type of commodity, 1995-2019
(index, US=100)



Source: Author based on Freire (2019) and data from UN COMTRADE.

Figure 12. Top five countries with higher gains in technological development, CDDCs and other country groupings (index, US=100)

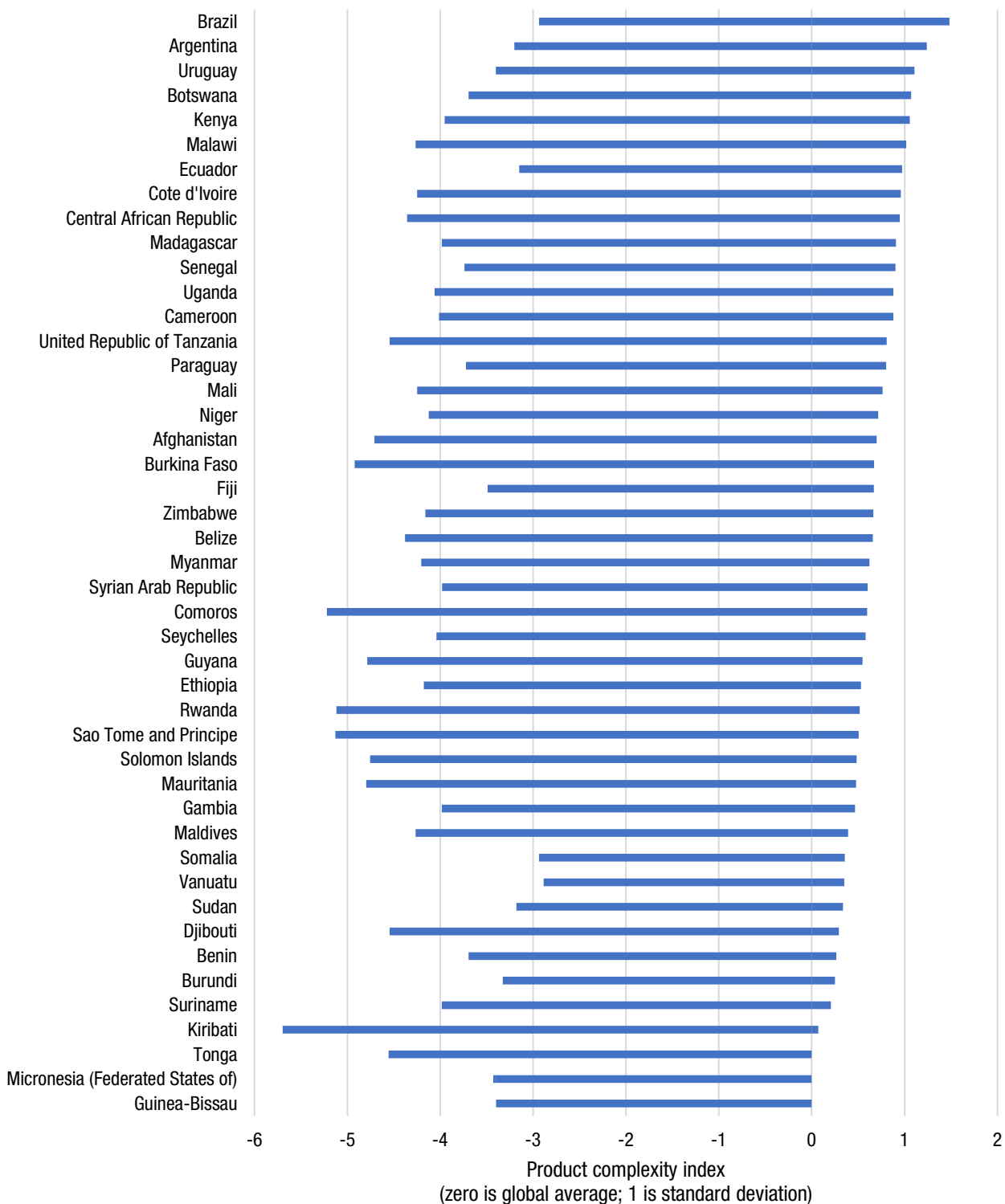


Source: Author based on Freire (2019) and data from UN COMTRADE.

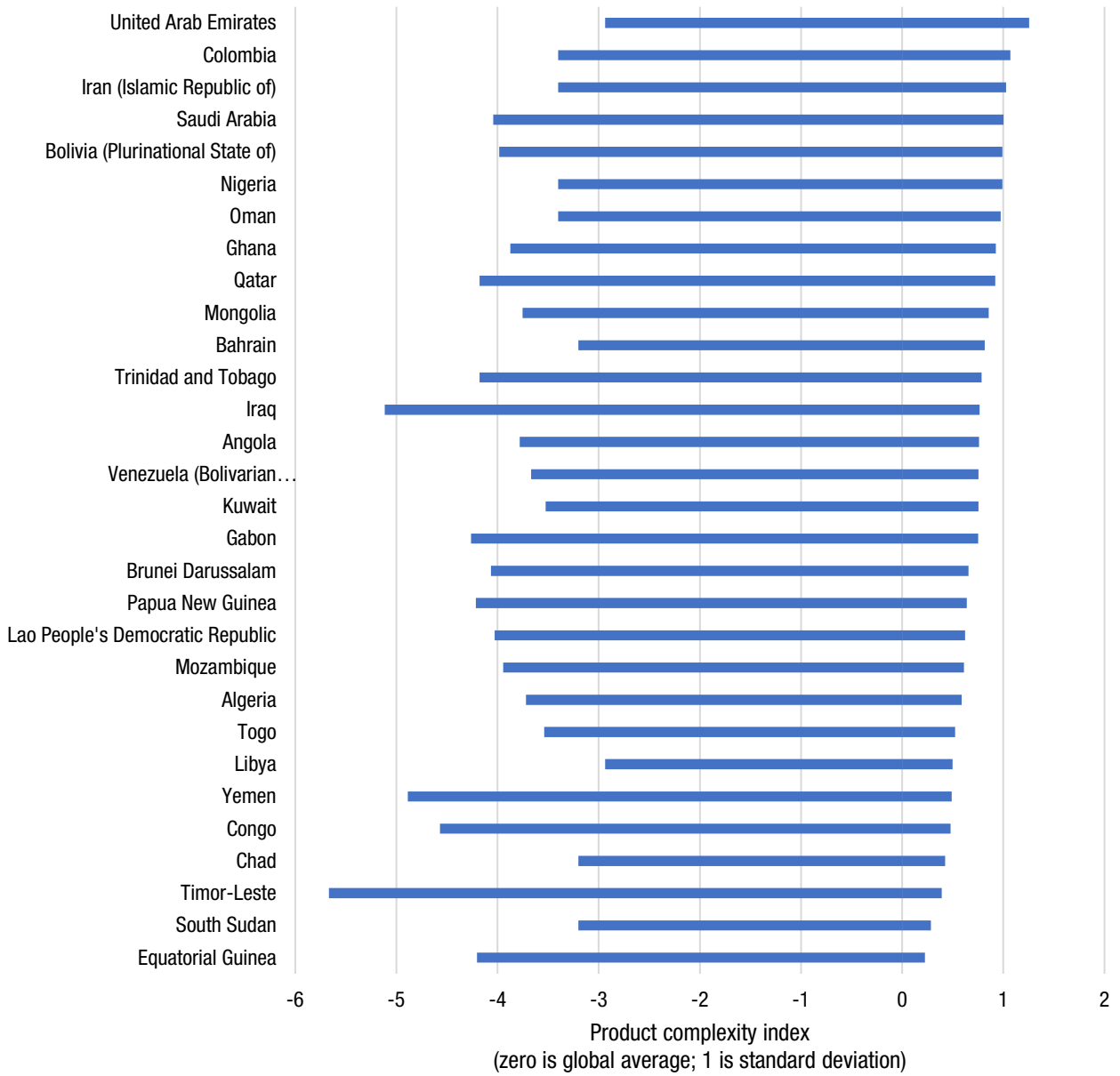
Looking at the distribution of product complexity of the exports of CDDCs, we can assess the range of technological capacity that is employed in these economies (Figure 13). Irrespective of the specialization in terms of the type of commodity, most CDDCs export products in the range from the global average of product complexity to minus three standard deviations of the global distribution (-3 to 0). Many countries also export products that require even lower technological capacity (-4 to -3), and a few, mainly agricultural CDDCs, also export the products that required the least technological capacities (less than -4). Higher levels of technology allow countries to produce and export products with above global average complexity.

Figure 13. Comparison of the distribution of product complexity of CDDCs, 2019

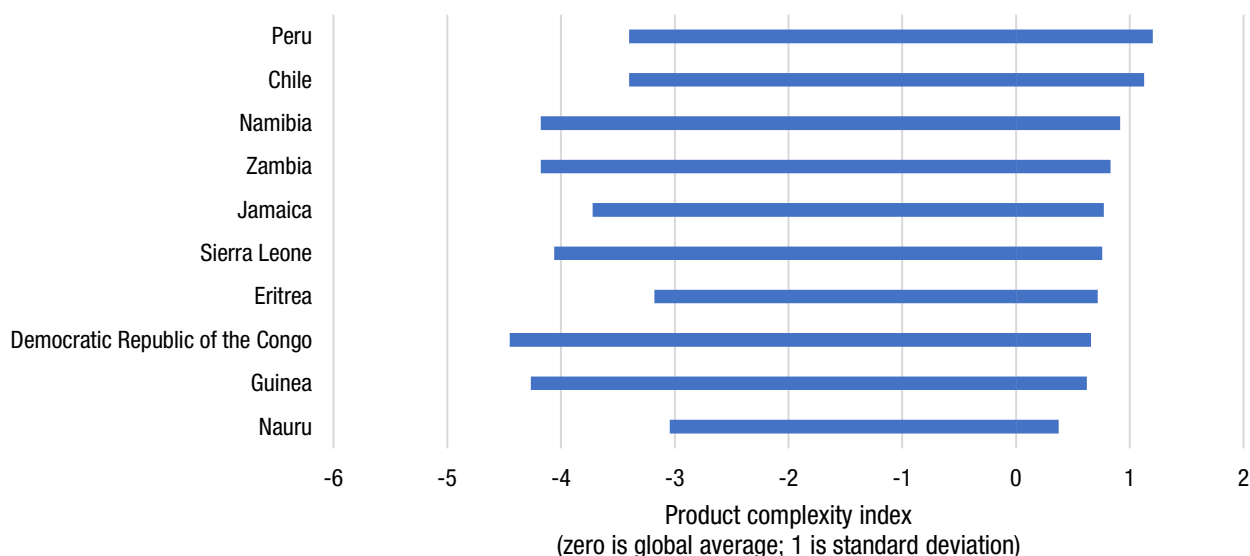
(A) Agricultural products



(B) Energy products



(C) Mining



Source: Author based on Freire (2019) and data from UN COMTRADE.

Note: In the x-axis, zero is the global average of product complexity and one is the standard deviation of the global distribution.

The more complex (transformed) the product, the more homogenous is the technology used to produce it. At one side of that spectrum, we have commodities, which can be produced using a variety of technologies. At the other side, we have the most complex products such as parts of airplanes. These are produced with about the same level of technology in all countries that can produce them. CDDCs have more industries that have more heterogeneous technologies by being economies in which commodity sectors comprise a larger share of the economy (at least of the exports).

The products with higher complexity produced by CDDCs by type and level of income are shown in Table 3. These are either chemicals, manufactured goods or machinery and transport equipment – the exception is the product with highest product complexity in Bolivia (germ of cereals, whole, rolled, flaked or ground, sold in the global market from \$9 to \$13).

Table 3. Products with higher complexity by CDDCs by type and level of income

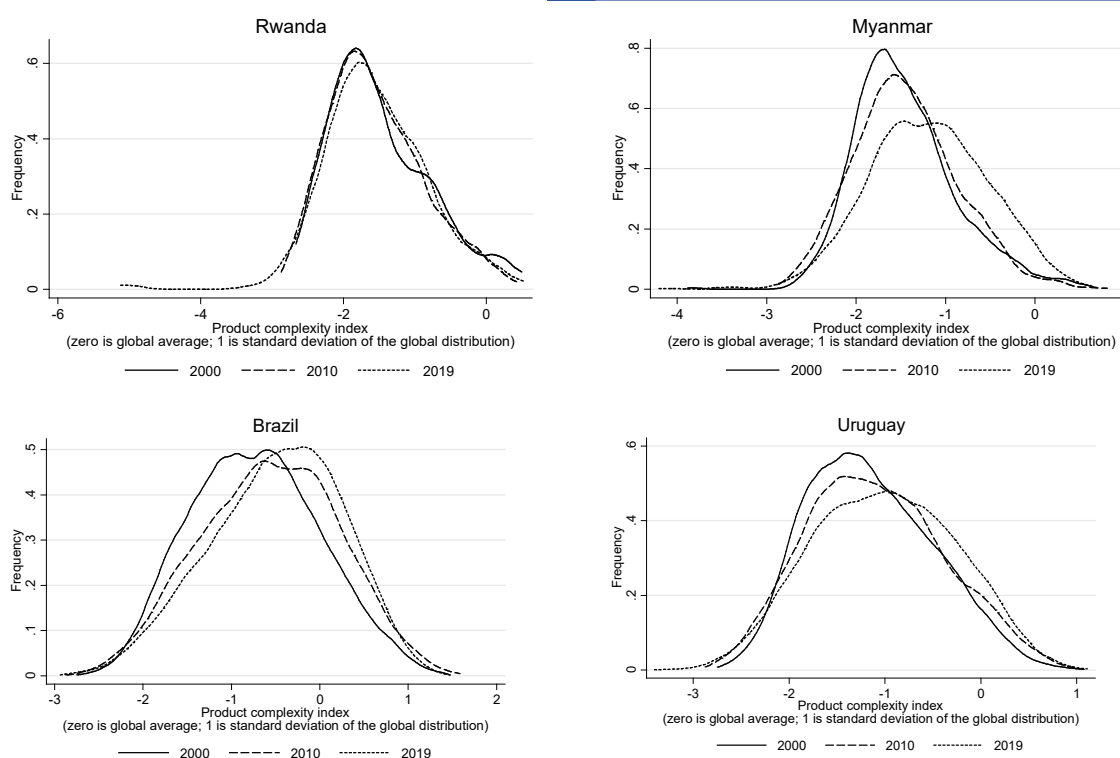
Type	Income level	Product (SITC classification) description, unit value range	Country	Complexity
Food	Low	(67683) Other angles, shapes and sections, hot-rolled, hot-drawn or extruded, \$20-42	Malawi	1.02
	Lower-middle	(72651) Reel-fed offset printing machinery, \$81,710-373,826	Kenya	1.06
	Upper-middle	(79211) Helicopters, of an unladen weight not exceeding 2,000 kg, \$917,444-1,533,096	Brazil	1.48
	High	(54145) Theophylline and aminophylline (theophylline-ethylenediamine) \$206-841	Uruguay	1.11
Mining	Low	(73712) Casting machines, \$0-1029	Mozambique	0.61
	Lower-middle	(04815) Germ of cereals, whole, rolled, flaked or ground, \$9-13	Bolivia	0.99
	Upper-middle	(68712) Tin alloys, \$76-181	Colombia	1.07
	High	(71122) Condensers for steam or other vapour power units, \$101-140	United Arab Emirates	1.25
Energy	Low	(67709) Other railway or tramway track construction material of iron or steel, \$123-260	Sierra Leone	0.76
	Lower-middle	(77423) X-ray tubes, \$1-98	Zambia	0.83

Type	Income level	Product (SITC classification) description, unit value range	Country	Complexity
	Upper-middle	(51223) Pentaerythritol, \$27-60	Peru	1.20
	High	(51543) Thiuram mono-, di- or tetrasulphides, \$11-22	Chile	1.13

Source: Author based on Freire (2019) and data from UN COMTRADE.

Figure 14 presents the evolution of the distribution of product complexity in selected CDDCs that rely on agricultural exports. It shows the shifts towards more technological capacities in the production base of the countries – clearly seen in the case of Brazil and Myanmar. The graphs also illustrate a case in which there has been little change in the complexity of exports, such as the example of Rwanda. This latter example highlights a limitation of this analysis since it does not capture the technological capacities related to services, which, in the case of digitally based services in Rwanda, have increased significantly in recent years. Figure 15 and Figure 16 shows similar graphs for selected CDDCs that rely on energy products and mining, respectively.

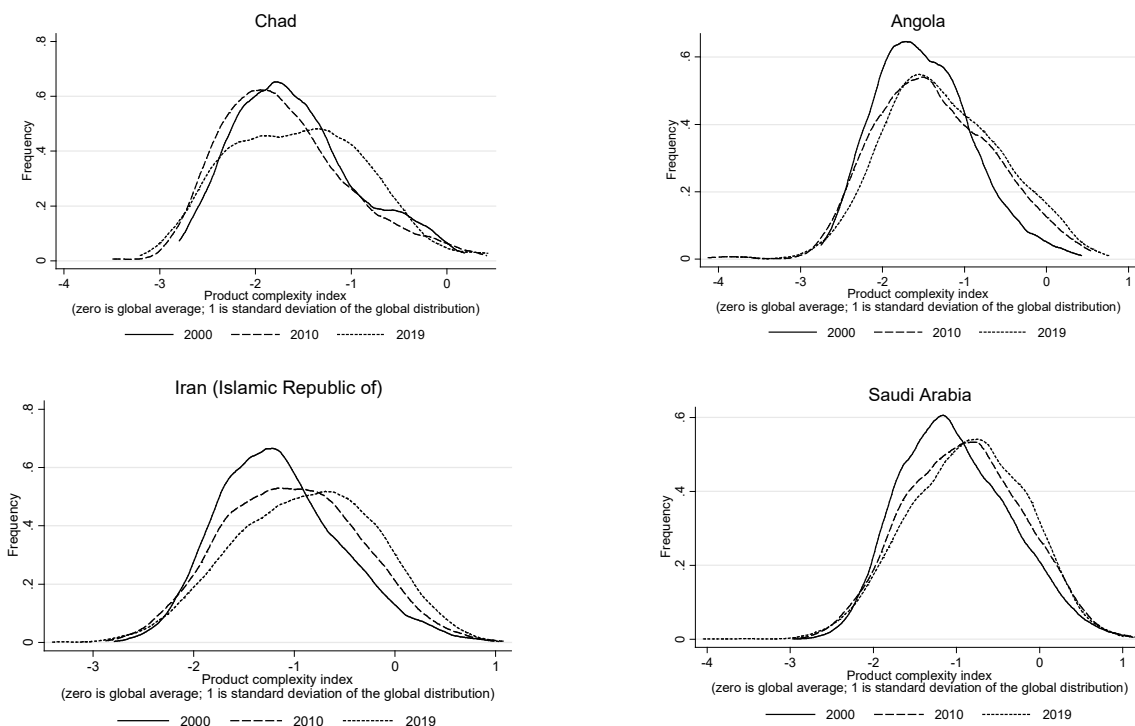
Figure 14. Evolution of the distribution of product complexity in selected CDDCs, agricultural products as main commodity exports



Source: Author based on Freire (2019) and data from UN COMTRADE.

Note: Frequency in the y-axis represents the share of the number of product categories with a given complexity (x-axis) in total exports. In the x-axis, zero is the global average of product complexity and one is the standard deviation of the global distribution.

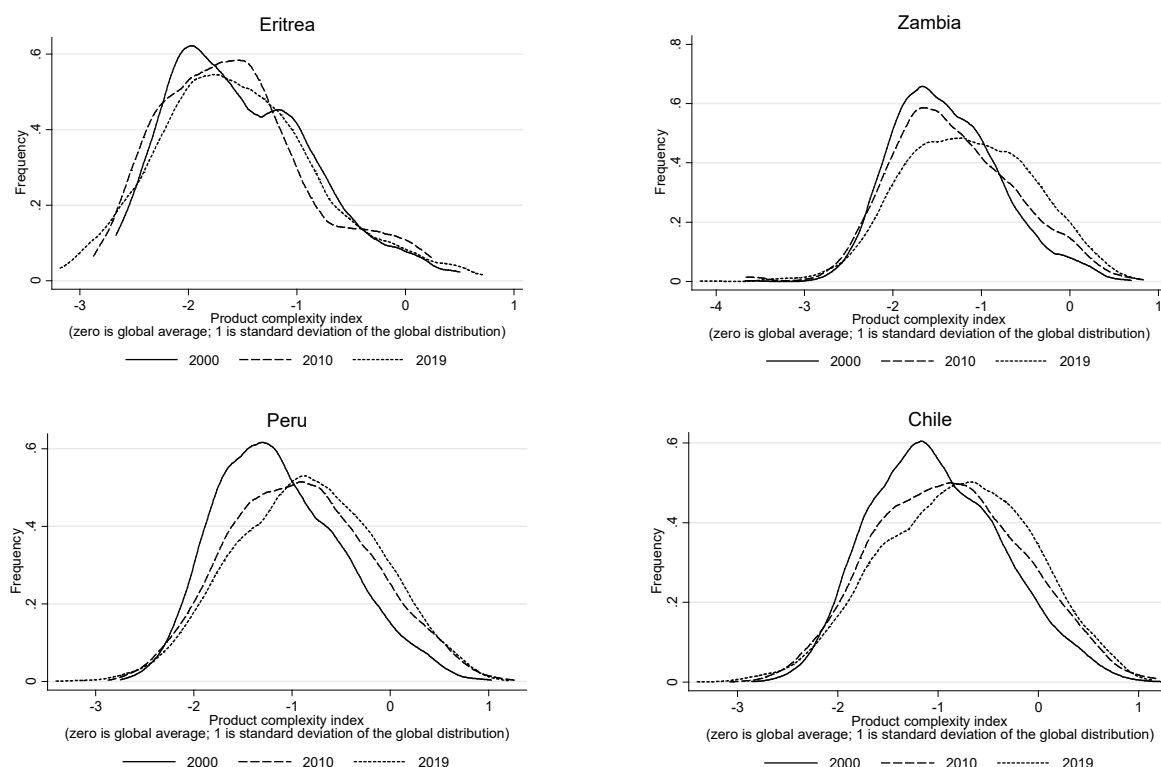
Figure 15. Evolution of the distribution of product complexity in selected CDDCs, energy products as main commodity exports



Source: Author based on Freire (2019) and data from UN COMTRADE.

Note: Frequency in the y-axis represents the share of the number of product categories with a given complexity (x-axis) in total exports. In the x-axis, zero is the global average of product complexity and one is the standard deviation of the global distribution.

Figure 16. Evolution of the distribution of product complexity in selected CDDCs, Minerals, ores and metals as main commodity exports



Source: Author based on Freire (2019) and data from UN COMTRADE.

Note: Frequency in the y-axis represents the share of the number of product categories with a given complexity (x-axis) in total exports. In the x-axis, zero is the global average of product complexity and one is the standard deviation of the global distribution.

4. Where CDDCs stand in relation to the technological revolutions

Currently, there is a big push in developing countries for digitalization, e-commerce, and digital integration within global value chains. These are all signs of the further deployment of the Web 2.0 digital revolution in the Global South. However, for many people in low and lower-income developing countries, concerns about AI and robots are considered farfetched given that it seems that they are mostly still trying to catch up with previous technological revolutions of industrialization, electricity and mass production. Where CDDCs stand in relation to the current and previous technological revolutions?

The framework of techno-economic paradigms has identified five technological waves since the Industrial Revolution; Industry 4.0 is considered by many the next one (Table 4).¹²

Table 4. Techno-economic paradigms

Tech revolution	New tech or new and redefined industries	Techno-economic paradigm	Key commodities
First: The industrial revolution	Mechanized cotton industry Wrought iron Machinery	Factory production Mechanization Productivity/time keeping and time saving Local networks	Iron
Second: Age of steam and railways	Steam engine and machinery Iron and coal mining Railway construction Rolling stock production	Economies of agglomeration, industrial cities, national markets Scale as progress Standard parts Energy when needed (steam)	Iron, Coal
Third: Age of steel, electricity and heavy engineering	Cheap steel Steam engine for steel ships Heavy chemistry and civil engineering Electrical equipment industry Copper and cables Canned and bottled food Paper and packaging	Giant structures (steel) Economies of scale of plant, vertical integration Distribute power for industry (electricity) Science as a productive force Worldwide networks and empires Universal standardization Cost accounting	Copper
Fourth: Age of oil, automobile and mass production	Mass-produced automobiles Cheap oil and oil fuels Petrochemicals (synthetics) Internal combustion engine Home electrical appliances Refrigerated and frozen foods	Mass production and markets Economies of scale Horizontal integration Standardization of products Energy intensity Synthetic materials Functional specialization Suburbanization World agreements	Oil
Fifth: Age of ICT	Cheap microelectronics ICTs, Internet and digital revolution Control instruments Biotech and new materials	Information intensity, instant communication Knowledge as capital Digital platforms, social media Connectivity, Mobility E-commerce, E-government Segmentation of markets Economies of scope Flat organizations, network structures Global Value Chains MDGs, SDGs	Oil Data
Sixth: Industry 4.0 (speculative)	AI, IoT, robots, drones, 3D printing, blockchain Smart production Smart cities Renewable energy	Automation Digital integration Niche markets Local production on demand Sustainability, SDGs	Data Renewables

Source: Author based on Perez (2002).

Some of the elements of previous techno-economic paradigms are still being implemented in different economic activities in CDDCs. In many of these countries, mechanization (first technological revolution) has not reached most of the farms, large shares of the population do not have access to electricity (third), many production sectors have not been able to take advantage of economies of scale and become internationally competitive (fourth), and the digital revolution (fifth) has been limited to the use of digital devices and platforms.

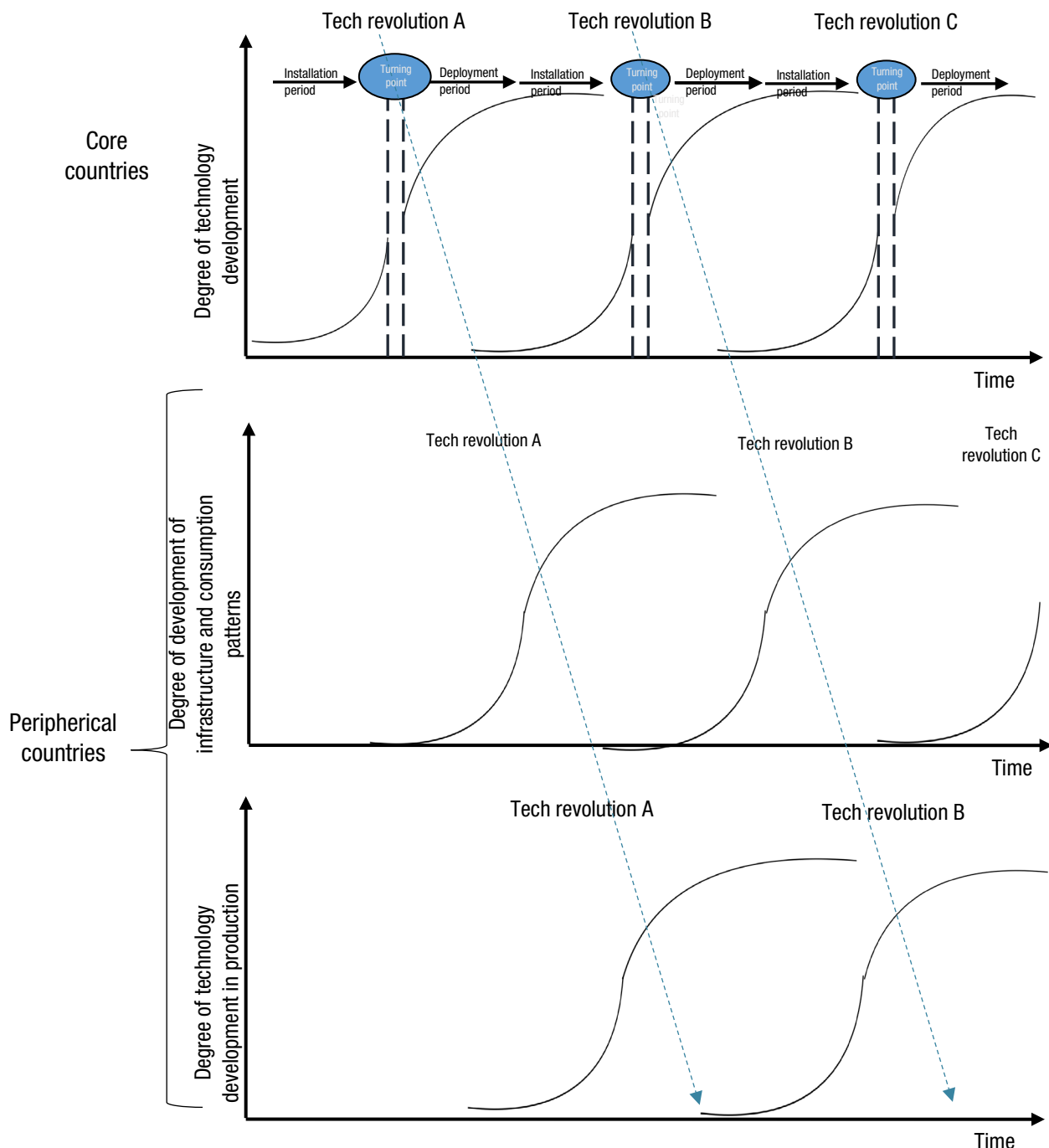
These big surges of technological change truly behave like waves that start in one or two of the most technologically advanced countries and then start to spread around the world; first to other advanced economies, then to more complex sectors of emerging economies, and just over time they move towards the more peripheral economies. It takes time for the deployment of technology for two main reasons. First, this deployment happens from one sector to the other, as new technologies are combined with existing ones in more traditional sectors. This process usually starts in industries

that are more complex and in which fewer developing countries are engaged. It also requires an enabling infrastructure and the necessary skills. For example, two issues are particularly challenging for broader use and adoption of new technologies in developing countries: poor digital infrastructure and low technical skills. Second, the deployment of new technologies requires changes in social behaviour and institutions, and there is a lot of inertia in these areas. Thus, it may take several years for changes to play out.

Figure 17 illustrate this uneven deployment of technological revolutions. In countries that are at the core of the techno-economic paradigm, the deployment of the new technologies in production sectors is accompanied by the rollout of the required infrastructure and the changes in consumption pattern. Once a technological revolution matures, financial capital starts to look for new opportunities for higher profits, either by stretching the paradigm to other countries or betting in an emerging technological revolution. That creates the sequencing of waves of technological revolutions.

The technological waves reach developing countries with a delay and out of synchronization. The deployment of the required infrastructure of the paradigm and the changes in consumption pattern tend to reach countries first – for example, in the case of smartphones and e-commerce. The deployment of new technologies in the production sectors is the last stage. It may first occur through FDI, and only after further delays, it starts to be integrated into domestic firms.

Figure 17. Uneven deployment of technological revolutions



Source: Author based on (Perez, 2002).

Given that a sizeable share of the investment in the new technological paradigm in developing countries is through foreign finance, and the initial push to improve infrastructure and change consumption patterns is driven by foreign firms that seek to expand their markets, the deployment of new technological paradigms in developing countries also depends on how attractive these countries are to international investors and firms.

The result is a patchwork of elements of different techno-economic paradigms in various sectors of the economy. In many CDDCs, a large share of the agricultural sector, those in subsistence agriculture, could be basically operating under the “common sense” of technology, rules, and expectations that resembles the time before the industrial revolution, while in the major cities, innovation hubs are promoting the dissemination of the newest technologies of AI, robotics and 3D printing. This mismatch of paradigms creates new challenges for interventions that seek to promote

structural transformation. For example, discussions with managers of garment factories installed through FDI in industrial parks in Ethiopia reveal that a key area of training for new workers, usually those coming from the rural areas, is on soft skills related to working ethics in the factory environment, timekeeping and productivity,¹³ all elements of the first technological revolution.

The assessment of communication, transport and energy infrastructure of CDDCs can give an indication of the stage of technological development of these countries in relation to the different paradigms (Table 5). In many of these countries, universal access to electricity was not yet achieved, and the network of roads, highways and ports is still weak (which place them in the 4th technological revolution). At the same time, countries have leapfrogged the installation of analogue telephony with the deployment of digital infrastructure.

Table 5. Changes in infrastructure due to technological revolutions

Tech revolution	Communications	Transport	Energy
First: The industrial revolution		Canals and waterways Turnpike roads	Waterpower (highly improved water wheels)
Second: Age of steam and railways	Universal Postal Service Telegraph	Railways Great ports, depots	City gas
Third: Age of steel, electricity and heavy engineering	Worldwide telegraph Telephone (mainly nationally)	Worldwide shipping Worldwide railways Great bridges and tunnels	Electrical networks for illumination and industrial use
Fourth: Age of oil, automobile and mass production	Worldwide analogue telecommunications (telephone, telex and cablegram) wire and wireless	Networks of roads, highways, ports and airports	Universal electricity (industry and homes)
Fifth: Age of ICT	Worldwide digital telecommunications (cable, fiber optics, radio and satellite) Internet, e-mail, and other e-services Mobile internet, smartphones	High-speed physical transport links (by land, air and water)	Multiple sources, flexible use, electricity networks
Sixth: Industry 4.0 (<i>speculative</i>)	Universal broadband Internet Access	Faster physical transport links (hyperloop, space flights) Driverless cars	Renewable energy Electric cars

Source: Author based on (Perez, 2002).

Nevertheless, most CDDCs still have a weak infrastructure of high-speed fixed internet connections, such as fibre optic and broadband, or high-speed mobile connections. Such digital infrastructures are not broadly available for large shares of the population (Table 6). Digital and frontier technologies also require technology literacy and skills, which usually are lower in developing countries. The development of skills to use digital technologies requires people to be exposed to these technologies and engaged actively in “learning by using”.

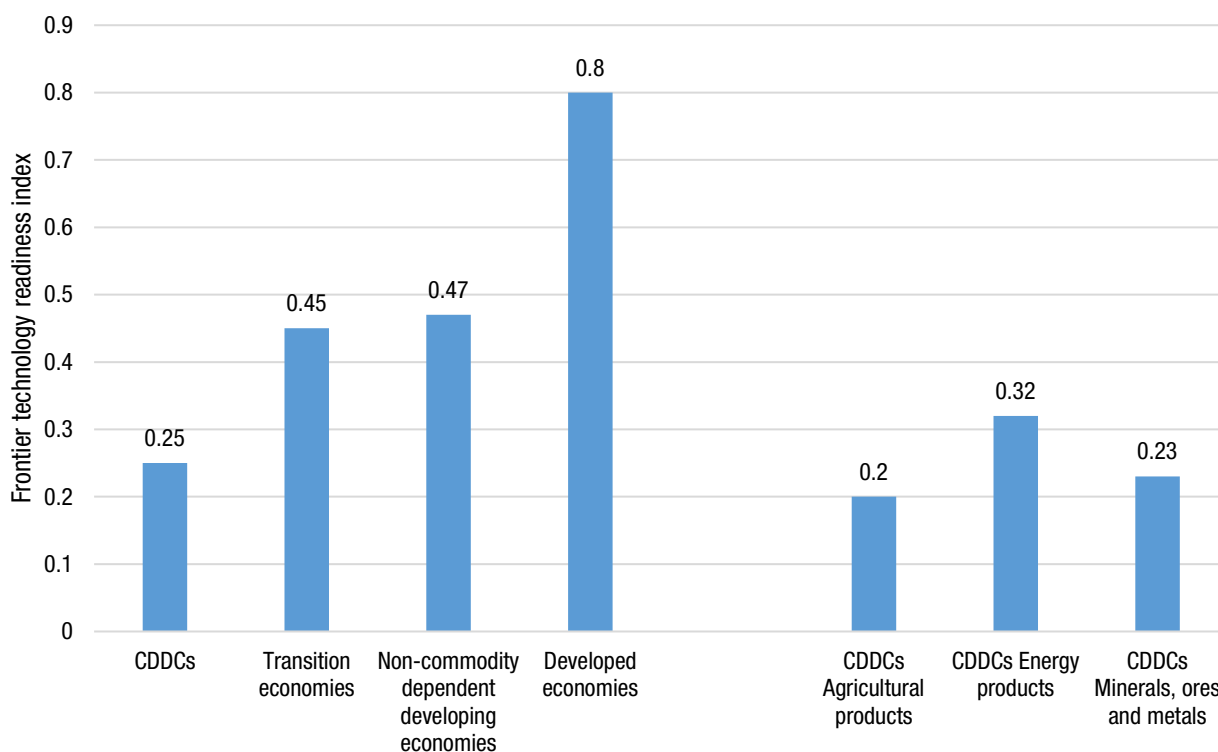
Table 6. Gaps in access to digital infrastructure

Indicator	CDDCs	Non-CDDCs	Transition economies	Developed economies
Percentage of households with a computer at home	17.8%	25.1%	52.4%	65.5%
Active mobile-broadband subscriptions per 100 inhabitants	56.8%	78.0%	76.0%	110.1%
Percentage of households with internet access at home	21.7%	36.2%	60.9%	80.5%
Mobile-cellular subscriptions per 100 inhabitants	96.4	121.9	120.9	122.7

Source: Author based on data from ITU.

UNCTAD's recent Frontier Technology Readiness index shows that CDDCs are less prepared to use, adopt and adapt these technologies when compared with developed, transition and non-commodity dependent developing countries (Figure 18).¹⁴ Among the CDDCs, those that rely mainly on agricultural products are less prepared than energy and mining CDDCs.

Figure 18. Frontier technology readiness index



Source: Author based on UNCTAD Technology and Innovation Report 2021.

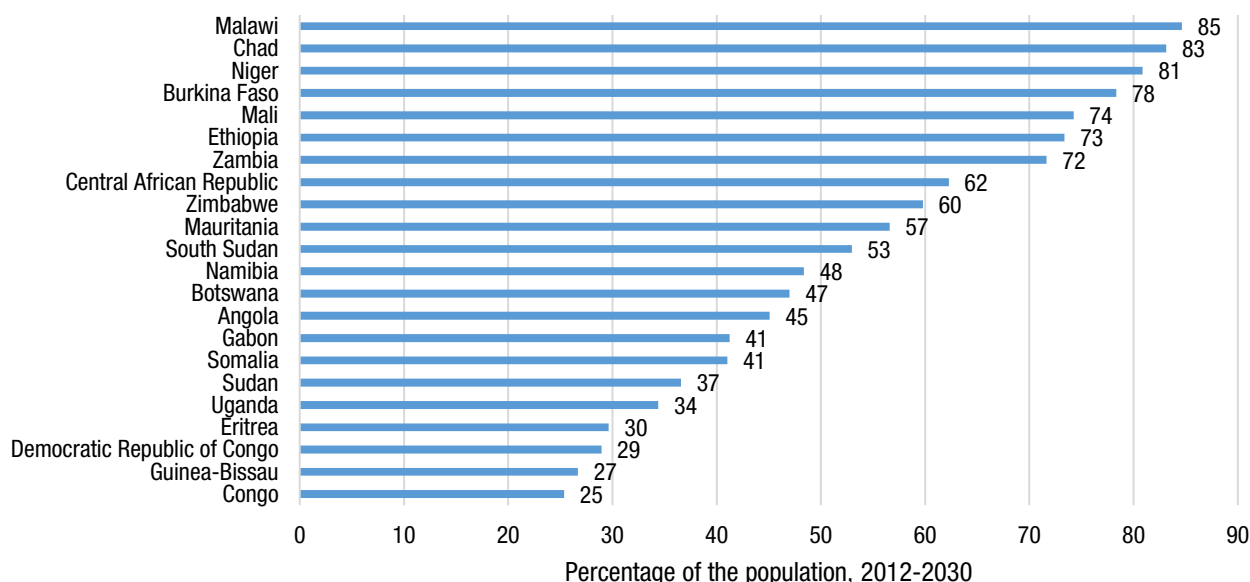
5. Windows of opportunity on deploying digital technologies and preparing the ground for the 4th Industrial revolution in CDDCs

Digitalization and the push for the adoption of digital and frontier technologies in e-commerce and global value chains open new windows of opportunity for developing countries such as CDDCs to catch up and for narrowing the technological gap to developed countries. In conjunction with the potential for diversification and structural transformation, there are opportunities in leapfrogging energy and communications infrastructure, facilitating trade, and promoting financial inclusion.

Frontier technologies offer economically viable alternatives for costly investment in infrastructure related to traditional technological paradigms. An example of the potential for leapfrogging in frontier technologies is the development of decentralized renewable energy systems. Low-cost, high-efficiency solar panels are available for household rooftop solar installations as well as village-level micro and mini-grids. The cost of these panels has fallen by a factor of more than 100 in the last 40 years and by 75 per cent over the past ten years,¹⁵ dramatically improving their affordability especially with household rooftop two-year rent-to-own plans priced as low as \$6 per month.¹⁶ Over the coming years, we can expect further price declines due to additional frontier technological breakthroughs in the design and manufacture of photovoltaic cells and battery storage systems¹⁷ and possibly even the advent, in the not-too-distant future, of printed, organic solar cells.¹⁸ Cost reductions represent an opportunity for electrification in rural areas, especially in developing countries, through off-grid and mini-grid solutions.

For example, an analysis using geospatial data shows that to bring electricity to all households in Sub-Saharan Africa by 2030, the most cost-effective mix of conventional and renewable energy technologies, for several countries, would be off-grid and mini-grid solutions using solar technology. These solutions could serve a large share of the population with a lower cost in Malawi (84% of the population), Chad (83%) and Niger (80%) (Figure 19).

Figure 19. Estimates of the population served by mini-grid and off-grid solar PV solutions to reach the most cost-effective mix of energy for bringing electricity to all by 2030, selected CDDCs



Source: Author calculations based on data from UN modelling tool "Open Source Spatial Electrification Tool (OnSSET)". Available from <https://un-modelling.github.io/electrification-paths-presentation/>

Note: Scenario of electrification considers 22 kWh of electricity consumption per household per year, grid electricity cost of US\$ 0.1 per kWh, and the price of diesel of \$0.7 per liter.

Frontier technologies are also expected to facilitate trade and increase efficiency in global commodity value chains. The potential to take advantage of these opportunities vary by technology. Those that require higher capital such as robotics and IoT may be more challenging to diffuse in low-income country's settings than those technologies that are mainly digital (e.g. blockchain, AI, and digital platforms). However, the network nature of the benefits of digital technologies being adopted in value chains, in which the value of the use of the solutions that apply the technology increases with the number of users, create incentives for the diffusion of the technology from firms in developed countries to those in developing ones.

The efficiency gains of digitalization can be higher in developing countries, due to the higher cost of trade that these countries face; on average 1.8 times higher than for developed countries.¹⁹ Logistics and supply chains between firms in developed countries have already adopted digitalization and have higher efficiency when compared with logistics and supply chains that involve firms in developing countries. Therefore, higher opportunities for gains can drive the diffusion from the core to the periphery and increasingly towards the countries that have higher potential gains.

Straightforward opportunities are in the digitalization of trade and logistics-related documents. This is an area in which firms in developed countries have already a lot of experience (thus the risk of implementation, in the supply side is low) and there are not much more opportunities for expanding the market in developed countries, given that digitization is already a mature innovation. Companies from developed countries seeking to grow market share and profitability would have incentives to do so through entering the developing country markets. This offer an opportunity in CDDCs for the local firms and other actors in the logistics sector and for firms engaged in global supply chains, including relevant government agencies, to further digitalize and increase efficiency and reduce costs of their operations.

Digitalization of trade and logistic documents also offers the opportunity for local tech development firms to enter this segment and increase their technical capabilities. Firms from developed countries will need local knowledge to adapt

solutions for the local situations, including in relation to localizing language but also related to adapting the technology for the levels of services of the existing infrastructure and technology skill of users. Local tech firms could provide this knowledge, and, thus, there is the potential for partnerships between firms from developed countries and local tech firms in CDDCs.

Efficient payment systems are critical for international trade, and, as discussed in the previous section, frontier technologies can also be used to reduce transaction costs and the time required to complete payments. Relatively high transactions costs and delays for the processing of payments can become a critical hindrance for SMEs in developing countries to participate in trade. The services of third-party providers help to address this challenge, and they have become more available thanks to advancements in digital technologies. Frontier technologies such as blockchain can further reduce transaction costs of international payment systems by removing the need for a trusted third party.

The use of emerging and frontier technologies such as AI and blockchain in commodity trade also poses the opportunity for adoption and the development of solutions in CDDCs. These technologies are still in an installation phase, meaning that they are yet being adopted in firms and sectors in countries that are the core of the development of these technologies, for example in the United States and China. Thus, the pressure for the development of solutions using these technologies as a way to increase the size of the market is not there, given that there is still a lot of market development to be made in the core countries. However, many of the solutions for digitalization are already adopting these new technologies, for example in the scanning of documents and in digital signatures and privacy services, which could facilitate the diffusion of these technologies in developing countries (in firms in logistics and supply chain) as part of the digitalization efforts. Therefore, firms in CDDCs can place themselves in a good position in these new technologies, as early adopters.

Another opportunity for CDDCs is that, at the global level, there are finance available to fund digital and frontier technology solutions in e-commerce and global value chains. In the current stage of Web 2.0 technologies (e.g. apps, platforms, social networks), in which the technology is more mature, finance is looking for profitable applications related to digitalization and e-commerce, and these are becoming less available in developed countries' context. Thus, there is the possibility for innovators in developing countries to tap into the available idle money to finance digital innovation. The higher potential for gains of efficiency in the application of these technologies in developing countries could become an attractor for financing innovation in this area, not only those that are based in well-tested solution such as digitalization, but also those that promise higher productivity gains as those using technologies such as AI and blockchain.

Digitalization and frontier technologies also offer an opportunity for governments to build national capacity on the provision of digital services. The government is a key actor in the digitalization of trade, due to the need for exchanging trade-related documents with governments agencies. For example, UNCTAD has been at the forefront in the delivery of technical tools to developing countries such as single windows through its Automated System for Customs Data – ASYCUDA – programme and trade information portals.²⁰ Hence, it has a wealth of knowledge that can assist countries in the use of emerging technologies. Similarly, other providers of technological solutions will have a big incentive to engage governments, and that requires building their capacity to engage in digital trade. That knowledge, if properly managed, could spill over to other areas of government services and help improve the public services in CDDCs.

Some structural and non-structural factors may facilitate the adoption and development of frontier technologies in CDDCs. For example, due to the AfCFTA, there are many incentives for governments and innovators in Africa for adopting technology for improving trade logistics and supply chain. The AfCFTA is expected to increase intra-regional trade, but much of the benefits of the AfCFTA would be realized if the overall trade costs are reduced (not only trade tariffs). That would require the improvement of the logistics between countries and the reduction of trade costs.²¹ Digital solutions using frontier technologies can deliver these improvements, and, thus, there would be an incentive to adopting them.

Another factor is an important role of China in commodity value chains and its position of leadership in many of the new technologies associated with Industry 4.0. Under appropriate policies, that factor can facilitate the diffusion of these technologies to firms in countries that are China's partners, including CDDCs.

6. Promoting structural transformation through economic diversification and technological upgrading

This section proposes a strategy of innovation and entrepreneurship in three tiers to promote the technological and structural transformation of developing countries such as CDDCs: 1) promote economic diversification, 2) promote the implementation of the digital revolution (current techno-economic paradigm), and 3) prepare the environment for the implementation of Industry 4.0 and try to enter into possible value chains related to this paradigm. This strategy should be guided by the national development plan and the objectives of sustainable development, which define development priorities.

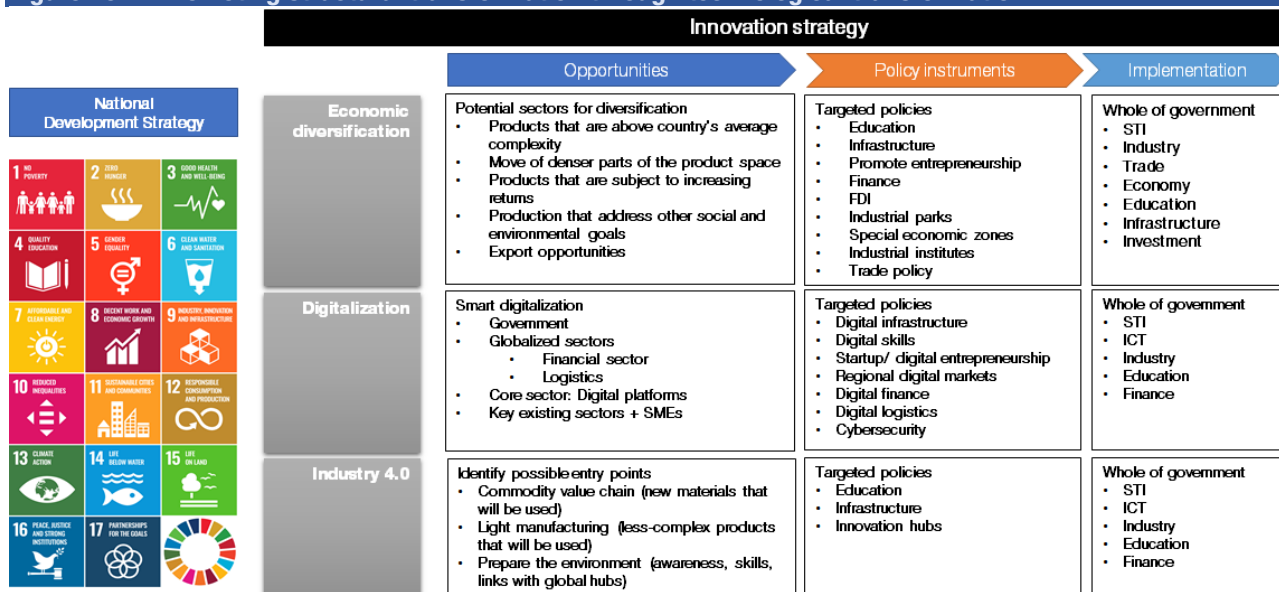
This strategy has three main steps: identification of opportunities, design of policy instruments and implementation. The identification of opportunities should be a government-led process with the participation of the main actors of the innovation ecosystem, the private sector, universities, the organized civil sector, the financial sector. The private sector is fundamental. This is the sector that has productive capacities and is best positioned to identify opportunities for innovation.

In the case of diversification, CDDCs should identify which are the new potential diversification sectors that are realistically viable, given the current level of technological and productive capacity, and which will bring more benefits. The following steps should be considered in this process:

- Identify the sectors that are close in the country's current production space and that are more complex than the country's average production. This will increase the technological level. The more complex the product, the higher the government support will be required.
- Identify the sectors that are in the densest parts of the product space. This will facilitate future diversification.
- Identifying products that are subject to increasing returns (productivity increases with increased production). The primary products are off this list.
- Identifying sectors that meet other social and environmental goals. For example, sectors that employ more women, or sectors that use less water, or that have less impact on climate change.
- List the sectors with the highest export opportunities in terms of global demand and that the country can leverage traditional trading partners or regional trade integration. The analysis can also identify the main markets of the potential new products for diversification, which could inform trade policies.

An example of the result of such analysis is presented in Annex C – Examples of potential products for diversification.

Figure 20. Promoting structural transformation through technological transformation



Source: Author.

In the case of digitalization, the suggestion is to implement a smart digitalization strategy. First, focus on the digitalization of public services with the objective of promoting inclusion. Second, sectors that are globalized and that are already more exposed to digitalization; this includes the financial sector focusing on digital financing and digital inclusion, and the logistics sector. Then also focus on the core sectors of the Digital Age, which are the digital platforms. The idea is to foster the ecosystem of digital innovation (finance, entrepreneurship, infrastructure, skills). This will deal with the supply side. The demand side also must be strengthened. The focus could be on promoting the digitalization of key traditional sectors of the economy and of SMEs.

In relation to Industry 4.0, the idea is to identify the possible new production part of the value chain of the core products of the new technological paradigm. These have a high potential for productivity gains. The focus could be in two areas. First, the commodity value chain: what are the opportunities in new materials that will be used by the core products of the Industry 4.0? for example, lithium, nickel and cobalt used to make batteries for electric vehicles. Second, the opportunities in less-complex manufactured products that are used in products of frontier technologies - for example, miners of blockchain use specialized computers that are somewhat easy to assemble. The strategy should also include the preparation of the environment for this new paradigm, including raising awareness, building skills, and promoting links with global and regional hubs.

The next step is to design the policy instruments. The key aspect is that they must be targeted policy instruments. They should promote innovation in the identified sectors. Either to diversify to that sector (product innovation) or to improve the production in that sector (process innovation). The targeted policies instruments for diversification include those acting in the areas of Education, Infrastructure, Entrepreneurship, Finance, FDI, Industrial parks, Special economic zones, Industrial institutes, and Trade policy. For digitalization, the policy instruments will be related to Digital infrastructure, Digital skills, Start-up and digital entrepreneurship, Regional digital markets, Digital finance, Digital logistics, and Cybersecurity. And the instruments for Industry 4.0 may be related to Education, Infrastructure and Innovation hubs. Policy instruments to facilitate innovation in the selected sectors are discussed in Chapter 4.

The next step is implementation. That must be the business of the whole government - different ministries and agencies will be more engaged in each of these blocks. The design and implementation of STI policy instruments become complex because of the systemic nature of the policy objectives and the SDGs, the diversity of actors involved, and the diversity of policy instruments, including policy instruments that were designed for other issues and that affect innovation unintentionally. For example, exchange rate policy, which has a big impact on the exports of new products, and on the import of technology.

7. Conclusions

This paper discusses the relation between technological transformation, innovation, economic diversification, and structural transformation. Based on the analysis of their economic complexity, most CDDCs have low levels of technological capacity. They have made minimal gains in closing technological gaps in the past 25 years. Technological change and innovation lead to structural transformation when they result in economic diversification towards more complex products. Diversification is path-dependent; thus, what a country produces impacts the likelihood of diversification to new products. Larger jumps in product complexity require more substantial support by the Government to build absorptive capacities and create the conditions for introducing a more complex production in the country.

Technological change and innovation are also affected by long-term waves of technological revolutions that affect the economy and society, institutions, and the relation with the environment. The next chapter discusses the impact of these technological revolutions on CDDCs.

It is critical to fast-track the deployment of digital and frontier technologies in CDDCs to promote their structural transformation. Inequalities in technological access and use are the result of existing inequalities in economic and social dimensions and tend to perpetuate them. The risk is that if developing countries miss this new wave of technological change, they will fall further behind, and that could exacerbate global challenges, from climate change to migration pressures, from terrorism to pandemics. And CDDCs risk continuing trapped into unsustainable, volatile, unequal and slow development patterns.

Endnotes

¹ In the case of agricultural products, process innovation also relates to the compliance of SPS and TBT measures implemented either domestically or in some export destination markets.

² (Perez, 2002)

³ UNCTAD's Technology and Innovation Report 2021.

⁴ In the case of agricultural products, process innovation also relates to the compliance of SPS and TBT measures implemented either domestically or in some export destination markets.

⁵ (ESCAP, 2011; Freire, 2017)

⁶ Other studies focusing on the association between diversification and income per capita have found that diversification is associated with economic development for most of the development trajectory of a country (Imbs and Wacziarg, 2003; Cadot et al., 2010). That relationship is shown to be non-monotonic, following an inverted U-shaped curve. This chapter highlights the less studied relationship between diversification and total GDP (Lei and Zhang, 2014; Freire, 2019).

⁷ (Hidalgo and Hausmann, 2009; Tacchella et al., 2012)

⁸ (Freire, 2017)

⁹ (Hidalgo et al., 2007)

¹⁰ Source: UNCTADstat available from <https://unctadstat.unctad.org/EN/Index.html>.

¹¹ (UN-Habitat, 2015)

¹² (Perez, 2002; Schwab, 2013)

¹³ Based on the findings of the UNCTAD's programme of STI Policy Review in Ethiopia (2018-19).

¹⁴ UNCTAD Technology and Innovation Report 2021.

¹⁵ Details of these price declines are available in Technology and Innovation Report 2018 - Harnessing Frontier Technologies for Sustainable Development (UNCTAD/TIR/2018), 15 May 2018.

¹⁶ <https://www.ignite.solar/post/ignite-power-rwanda-s-largest-rural-utility-connects-538-homes-in-a-single-day>

¹⁷ TIR 2018, p. 18-19.

¹⁸ <https://powerbloom.com/>

¹⁹ <https://unctad.org/en/pages/newsdetails.aspx?OriginalVersionID=1423>

²⁰ <https://asycuda.org/en/>

²¹ https://unctad.org/en/PublicationsLibrary/aldcafrica2019_en.pdf

Annex A – Economic complexity

Economic complexity, 2019 (index US=100)

Rank	Index	Rank	Index
1	United States	100	Macao, China
2	United Kingdom	101	Armenia
3	Germany	102	Madagascar
4	France	103	Senegal
5	Japan	104	Zambia
6	Italy	105	Cameroon
7	Switzerland	106	Cote d'Ivoire
8	Netherlands	107	Kyrgyzstan
9	Spain	108	Azerbaijan
10	Belgium	109	Uzbekistan
11	Canada	110	Venezuela
12	Austria	111	Algeria
13	China	112	Zimbabwe
14	Sweden	113	Bolivia
15	Denmark	114	Uganda
16	India	115	Nicaragua
17	Republic of Korea	116	Angola
18	Australia	117	Trinidad and Tobago
19	Czech Republic	118	Ethiopia
20	Poland	119	Mozambique
21	Singapore	120	Sierra Leone
22	Hong Kong, China	121	Montenegro
23	Turkey	122	Afghanistan
24	South Africa	123	Lesotho
25	Finland	124	Lao People's Democratic Republic
26	Thailand	125	Togo
27	Mexico	126	Paraguay
28	Russian Federation	127	San Marino
29	Hungary	128	Syrian Arab Republic
30	Ireland	129	Andorra
31	Portugal	130	Mali
32	Brazil	131	Mongolia
33	Malaysia	132	Democratic Republic of the Congo
34	Norway	133	Jamaica
35	Israel	134	Brunei Darussalam

Rank		Index	Rank		Index
36	United Arab Emirates	29.7	135	Iraq	1.4
37	Romania	29.5	136	Gabon	1.3
38	Slovakia	28.9	137	Democratic People's Republic of Korea	1.3
39	Slovenia	28.9	138	Haiti	1.2
40	Bulgaria	26.5	139	Niger	1.2
41	Greece	26.1	140	Fiji	1.2
42	Indonesia	25.6	141	Guinea	1.1
43	Viet Nam	25.3	142	Burkina Faso	1.1
44	Lithuania	25.0	143	Seychelles	1.1
45	Estonia	22.0	144	Malawi	1.1
46	New Zealand	21.5	145	Bahamas	1.1
47	Luxembourg	21.4	146	Congo	1.1
48	Latvia	20.9	147	Papua New Guinea	1.0
49	Croatia	20.7	148	Suriname	1.0
50	Ukraine	20.7	149	Turkmenistan	0.9
51	Philippines	17.7	150	Benin	0.9
52	Serbia	16.3	151	Barbados	0.9
53	Argentina	14.9	152	Belize	0.8
54	Morocco	12.9	153	Cuba	0.8
55	Chile	12.6	154	Tajikistan	0.8
56	Colombia	12.3	155	Mauritania	0.7
57	Saudi Arabia	12.2	156	Sudan	0.7
58	Belarus	11.7	157	Maldives	0.7
59	Peru	11.2	158	Guyana	0.6
60	Egypt	11.1	159	Rwanda	0.6
61	Pakistan	11.1	160	Libya	0.6
62	Tunisia	10.3	161	Antigua and Barbuda	0.5
63	Cyprus	10.2	162	Cabo Verde	0.5
64	Sri Lanka	9.8	163	Dominica	0.5
65	Iran (Islamic Republic of)	9.1	164	Liberia	0.5
66	Malta	8.6	165	Bhutan	0.5
67	Bosnia and Herzegovina	8.4	166	Yemen	0.5
68	Lebanon	8.2	167	Djibouti	0.4
69	Mauritius	7.9	168	Gambia	0.4
70	Costa Rica	7.6	169	Saint Lucia	0.4
71	Kazakhstan	7.6	170	Bermuda	0.4
72	Nigeria	7.4	171	Occupied Palestinian Territory	0.4

Technological transformation and innovation for economic diversification and structural transformation in CDDCs

Rank	Index	Rank	Index	
73	Panama	7.0	172 Sao Tome and Principe	0.3
74	Iceland	6.7	173 Marshall Islands	0.3
75	Kenya	6.6	174 Saint Vincent and the Grenadines	0.3
76	Bangladesh	6.3	175 Nauru	0.3
77	North Macedonia	6.1	176 Samoa	0.3
78	Ecuador	6.0	177 Central African Republic	0.3
79	Qatar	5.8	178 Equatorial Guinea	0.3
80	Dominican Republic	5.7	179 Saint Kitts and Nevis	0.3
81	El Salvador	5.4	180 Burundi	0.3
82	Guatemala	5.4	181 Grenada	0.3
83	Namibia	5.2	182 Vanuatu	0.3
84	Georgia	5.0	183 Chad	0.3
85	Jordan	5.0	184 Somalia	0.3
86	Uruguay	4.9	185 Comoros	0.2
87	Eswatini	4.6	186 Timor-Leste	0.2
88	Albania	4.6	187 Eritrea	0.2
89	Oman	4.6	188 Solomon Islands	0.2
90	Ghana	4.6	189 Tonga	0.2
91	Bahrain	4.5	190 Niue	0.1
92	Cambodia	4.4	191 South Sudan	0.1
93	Republic of Moldova	4.1	192 Kiribati	0.1
94	Kuwait	4.0	193 Tuvalu	0.1
95	United Republic of Tanzania	4.0	194 Guinea-Bissau	0.1
96	Botswana	3.9	195 Micronesia (Federated States of)	0.0
97	Honduras	3.8	196 Palau	0.0
98	Nepal	3.8		
99	Myanmar	3.6		

Source: UNCTAD.

Note: CDDCs are indicated in blue.

Annex B – List of countries

Commodity-dependent developing countries (CDDCs)

Afghanistan	Malawi
Algeria	Maldives
Angola	Mali
Argentina	Mauritania
Bahrain	Micronesia (Federated States of)
Belize	Mongolia
Benin	Mozambique
Bolivia	Myanmar
Botswana	Namibia
Brazil	Nauru
Brunei Darussalam	Niger
Burkina Faso	Nigeria
Burundi	Oman
Cameroon	Papua New Guinea
Central African Republic	Paraguay
Chad	Peru
Chile	Qatar
Colombia	Rwanda
Comoros	Sao Tome and Principe
Congo	Saudi Arabia
Cote d'Ivoire	Senegal
Democratic Republic of the Congo	Seychelles
Djibouti	Sierra Leone
Ecuador	Solomon Islands
Equatorial Guinea	Somalia
Eritrea	South Sudan
Ethiopia	Sudan
Fiji	Suriname
Gabon	Syrian Arab Republic
Gambia	Timor-Leste
Ghana	Togo
Guinea	Tonga
Guinea-Bissau	Trinidad and Tobago
Guyana	Uganda
Iran (Islamic Republic of)	United Arab Emirates
Iraq	United Republic of Tanzania
Jamaica	Uruguay
Kenya	Vanuatu
Kiribati	Venezuela
Kuwait	Yemen
Lao People's Democratic Republic	Zambia
Libyan Arab Jamahiriya	Zimbabwe
Madagascar	

Note: CDDC classification based on 2014–2018 export data.

Developed economies

Andorra	Germany	Norway
Australia	Greece	Poland
Austria	Hungary	Portugal
Belgium	Iceland	San Marino
Bermuda	Ireland	Slovakia
Bulgaria	Italy	Slovenia
Canada	Japan	Spain
Croatia	Latvia	Sweden
Czech Republic	Lithuania	Switzerland
Denmark	Luxembourg	United Kingdom
Estonia	Malta	United States
Finland	Netherlands	
France	New Zealand	

Transition economies

Albania	Kazakhstan	Russian Federation
Armenia	Kyrgyzstan	Serbia
Azerbaijan	Montenegro	Tajikistan
Belarus	North Macedonia	Turkmenistan
Bosnia and Herzegovina	Republic of Moldova	Ukraine
Georgia	Romania	Uzbekistan

Non-commodity dependent developing economies

Antigua and Barbuda	Liberia
Bahamas	Macao, China
Bangladesh	Malaysia
Barbados	Marshall Islands
Bhutan	Mauritius
Cabo Verde	Mexico
Cambodia	Morocco
China	Nepal
Costa Rica	Nicaragua
Cuba	Niue
Cyprus	Occupied Palestinian Territory
Democratic People's Republic of Korea	Pakistan
Dominica	Palau
Dominican Republic	Panama
Egypt	Philippines
El Salvador	Republic of Korea
Eswatini	Saint Kitts and Nevis
Grenada	Saint Lucia
Guatemala	Saint Vincent and the Grenadines
Haiti	Samoa
Honduras	Singapore
Hong Kong, China	South Africa
India	Sri Lanka
Indonesia	Thailand
Israel	Tunisia
Jordan	Turkey
Lebanon	Tuvalu
Lesotho	Viet Nam

Commodity-dependent developing countries (CDDCs) by income group

Income group

Low-income (25)	Afghanistan Burkina Faso Burundi Central African Republic Chad Democratic Republic of the Congo Eritrea Ethiopia Gambia Guinea Guinea-Bissau Madagascar Malawi	Mali Mozambique Niger Rwanda Sierra Leone Somalia South Sudan Sudan Syrian Arab Republic Togo Uganda Yemen
Lower-middle-income (27)	Algeria Angola Benin Bolivia Cameroon Comoros Congo Cote d'Ivoire Djibouti Ghana Kenya Kiribati Lao People's Democratic Republic Mauritania	Micronesia (Federated States of) Mongolia Myanmar Nigeria Papua New Guinea Sao Tome and Principe Senegal Solomon Islands Timor-Leste United Republic of Tanzania Vanuatu Zambia Zimbabwe
Upper-middle-income (21)	Argentina Belize Botswana Brazil Colombia Ecuador Equatorial Guinea Fiji Gabon Guyana Iran (Islamic Republic of)	Iraq Jamaica Libyan Arab Jamahiriya Maldives Namibia Paraguay Peru Suriname Tonga Venezuela

High-income (12)	Bahrain	Qatar
	Brunei Darussalam	Saudi Arabia
	Chile	Seychelles
	Kuwait	Trinidad and Tobago
	Nauru	United Arab Emirates
	Oman	Uruguay

Notes: CDDC classification based on 2014–2018 export data, and World Bank country classification by income for 2020.

Commodity-dependent developing countries (CDDCs) by type of main commodity export

Type of main commodity export

Agricultural products (45)	Afghanistan	Maldives
	Argentina	Mali
	Belize	Mauritania
	Benin	Micronesia (Federated States of)
	Botswana	Myanmar
	Brazil	Niger
	Burkina Faso	Paraguay
	Burundi	Rwanda
	Cameroon	Sao Tome and Principe
	Central African Republic	Senegal
	Comoros	Seychelles
	Cote d'Ivoire	Solomon Islands
	Djibouti	Somalia
	Ecuador	Sudan
	Ethiopia	Suriname
	Fiji	Syrian Arab Republic
	Gambia	Tonga
	Guinea-Bissau	Uganda
	Guyana	United Republic of Tanzania
	Kenya	Uruguay
	Kiribati	Vanuatu
Madagascar	Zimbabwe	
Malawi		
Energy products (30)	Algeria	Libya
	Angola	Mongolia
	Bahrain	Mozambique
	Bolivia	Nigeria
	Brunei Darussalam	Oman
	Chad	Papua New Guinea
	Colombia	Qatar
	Congo	Saudi Arabia
	Equatorial Guinea	South Sudan
	Gabon	Timor-Leste
	Ghana	Togo
	Iran (Islamic Republic of)	Trinidad and Tobago

	Iraq Kuwait Lao People's Democratic Republic	United Arab Emirates Venezuela Yemen
Minerals, ores and metals (10)	Chile Democratic Republic of the Congo Eritrea Guinea Jamaica	Namibia Nauru Peru Sierra Leone Zambia

Notes. CDDC classification based on 2014–2018 export data.

Annex C – Examples of potential products for diversification

Examples of potential products for diversification for CDDCs with above average complexity, 2019

Country	(SITC) description, unit value range (\$)	Top 10 growing markets									
Afghanistan	(73163) Other grinding machines, numerically controlled, in which the positioning, \$0-5360	NL	DK	FR	MY	PT	GB	CZ	PK	SE	EG
Afghanistan	(77879) Parts of the electrical machines and apparatus of subgroup 778.7, \$46-447	QA	MD	GE	SR	ST					
Afghanistan	(74131) Resistance-heated furnaces and ovens, electric, \$22616-73204	MX	FR	TR	BR	HU	GB	SG	CA	UZ	GR
Afghanistan	(51385) Cyclanic, cyclenic or cycloaterpenic polycarboxylic acids, their anhydride, \$2-7	IN	CH	NL	TR	JP	IT	TH	PL	CZ	US
Afghanistan	(43131) Fatty acids; acid oils from refining, \$2-4	JP	EG	BR	AT	FR	TR	RU	CZ	SG	MX
Afghanistan	(67551) Flat-rltd prod. of stnls steel, coldrltd,w>600mm,th>4.75mm, \$0-2	PL	IT	CZ	ES	DK	CH	TR	SI	PH	JP
Afghanistan	(43141) Vegetable waxes (other than triglycerides), whether or not refined or col, \$4-16	DE	CA	US	ES	BE	ID	IN	PL	TR	AR
Afghanistan	(71332) Spark-ignition reciprocating or rotary internal combustion piston marine, \$526-7792	CA	NL	BE	JM	BR	SE	IT	RU	NO	NA
Afghanistan	(74414) Works trucks, electrical, self-propelled, not fitted with lifting or hand, \$0-2957	CA	FR	BE	BR	ES	UZ	IE	PH	TR	GR
Afghanistan	(54143) Caffeine and its salts, \$11-28	IE	FR	IT	SG	US	CA	KR	CL	ES	TH
Algeria	(57399) Other polymers of vinyl chloride or of other halogenated olefins, \$13-31	SE	AU	CH	JP	CA	IN	HK	IE	FR	ES
Algeria	(57542) Melamine resins, \$4-7	AU	TR	SV	UZ	JP	ZA	AT	HK	CH	FR
Algeria	(73163) Other grinding machines, numerically controlled, in which the positioning, \$5360-222710	VN	IN	ID	RU	JP	CA	AT	ES	BG	TR
Algeria	(77879) Parts of the electrical machines and apparatus of subgroup 778.7, \$46-447	QA	MD	GE	SR	ST					
Algeria	(73318) Presses for working metal or metal carbides, n.e.s., \$44142-139975	SI	TR	BE	DE	BG	BR	RO	MY	CH	PT
Algeria	(51244) Halogenated, sulphonated, nitrated or nitrosated derivatives of phenols o, \$0-6	KR	IN	NL	CA	DE	HK	US	MY	BE	JP
Algeria	(73152) Other knee-type milling machines, \$1395-13740	IN	MX	CA	EG	SK	BE	NO	US	SG	FR
Algeria	(51385) Cyclanic, cyclenic or cycloaterpenic polycarboxylic acids, their anhydride, \$2-7	IN	CH	NL	TR	JP	IT	TH	PL	CZ	US
Algeria	(73113) Machine tools for working any material by removal of material, operated b, \$9591-96806	RU	VN	FR	TR	CA	MY	IN	CZ	BR	RS
Algeria	(05794) Berries, fresh, \$49-61	US	CH	IT							
Angola	(77611) Television picture tubes, cathode-ray (including video monitor cathode-ra, \$36-795	BW	EG	PH	TH	IT	IE	CA	GE	HK	DE
Angola	(59867) Prepared culture media for development of micro-organisms, \$34-140	QA	MD	GE	SR						
Angola	(73165) Sharpening (tool- or cutter-grinding) machines, numerically controlled, \$2244-106861	VN	GB	RU	ID	TR	PL	ES	SK	CZ	US
Angola	(26671) Synthetic staple fibres, processed for spinning, of nylon or other polyam, \$4-20	IN	TR	CZ	BG	VN	SN	US	SK	SV	ZA
Angola	(57542) Melamine resins, \$4-7	AU	TR	SV	UZ	JP	ZA	AT	HK	CH	FR
Angola	(74917) Moulds for mineral materials, \$47-173	DE	MY	ES	GB	CH	NO	PL	IN	ZA	BE
Angola	(72345) Tamping or compacting machinery, not self-propelled, \$3823-8730	PH	FR	US	PE	ES	CO	IT	EG	CZ	HR
Angola	(64174) Kraft paper,coated with kaolin (China clay), weight < 150 g/m2, \$0-1	NL	IN	FR	CL	AU	TN	EG	AR	LA	GR
Angola	(67542) Flat-rltd prod. of other alloy steel, hotrltd, of a width of 600 mm or more, \$4-10	KR	TR	US	GB	SG	BG	AR	BE	TH	CO
Angola	(74916) Moulds for glass, \$50-98	MX	DE	EG	FR	BE	CZ	IT	HU	TR	DK
Argentina	(52235) Oxides of boron; boric acids, \$12-18	TR	FR	NZ	BE	AU	IS	GH	MK	SI	GR
Argentina	(77611) Television picture tubes, cathode-ray (including video monitor cathode-ra, \$36-795	BW	EG	PH	TH	IT	IE	CA	GE	HK	DE
Argentina	(72472) Dry-cleaning machines, \$2114-28864	ID	EG	PH	FI	KR	CH	RU	VN	KZ	LV
Argentina	(59867) Prepared culture media for development of micro-organisms, \$34-140	QA	MD	GE	SR						
Argentina	(69999) Base metals, wrought, n.e.s., and articles of these metals, n.e.s., \$1271-2497	US	SG	GB	KR	RO	BE	DE	DK	RU	SI
Argentina	(67646) Other bars and rods of other alloy steel (except high speed or silico-man, \$11-53	US	GB	JP	RO	DK	SG	KR	DE	NO	PL
Argentina	(73165) Sharpening (tool- or cutter-grinding) machines, numerically controlled, \$2244-106861	VN	GB	RU	ID	TR	PL	ES	SK	CZ	US
Argentina	(57399) Other polymers of vinyl chloride or of other halogenated olefins, \$13-31	SE	AU	CH	JP	CA	IN	HK	IE	FR	ES
Argentina	(64162) Other kraft paper, in rolls or sheets, cr ped or crinkled, whether or not, \$15-38	FR	PL	JM	AU	PT	BG	SK	KZ	BA	GR
Argentina	(74917) Moulds for mineral materials, \$47-173	DE	MY	ES	GB	CH	NO	PL	IN	ZA	BE
Bahrain	(59867) Prepared culture media for development of micro-organisms, \$34-140	QA	MD	GE	SR						
Bahrain	(73165) Sharpening (tool- or cutter-grinding) machines, numerically controlled, \$2244-106861	VN	GB	RU	ID	TR	PL	ES	SK	CZ	US

Country	(SITC) description, unit value range (\$)	Top 10 growing markets									
Bahrain	(51484) Other nitrile-function compounds, \$26-57	BR	DE	US	FR	GB	AR	CO	JO	ZA	IE
Bahrain	(72345) Tamping or compacting machinery, not self-propelled, \$3823-8730	PH	FR	US	PE	ES	CO	IT	EG	CZ	HR
Bahrain	(67535) Flat-rlid prod. of stnls steel, hotrlid, of a width of 600 mm or more and, \$4-6	NO	IT	FR	NL	GB	UZ	AU	HK	KZ	RS
Bahrain	(88134) Parts and accessories for the equipment of headings 881.31 through 881.33, \$165-375	US	KR	ZA	NO	IT	ES	DK	CO	PT	PL
Bahrain	(64174) Kraft paper,coated with kaolin (China clay), weight < 150 g/m2, \$0-1	NL	IN	FR	CL	AU	TN	EG	AR	LA	GR
Bahrain	(57399) Other polymers of vinyl chloride or of other halogenated olefins, \$48-184	SG	GB	AT	CA	NO	RU	RS	MG	FR	ES
Bahrain	(81211) Radiators and parts thereof, \$33-42	LV	CL	PE	DE	QA	LT	MX	GB	RS	PL
Bahrain	(62112) Solutions, rubber, compounded, unvulcanized; dispersions, rubber, compoun, \$18-41	SE	JP	NO	SI	TN	DK	RU	CH	IN	GR
Belize	(74175) Machinery for liquefying air or other gases, \$0-939	PE	MM	MY	US	MG	CA	CH	YE	BN	CO
Belize	(72345) Tamping or compacting machinery, not self-propelled, \$3823-8730	PH	FR	US	PE	ES	CO	IT	EG	CZ	HR
Belize	(73163) Other grinding machines, numerically controlled, in which the positioning, \$0-5360	NL	DK	FR	MY	PT	GB	CZ	PK	SE	EG
Belize	(51471) Acyclic amides (including acyclic carbamates) and their derivatives; salt, \$43-71	FR	SG	IE	KR	BE	DK	NO	RU	GB	AU
Belize	(51385) Cyclanic, cyclenic or cycloaterpenic polycarboxylic acids, their anhydride, \$2-7	IN	CH	NL	TR	JP	IT	TH	PL	CZ	US
Belize	(43131) Fatty acids; acid oils from refining, \$2-4	JP	EG	BR	AT	FR	TR	RU	CZ	SG	MX
Belize	(51489) Compounds with other nitrogen function, \$22-224	US	IE	KR	FR	HK	SE	BW	BE	PT	NL
Belize	(67551) Flat-rlid prod. of stnls steel, coldrlid,w>600mm,th>4.75mm, \$0-2	PL	IT	CZ	ES	DK	CH	TR	SI	PH	JP
Belize	(43141) Vegetable waxes (other than triglycerides), whether or not refined or col, \$4-16	DE	CA	US	ES	BE	ID	IN	PL	TR	AR
Belize	(77882) Electrical signalling, safety or traffic control equipment for railways,, \$0-101	PK	IN	PH	HK	BR	NO	BW	CH	CO	EG
Benin	(72345) Tamping or compacting machinery, not self-propelled, \$3823-8730	PH	FR	US	PE	ES	CO	IT	EG	CZ	HR
Benin	(67532) Flat-rlid prod. of stnls steel, hotrlid, of a width of 600 mm or more and, \$0-1	FR	IN	IT	MY	TR	DE	RU	BR	JP	NL
Benin	(73163) Other grinding machines, numerically controlled, in which the positioning, \$0-5360	NL	DK	FR	MY	PT	GB	CZ	PK	SE	EG
Benin	(77879) Parts of the electrical machines and apparatus of subgroup 778.7, \$46-447	QA	MD	GE	SR	ST					
Benin	(51385) Cyclanic, cyclenic or cycloaterpenic polycarboxylic acids, their anhydride, \$2-7	IN	CH	NL	TR	JP	IT	TH	PL	CZ	US
Benin	(89437) Playing-cards, \$0-8	SG	LA	NO	AM	CO	BR	BW	IN	MG	PK
Benin	(71332) Spark-ignition reciprocating or rotary internal combustion piston marine, \$526-7792	CA	NL	BE	JM	BR	SE	IT	RU	NO	NA
Benin	(54143) Caffeine and its salts, \$11-28	IE	FR	IT	SG	US	CA	KR	CL	ES	TH
Benin	(72191) Presses, crushers and similar machinery used in the manufacture of wine,, \$288-4014	CA	US	BR	MD	PE	GE	LA	AZ	GM	SR
Benin	(77882) Electrical signalling, safety or traffic control equipment for railways,, \$0-101	PK	IN	PH	HK	BR	NO	BW	CH	CO	EG
Bolivia	(74917) Moulds for mineral materials, \$47-173	DE	MY	ES	GB	CH	NO	PL	IN	ZA	BE
Bolivia	(72345) Tamping or compacting machinery, not self-propelled, \$3823-8730	PH	FR	US	PE	ES	CO	IT	EG	CZ	HR
Bolivia	(67542) Flat-rlid prod. of other alloy steel, hotrlid, of a width of 600 mm or more, \$4-10	KR	TR	US	GB	SG	BG	AR	BE	TH	CO
Bolivia	(62112) Solutions, rubber, compounded, unvulcanized; dispersions, rubber, compoun, \$18-41	SE	JP	NO	SI	TN	DK	RU	CH	IN	GR
Bolivia	(73163) Other grinding machines, numerically controlled, in which the positioning, \$0-5360	NL	DK	FR	MY	PT	GB	CZ	PK	SE	EG
Bolivia	(77879) Parts of the electrical machines and apparatus of subgroup 778.7, \$46-447	QA	MD	GE	SR	ST					
Bolivia	(72631) Machinery, apparatus and equipment (other than the machine tools of subgr, \$38759-95043	JP	IT	US	MX	GB	BR	ID	NL	ES	DK
Bolivia	(66335) Mica, worked, and articles of mica (including agglomerated or reconstitut, \$37-78	US	BA	FR	CH	GB	CO	AT	HR	NL	ES
Bolivia	(73152) Other knee-type milling machines, \$1395-13740	IN	MX	CA	EG	SK	BE	NO	US	SG	FR
Bolivia	(51385) Cyclanic, cyclenic or cycloaterpenic polycarboxylic acids, their anhydride, \$2-7	IN	CH	NL	TR	JP	IT	TH	PL	CZ	US
Botswana	(72472) Dry-cleaning machines, \$2114-28864	ID	EG	PH	FI	KR	CH	RU	VN	KZ	LV
Botswana	(74362) Machinery and apparatus for filtering or purifying beverages other than w, \$3921-22211	CL	LA	AR	CO	MM	US	BR	PE	MN	NO
Botswana	(57399) Other polymers of vinyl chloride or of other halogenated olefins, \$13-31	SE	AU	CH	JP	CA	IN	HK	IE	FR	ES
Botswana	(74917) Moulds for mineral materials, \$47-173	DE	MY	ES	GB	CH	NO	PL	IN	ZA	BE
Botswana	(51473) Ureines and their derivatives; salts thereof, \$8-41	ID	BR	TH	MX	IT	TR	RU	CL	GR	DE
Botswana	(87143) Other microscopes for photomicrography, cinephotomicrography or microproj, \$0-247	NL	IT	CA	AU	SG	FR	PH	MY	PK	PE
Botswana	(74351) Cream separators, \$85-5164	MY	CO	AR	CA	PE	CL	MM			
Botswana	(73163) Other grinding machines, numerically controlled, in which the positioning, \$0-5360	NL	DK	FR	MY	PT	GB	CZ	PK	SE	EG
Botswana	(57391) Vinyl chloride-vinyl acetate copolymers, \$4-9	NL	IT	EG	JP	HK	SI	FR	IN	PL	NZ
Botswana	(77869) Parts of electrical capacitors, \$94-201	JP	BE	DE	FI	FR	CH	NL	GR	IT	ES

Technological transformation and innovation for economic diversification and structural transformation in CDDCs

Country	(SITC) description, unit value range (\$)	Top 10 growing markets									
Brazil	(51626) Halogenated, sulphonated, nitrated or nitrosated derivatives of the produ, \$193-320	IN	AT	ES	NL	HU	TR	DK	MA	SI	GR
Brazil	(77611) Television picture tubes, cathode-ray (including video monitor cathode-ra, \$36-795	BW	EG	PH	TH	IT	IE	CA	GE	HK	DE
Brazil	(87143) Other microscopes for photomicrography, cinephotomicrography or microproj, \$4149-10002	FR	CH	HK	DE	TH	IN	PT	IE	ES	RO
Brazil	(59867) Prepared culture media for development of micro-organisms, \$34-140	QA	MD	GE	SR						
Brazil	(74175) Machinery for liquefying air or other gases, \$0-939	PE	MM	MY	US	MG	CA	CH	YE	BN	CO
Brazil	(65735) Textile wall coverings, \$45-95	CH	CA	SG	MG	UZ	NO	AR	KG	AM	MU
Brazil	(74415) Other self-propelled works trucks, not fitted with lifting or handling eq, \$19573-48018	CA	IN	AU	HU	NO	BE	PH	US	MY	AR
Brazil	(51394) Other carboxylic acids with phenol function but without other oxygen func, \$636+	ES	BR								
Brazil	(72339) Other moving, grading, levelling, scraping, excavating, compacting or ext, \$0-5049	BW	LA	SG	EG	MM	IN	CL	CA	UZ	PE
Brazil	(51133) Tetrachloroethylene (perchloroethylene), \$0-0	TR	BR	IN	KR	EG	ZA	IT	MA	CO	GT
Brunei Darussalam	(73163) Other grinding machines, numerically controlled, in which the positioning, \$0-5360	NL	DK	FR	MY	PT	GB	CZ	PK	SE	EG
Brunei Darussalam	(77879) Parts of the electrical machines and apparatus of subgroup 778.7, \$46-447	QA	MD	GE	SR	ST					
Brunei Darussalam	(65496) Terry towelling and similar woven terry fabrics of textile materials (oth, \$17-35	GB	NO	ES	CA	FR	RO	IT	LT	IS	TH
Brunei Darussalam	(57519) Other olefins, \$9-12	CZ	SG	TR	HK	IT	RS	SE	GT	KZ	HU
Brunei Darussalam	(57312) Polyvinyl chloride, other, non-plasticized, \$2-3	MX	DK	HU	CZ	PE	LT	CA	PH	SK	RU
Brunei Darussalam	(51385) Cyclanic, cyclenic or cycloaterpenic polycarboxylic acids, their anhydride, \$2-7	IN	CH	NL	TR	JP	IT	TH	PL	CZ	US
Brunei Darussalam	(51628) Other cyclanic, cyclenic or cycloaterpenic ketones without other oxygen fu, \$31-74	DE	GB	SG	US	CH	BR	ES	FR	JP	TR
Brunei Darussalam	(43131) Fatty acids; acid oils from refining, \$2-4	JP	EG	BR	AT	FR	TR	RU	CZ	SG	MX
Brunei Darussalam	(74414) Works trucks, electrical, self-propelled, not fitted with lifting or hand, \$2957-14306	RU	DE	VN	FR	PL	MA	CZ	GB	AU	MX
Brunei Darussalam	(67551) Flat-rld prod. of stnls steel, coldrld,w>600mm,th>4.75mm, \$0-2	PL	IT	CZ	ES	DK	CH	TR	SI	PH	JP
Burkina Faso	(74362) Machinery and apparatus for filtering or purifying beverages other than w, \$3921-22211	CL	LA	AR	CO	MM	US	BR	PE	MN	NO
Burkina Faso	(73163) Other grinding machines, numerically controlled, in which the positioning, \$0-5360	NL	DK	FR	MY	PT	GB	CZ	PK	SE	EG
Burkina Faso	(51385) Cyclanic, cyclenic or cycloaterpenic polycarboxylic acids, their anhydride, \$2-7	IN	CH	NL	TR	JP	IT	TH	PL	CZ	US
Burkina Faso	(43131) Fatty acids; acid oils from refining, \$2-4	JP	EG	BR	AT	FR	TR	RU	CZ	SG	MX
Burkina Faso	(43141) Vegetable waxes (other than triglycerides), whether or not refined or col, \$4-16	DE	CA	US	ES	BE	ID	IN	PL	TR	AR
Burkina Faso	(54143) Caffeine and its salts, \$11-28	IE	FR	IT	SG	US	CA	KR	CL	ES	TH
Burkina Faso	(77882) Electrical signalling, safety or traffic control equipment for railways,, \$0-101	PK	IN	PH	HK	BR	NO	BW	CH	CO	EG
Burkina Faso	(51571) Heterocyclic compounds with nitrogen hetero-atom(s) only, containing an u, \$19-141	BR	DE	CH	ES	BE	JP	CA	IN	FR	SG
Burkina Faso	(67241) Ingots of iron (other than iron of heading 671.33) or n/a steel, \$0-6	ES	US	JP	RO	HU	GB	PH	AU	SE	AT
Burkina Faso	(89123) Airgun pellets and parts of cartridges for shotguns, \$3-21	PH	GB	FR	IT	CG	DE	ES	SK	GR	JM
Burundi	(51385) Cyclanic, cyclenic or cycloaterpenic polycarboxylic acids, their anhydride, \$2-7	IN	CH	NL	TR	JP	IT	TH	PL	CZ	US
Burundi	(43131) Fatty acids; acid oils from refining, \$2-4	JP	EG	BR	AT	FR	TR	RU	CZ	SG	MX
Burundi	(67551) Flat-rld prod. of stnls steel, coldrld,w>600mm,th>4.75mm, \$0-2	PL	IT	CZ	ES	DK	CH	TR	SI	PH	JP
Burundi	(77882) Electrical signalling, safety or traffic control equipment for railways,, \$0-101	PK	IN	PH	HK	BR	NO	BW	CH	CO	EG
Burundi	(51571) Heterocyclic compounds with nitrogen hetero-atom(s) only, containing an u, \$19-141	BR	DE	CH	ES	BE	JP	CA	IN	FR	SG
Burundi	(88113) Photographic flashlight apparatus (other than the discharge lamps of subg, \$326-704	GB	FR	SG	IT	JP	NO	RO	PL	PH	IE
Burundi	(51121) Cyclohexane, \$1-13	CL	NL	IN	FR	BE	QA	HK	ZA	CO	ZW
Burundi	(67442) Flat-rld prod. iron,n/a steel, coated with chromium oxides or with chromi, \$0-0	IN	IT	DE	PH	SG	JP	PL	BG	TN	NL
Burundi	(51481) Quaternary ammonium salts and hydroxides; lecithins and other phosphoamin, \$10-22	KR	CZ	FR	GB	GT	SG	CA	IE	AT	TR
Burundi	(57392) Other vinyl chloride copolymers, \$2-5	MX	TH	IN	US	RU	ID	VN	JP	MY	KR
Cameroon	(52321) Ammonium chloride, \$10-24	SR	AU	SG	ES	CA	SE	IT	SK	BR	BE
Cameroon	(72345) Tamping or compacting machinery, not self-propelled, \$3823-8730	PH	FR	US	PE	ES	CO	IT	EG	CZ	HR
Cameroon	(73163) Other grinding machines, numerically controlled, in which the positioning, \$0-5360	NL	DK	FR	MY	PT	GB	CZ	PK	SE	EG
Cameroon	(77869) Parts of electrical capacitors, \$94-201	JP	BE	DE	FI	FR	CH	NL	GR	IT	ES
Cameroon	(51244) Halogenated, sulphonated, nitrated or nitrosated derivatives of phenols o, \$0-6	KR	IN	NL	CA	DE	HK	US	MY	BE	JP
Cameroon	(66335) Mica, worked, and articles of mica (including agglomerated or reconstitut, \$37-78	US	BA	FR	CH	GB	CO	AT	HR	NL	ES
Cameroon	(52265) Hydroxide and peroxide of magnesium; oxides, hydroxides and peroxides, of, \$0-1	JP	GB	CA	ID	ES	KR	PT	US	AT	SG
Cameroon	(51613) Oxirane (ethylene oxide), \$0-1	BE	SK	FR	ES	SE	ID	CH	VN	PH	CZ

Country	(SITC) description, unit value range (\$)	Top 10 growing markets									
Cameroon	(51385) Cyclanic, cyclenic or cycloterpenic polycarboxylic acids, their anhydride, \$2-7	IN	CH	NL	TR	JP	IT	TH	PL	CZ	US
Cameroon	(43131) Fatty acids; acid oils from refining, \$2-4	JP	EG	BR	AT	FR	TR	RU	CZ	SG	MX
Central African Republic	(51213) Butanols, \$75-146	AT	JP	US	CL	PH	AM	MN	KR	ZM	TR
Central African Republic	(05487) Sugar beet, fresh or dried, whether or not ground, \$0-2	SI	LV	HU	NZ	EE	DE	IT	BE	SG	JO
Central African Republic	(59818) Wood tar; wood tar oils; wood creosote; wood naphtha; vegetable pitch; br, \$1-13	KZ	NL	FR	DK	NZ	HU	DE	ES	IN	KR
Central African Republic	(52595) Compounds, inorganic or organic, of rare earth metals, of yttrium or of s, \$16-119	TH	IN	JP	US	ES	IT	PH	MK	MY	EE
Central African Republic	(64193) Filter blocks, slabs and plates, of paper pulp, \$0-5	IT	CA	RU	TR	US	TH	PL	ES	IN	LT
Central African Republic	(57291) Styrene-acrylonitrile (SAN) copolymers, \$1-3	TH	CA	ID	IT	VN	BR	ES	IN	RU	IE
Central African Republic	(67538) Flat-rid prod. of stnls steel, hotrid, of a width of less than 600 mm, \$0-2	PL	FI	GB	DE	PK	FR	IN	SE	GH	BE
Central African Republic	(67555) Flat-rid prod. of stnls steel, coldrid,w>600mm,th<0.5mm, \$2-5	ID	EG	TR	VN	CA	GB	NL	CH	PT	SK
Central African Republic	(57419) Other polyethers, \$11-58	SG	KR	DE	AT	US	MY	FR	JO	GR	FI
Central African Republic	(69752) Sanitary ware and parts thereof, n.e.s., of copper, \$43-85	IN	DE	ES	GB	LT	DK	CH	SE	RU	MA
Chad	(74521) Dishwashing machines (other than household-type), \$3078-6403	GB	FR	CH	BE	PL	TR	SE	IN	DE	US
Chad	(69752) Sanitary ware and parts thereof, n.e.s., of copper, \$43-85	IN	DE	ES	GB	LT	DK	CH	SE	RU	MA
Chad	(71112) Superheated water boilers, \$6-37	ID	LV	SG	CH	US	IT	AT	NL	IE	KZ
Chad	(89935) Parts of lighters, n.e.s., other than flints and wicks, \$16-60	ID	US	MY	VN	PH	ES	TN	IN	IT	SE
Chad	(77627) Other valves and tubes, \$27-922	PH	US	GB	FR	NL	IT	CA	BE	MX	MY
Chad	(74911) Moulding boxes for metal foundry, \$9-56	IT	SG	DE	GB	ID	TH	IN	BE	AT	PK
Chad	(51455) Aromatic polyamines and their derivatives; salts thereof, \$4-19	ID	BR	DE	ES	US	KR	IT	JP	PK	FR
Chad	(59863) Prepared rubber accelerators, \$3-9	ID	VN	CA	US	HU	RO	TH	CZ	GT	KR
Chad	(67533) Flat-rid prod. of stnls steel, hotrid, of a width of 600 mm or more and, \$0-2	FR	IN	IT	JP	BE	RU	SG	IE	TN	KR
Chad	(52364) Sodium triphosphate (sodium tripolyphosphate), \$1-1	US	ID	PH	BR	VN	NL	GB	DE	IS	BE
Chile	(77611) Television picture tubes, cathode-ray (including video monitor cathode-ra, \$36-795	BW	EG	PH	TH	IT	IE	CA	GE	HK	DE
Chile	(74362) Machinery and apparatus for filtering or purifying beverages other than w, \$3921-22211	CL	LA	AR	CO	MM	US	BR	PE	MN	NO
Chile	(67646) Other bars and rods of other alloy steel (except high speed or silico-man, \$11-53	US	GB	JP	RO	DK	SG	KR	DE	NO	PL
Chile	(52432) Colloidal precious metals; compounds, inorganic or organic, of precious m, \$1572-3758	CH	GB	US	MY	AT	TR	SE	IN	BE	HK
Chile	(73165) Sharpening (tool- or cutter-grinding) machines, numerically controlled, \$2244-106861	VN	GB	RU	ID	TR	PL	ES	SK	CZ	US
Chile	(57399) Other polymers of vinyl chloride or of other halogenated olefins, \$13-31	SE	AU	CH	JP	CA	IN	HK	IE	FR	ES
Chile	(57542) Melamine resins, \$4-7	AU	TR	SV	UZ	JP	ZA	AT	HK	CH	FR
Chile	(64162) Other kraft paper, in rolls or sheets, cr ped or crinkled, whether or not, \$15-38	FR	PL	JM	AU	PT	BG	SK	KZ	BA	GR
Chile	(74917) Moulds for mineral materials, \$47-173	DE	MY	ES	GB	CH	NO	PL	IN	ZA	BE
Chile	(72345) Tamping or compacting machinery, not self-propelled, \$3823-8730	PH	FR	US	PE	ES	CO	IT	EG	CZ	HR
Colombia	(74175) Machinery for liquefying air or other gases, \$0-939	PE	MM	MY	US	MG	CA	CH	YE	BN	CO
Colombia	(51133) Tetrachloroethylene (perchloroethylene), \$0-0	TR	BR	IN	KR	EG	ZA	IT	MA	CO	GT
Colombia	(57399) Other polymers of vinyl chloride or of other halogenated olefins, \$13-31	SE	AU	CH	JP	CA	IN	HK	IE	FR	ES
Colombia	(74917) Moulds for mineral materials, \$47-173	DE	MY	ES	GB	CH	NO	PL	IN	ZA	BE
Colombia	(51214) Octanol (octyl alcohol) and isomers thereof, \$0-1	IN	TR	PK	BE	CA	AR	ES	CL	RU	CO
Colombia	(72345) Tamping or compacting machinery, not self-propelled, \$3823-8730	PH	FR	US	PE	ES	CO	IT	EG	CZ	HR
Colombia	(67561) Flat-rid prod. of other alloy steel, coldrid,w>600mm, \$2-4	US	SE	RU	PL	KR	IN	GB	DE	FR	TH
Colombia	(67535) Flat-rid prod. of stnls steel, hotrid, of a width of 600 mm or more and, \$4-6	NO	IT	FR	NL	GB	UZ	AU	HK	KZ	RS
Colombia	(88134) Parts and accessories for the equipment of headings 881.31 through 881.33, \$165-375	US	KR	ZA	NO	IT	ES	DK	CO	PT	PL
Colombia	(67551) Flat-rid prod. of stnls steel, coldrid,w>600mm,th>4.75mm, \$6-15	KR	FI	CL	FR	MG	CO	SE	IT	RU	HK
Comoros	(74185) Driers for wood, paper pulp, paper or paperboard, \$11377-72345	DE	US	RU	VN	FR	TR	HR	ID	MY	IT

Country	(SITC) description, unit value range (\$)	Top 10 growing markets											
Comoros	(69752) Sanitary ware and parts thereof, n.e.s., of copper, \$43-85	IN	DE	ES	GB	LT	DK	CH	SE	RU	MA		
Comoros	(89935) Parts of lighters, n.e.s., other than flints and wicks, \$16-60	ID	US	MY	VN	PH	ES	TN	IN	IT	SE		
Comoros	(51455) Aromatic polyamines and their derivatives; salts thereof, \$4-19	ID	BR	DE	ES	US	KR	IT	JP	PK	FR		
Comoros	(59863) Prepared rubber accelerators, \$3-9	ID	VN	CA	US	HU	RO	TH	CZ	GT	KR		
Comoros	(74125) Mechanical stokers, including their mechanical grates, mechanical ash dis, \$6-21	ID	PH	RU	FR	IT	TH	JP	ES	US	VN		
Comoros	(74473) Other continuous-action elevators and conveyors, bucket-type, \$6323-24852	ID	RU	FR	JO	VN	US	MA	PH	LV	IT		
Comoros	(72681) Bookbinding machinery (including book-sewing machines), \$303-10551	US	PH	HK	EG	CH	PE	BW	CL	MD	MN		
Comoros	(87141) Stereoscopic microscopes, \$0-325	US	MX	CA	FR	BE	PH	GB	MY	CZ	DK		
Comoros	(52253) Manganese oxides, \$0-2	SG	DK	DE	ID	IN	NL	CA	PL	NA	MY		
Congo	(73163) Other grinding machines, numerically controlled, in which the positioning, \$0-5360	NL	DK	FR	MY	PT	GB	CZ	PK	SE	EG		
Congo	(74441) Built-in jacking systems of a type used in garages, \$3029-6315	CH	GB	CA	BE	ES	SE	DE	PL	RO	NL		
Congo	(77879) Parts of the electrical machines and apparatus of subgroup 778.7, \$46-447	QA	MD	GE	SR	ST							
Congo	(52265) Hydroxide and peroxide of magnesium; oxides, hydroxides and peroxides, of, \$0-1	JP	GB	CA	ID	ES	KR	PT	US	AT	SG		
Congo	(51385) Cyclanic, cyclenic or cycloterpenic polycarboxylic acids, their anhydride, \$2-7	IN	CH	NL	TR	JP	IT	TH	PL	CZ	US		
Congo	(74414) Works trucks, electrical, self-propelled, not fitted with lifting or hand, \$2957-14306	RU	DE	VN	FR	PL	MA	CZ	GB	AU	MX		
Congo	(51612) Acetals and hemiacetals, whether or not with other oxygen function, and t, \$6-39	MY	BR	DE	GB	IE	JP	IL	CH	ID	PH		
Congo	(77882) Electrical signalling, safety or traffic control equipment for railways,, \$0-101	PK	IN	PH	HK	BR	NO	BW	CH	CO	EG		
Congo	(88113) Photographic flashlight apparatus (other than the discharge lamps of subg, \$326-704	GB	FR	SG	IT	JP	NO	RO	PL	PH	IE		
Congo	(58228) Other plates, sheets, film, strip, of cellulose or its chemical derivativ, \$27-63	KR	NL	BE	DK	AU	SE	MX	CH	SV	RS		
Cote d'Ivoire	(72345) Tamping or compacting machinery, not self-propelled, \$3823-8730	PH	FR	US	PE	ES	CO	IT	EG	CZ	HR		
Cote d'Ivoire	(73163) Other grinding machines, numerically controlled, in which the positioning, \$5360-222710	VN	IN	ID	RU	JP	CA	AT	ES	BG	TR		
Cote d'Ivoire	(73163) Other grinding machines, numerically controlled, in which the positioning, \$0-5360	NL	DK	FR	MY	PT	GB	CZ	PK	SE	EG		
Cote d'Ivoire	(77879) Parts of the electrical machines and apparatus of subgroup 778.7, \$46-447	QA	MD	GE	SR	ST							
Cote d'Ivoire	(51244) Halogenated, sulphonated, nitrated or nitrosated derivatives of phenols o, \$0-6	KR	IN	NL	CA	DE	HK	US	MY	BE	JP		
Cote d'Ivoire	(66335) Mica, worked, and articles of mica (including agglomerated or reconstitut, \$37-78	US	BA	FR	CH	GB	CO	AT	HR	NL	ES		
Cote d'Ivoire	(67353) Flat-rlid prod. iron,n/a steel, not coated, n.e.s., of a width of less tha, \$6-14	US	BR	GB	CA	FR	IN	TR	PL	JP	ZA		
Cote d'Ivoire	(88575) Other alarm clocks, \$30-69	GB	SK	DE	CH	PT	DK	GR	CA	NO	LV		
Cote d'Ivoire	(52372) Neutral sodium carbonate (disodium carbonate), \$6-21	IE	DK	ES	BE	JO	DE	GB	FR	KR	CZ		
Cote d'Ivoire	(65772) Textile wicks, woven, plaited or knitted, for lamps, stoves, lighters, ca, \$37-79	US	IE	BE	DK	HK	FR	JP	ES	PH	NL		
Democratic Republic of the Congo	(67542) Flat-rlid prod. of other alloy steel, hotrlid, of a width of 600 mm or more, \$4-10	KR	TR	US	GB	SG	BG	AR	BE	TH	CO		
Democratic Republic of the Congo	(74185) Driers for wood, paper pulp, paper or paperboard, \$11377-72345	DE	US	RU	VN	FR	TR	HR	ID	MY	IT		
Democratic Republic of the Congo	(63319) Articles of natural cork, other than corks or stoppers, \$21-44	FR	PT	US	CZ	GR	KR	SG	DE	RO	AR		
Democratic Republic of the Congo	(43131) Fatty acids; acid oils from refining, \$2-4	JP	EG	BR	AT	FR	TR	RU	CZ	SG	MX		
Democratic Republic of the Congo	(43141) Vegetable waxes (other than triglycerides), whether or not refined or col, \$4-16	DE	CA	US	ES	BE	ID	IN	PL	TR	AR		
Democratic Republic of the Congo	(74414) Works trucks, electrical, self-propelled, not fitted with lifting or hand, \$0-2957	CA	FR	BE	BR	ES	UZ	IE	PH	TR	GR		
Democratic Republic of the Congo	(77882) Electrical signalling, safety or traffic control equipment for railways,, \$0-101	PK	IN	PH	HK	BR	NO	BW	CH	CO	EG		
Democratic Republic of the Congo	(73315) Shearing machines (including presses), other than combined punching and s, \$18300-44071	AU	IT	SE	GB	BR	AR	JP	IN	US	DE		
Democratic Republic of the Congo	(51571) Heterocyclic compounds with nitrogen hetero-atom(s) only, containing an u, \$19-141	BR	DE	CH	ES	BE	JP	CA	IN	FR	SG		
Democratic Republic of the Congo	(88113) Photographic flashlight apparatus (other than the discharge lamps of subg, \$326-704	GB	FR	SG	IT	JP	NO	RO	PL	PH	IE		
Djibouti	(51626) Halogenated, sulphonated, nitrated or nitrosated derivatives of the produ, \$193-320	IN	AT	ES	NL	HU	TR	DK	MA	SI	GR		
Djibouti	(67532) Flat-rlid prod. of stnls steel, hotrlid, of a width of 600 mm or more and, \$0-1	FR	IN	IT	MY	TR	DE	RU	BR	JP	NL		
Djibouti	(74916) Moulds for glass, \$50-98	MX	DE	EG	FR	BE	CZ	IT	HU	TR	DK		
Djibouti	(73163) Other grinding machines, numerically controlled, in which the positioning, \$0-5360	NL	DK	FR	MY	PT	GB	CZ	PK	SE	EG		
Djibouti	(77879) Parts of the electrical machines and apparatus of subgroup 778.7, \$46-447	QA	MD	GE	SR	ST							

Country	(SITC) description, unit value range (\$)	Top 10 growing markets									
Djibouti	(52252) Chromium oxides and hydroxides, \$8-16	NL	CO	BE	SV	CZ	IT	GB	MY	SG	US
Djibouti	(65711) Needleloom felt and stitch-bonded fibre fabrics, \$36-94	HK	BG	US	DK	FR	KR	IT	ZA	SK	ES
Djibouti	(51613) Oxirane (ethylene oxide), \$0-1	BE	SK	FR	ES	SE	ID	CH	VN	PH	CZ
Djibouti	(72847) Machinery and apparatus for isotopic separation, and parts thereof, n.e.s., \$11-92	DE	ES	ZM	CI	BE	LV	IS	PL	GT	GB
Djibouti	(26512) Flax, broken, scutched, hackled or otherwise processed, but not spun, \$3-14	IN	LT	BE	TN	IT	TR	PL	PT	DK	RU
Ecuador	(57399) Other polymers of vinyl chloride or of other halogenated olefins, \$13-31	SE	AU	CH	JP	CA	IN	HK	IE	FR	ES
Ecuador	(57542) Melamine resins, \$4-7	AU	TR	SV	UZ	JP	ZA	AT	HK	CH	FR
Ecuador	(72345) Tamping or compacting machinery, not self-propelled, \$3823-8730	PH	FR	US	PE	ES	CO	IT	EG	CZ	HR
Ecuador	(51473) Ureines and their derivatives; salts thereof, \$8-41	ID	BR	TH	MX	IT	TR	RU	CL	GR	DE
Ecuador	(73163) Other grinding machines, numerically controlled, in which the positioning, \$0-5360	NL	DK	FR	MY	PT	GB	CZ	PK	SE	EG
Ecuador	(77869) Parts of electrical capacitors, \$94-201	JP	BE	DE	FI	FR	CH	NL	GR	IT	ES
Ecuador	(77879) Parts of the electrical machines and apparatus of subgroup 778.7, \$46-447	QA	MD	GE	SR	ST					
Ecuador	(73167) Honing or lapping machines, \$0-210	CA	NL	PL	BE	GB	EG	ES	YE	BW	PE
Ecuador	(51396) Carboxylic acids with additional oxygen functions, n.e.s., their anhydrid, \$159-1037	IE	KR	US	MA	BR	HK	PE	IN	IT	PT
Ecuador	(65496) Terry towelling and similar woven terry fabrics of textile materials (oth, \$17-35	GB	NO	ES	CA	FR	RO	IT	LT	IS	TH
Equatorial Guinea	(51385) Cyclanic, cyclenic or cycloaterpenic polycarboxylic acids, their anhydride, \$2-7	IN	CH	NL	TR	JP	IT	TH	PL	CZ	US
Equatorial Guinea	(24402) Cork, natural, debacked or roughly squared, or in rectangular blocks, pla, \$3-23	PT	NL	ZA	US	CH	FR	AU	SK	HR	AM
Equatorial Guinea	(67531) Flat-rld prod. of stnls steel, hotrld, of a width of 600 mm or more and, \$2-4	KR	VN	PL	TH	IT	BE	ID	NL	TR	IN
Equatorial Guinea	(71122) Condensers for steam or other vapour power units, \$10-47	BR	ID	MY	US	PH	VN	TN	PL	IL	PK
Equatorial Guinea	(51214) Octanol (octyl alcohol) and isomers thereof, \$1-9	ID	VN	FR	US	IT	MY	NL	CH	EG	DK
Equatorial Guinea	(67533) Flat-rld prod. of stnls steel, hotrld, of a width of 600 mm or more and, \$2-5	RO	ID	IN	VN	KR	TR	CZ	TH	PL	GE
Equatorial Guinea	(52265) Hydroxide and peroxide of magnesium; oxides, hydroxides and peroxides, of, \$1-7	FR	US	IT	DE	KR	DK	AT	TH	CH	VN
Equatorial Guinea	(52343) Dithionites and sulphoxylates, \$1-5	BR	TR	ID	VN	FR	PK	GB	US	ZM	KR
Equatorial Guinea	(73121) Machining centres, \$41400-142672	RU	CA	FR	IN	MY	TH	IT	CH	AT	JP
Equatorial Guinea	(51453) Cyclanic, cyclenic or cycloaterpenic mono- or polyamines, and their deriva, \$4-17	ID	US	DE	TH	IN	NL	TR	CA	EG	IT
Eritrea	(51485) Diazo-, azo-, and azoxy-compounds, \$4-27	NL	IT	BR	TH	US	HK	DE	TR	RO	BE
Eritrea	(59818) Wood tar; wood tar oils; wood creosote; wood naphtha; vegetable pitch; br, \$1-13	KZ	NL	FR	DK	NZ	HU	DE	ES	IN	KR
Eritrea	(64193) Filter blocks, slabs and plates, of paper pulp, \$0-5	IT	CA	RU	TR	US	TH	PL	ES	IN	LT
Eritrea	(51214) Octanol (octyl alcohol) and isomers thereof, \$1-9	ID	VN	FR	US	IT	MY	NL	CH	EG	DK
Eritrea	(67538) Flat-rld prod. of stnls steel, hotrld, of a width of less than 600 mm, \$0-2	PL	FI	GB	DE	PK	FR	IN	SE	GH	BE
Eritrea	(73154) Milling machines, n.e.s., \$0-790	US	CA	IN	PL	BE	UZ	SG	AR	BR	FI
Eritrea	(67686) Sheet piling of iron or steel, whether or not drilled, punched or made fr, \$9-21	US	CH	SE	BE	IE	NL	FI	AT	FR	PL
Eritrea	(57594) Alginic acid, its salts and esters, \$0-8	DE	FR	PH	GB	TR	AU	MY	AT	NL	BR
Eritrea	(89935) Parts of lighters, n.e.s., other than flints and wicks, \$16-60	ID	US	MY	VN	PH	ES	TN	IN	IT	SE
Eritrea	(67537) Flat-rld prod. of stnls steel, hotrld, of a width of less than 600 mm, \$0-3	DK	TH	PL	IT	DE	FR	BE	AT	HR	HU
Ethiopia	(73165) Sharpening (tool- or cutter-grinding) machines, numerically controlled, \$2244-106861	VN	GB	RU	ID	TR	PL	ES	SK	CZ	US
Ethiopia	(57542) Melamine resins, \$4-7	AU	TR	SV	UZ	JP	ZA	AT	HK	CH	FR
Ethiopia	(73163) Other grinding machines, numerically controlled, in which the positioning, \$0-5360	NL	DK	FR	MY	PT	GB	CZ	PK	SE	EG
Ethiopia	(72719) Parts for the machines of headings 721.27 and 727.11, \$90-138	IN	KR	RW	JP	FR	RU	EG	QA	AT	SN
Ethiopia	(77879) Parts of the electrical machines and apparatus of subgroup 778.7, \$46-447	QA	MD	GE	SR	ST					
Ethiopia	(51396) Carboxylic acids with additional oxygen functions, n.e.s., their anhydrid, \$159-1037	IE	KR	US	MA	BR	HK	PE	IN	IT	PT
Ethiopia	(51385) Cyclanic, cyclenic or cycloaterpenic polycarboxylic acids, their anhydride, \$2-7	IN	CH	NL	TR	JP	IT	TH	PL	CZ	US
Ethiopia	(43131) Fatty acids; acid oils from refining, \$2-4	JP	EG	BR	AT	FR	TR	RU	CZ	SG	MX
Ethiopia	(51243) Other phenols and phenol-alcohols, \$66-324	AT	SI	DK	GB	US	DE	MA	TR	IT	GR
Ethiopia	(67551) Flat-rld prod. of stnls steel, coldrld,w>600mm,th>4.75mm, \$0-2	PL	IT	CZ	ES	DK	CH	TR	SI	PH	JP
Fiji	(74916) Moulds for glass, \$50-98	MX	DE	EG	FR	BE	CZ	IT	HU	TR	DK
Fiji	(62112) Solutions, rubber, compounded, unvulcanized; dispersions, rubber, compoun, \$18-41	SE	JP	NO	SI	TN	DK	RU	CH	IN	GR
Fiji	(73163) Other grinding machines, numerically controlled, in which the positioning, \$0-5360	NL	DK	FR	MY	PT	GB	CZ	PK	SE	EG
Fiji	(77879) Parts of the electrical machines and apparatus of subgroup 778.7, \$46-447	QA	MD	GE	SR	ST					
Fiji	(51385) Cyclanic, cyclenic or cycloaterpenic polycarboxylic acids, their anhydride, \$2-7	IN	CH	NL	TR	JP	IT	TH	PL	CZ	US
Fiji	(43131) Fatty acids; acid oils from refining, \$2-4	JP	EG	BR	AT	FR	TR	RU	CZ	SG	MX

Technological transformation and innovation for economic diversification and structural transformation in CDDCs

Country	(SITC) description, unit value range (\$)	Top 10 growing markets																				
Fiji	(72847) Machinery and apparatus for isotopic separation, and parts thereof, n.e.s, \$11-92	DE	ES	ZM	CI	BE	LV	IS	PL	GT	GB											
Fiji	(54143) Caffeine and its salts, \$11-28	IE	FR	IT	SG	US	CA	KR	CL	ES	TH											
Fiji	(77882) Electrical signalling, safety or traffic control equipment for railways,, \$0-101	PK	IN	PH	HK	BR	NO	BW	CH	CO	EG											
Fiji	(51571) Heterocyclic compounds with nitrogen hetero-atom(s) only, containing an u, \$19-141	BR	DE	CH	ES	BE	JP	CA	IN	FR	SG											
Gabon	(52432) Colloidal precious metals; compounds, inorganic or organic, of precious m, \$1572-3758	CH	GB	US	MY	AT	TR	SE	IN	BE	HK											
Gabon	(73165) Sharpening (tool- or cutter-grinding) machines, numerically controlled, \$2244-106861	VN	GB	RU	ID	TR	PL	ES	SK	CZ	US											
Gabon	(57542) Melamine resins, \$4-7	AU	TR	SV	UZ	JP	ZA	AT	HK	CH	FR											
Gabon	(73163) Other grinding machines, numerically controlled, in which the positioning, \$0-5360	NL	DK	FR	MY	PT	GB	CZ	PK	SE	EG											
Gabon	(77879) Parts of the electrical machines and apparatus of subgroup 778.7, \$46-447	QA	MD	GE	SR	ST																
Gabon	(51396) Carboxylic acids with additional oxygen functions, n.e.s., their anhydrid, \$159-1037	IE	KR	US	MA	BR	HK	PE	IN	IT	PT											
Gabon	(51385) Cyclanic, cyclenic or cycloterpenic polycarboxylic acids, their anhydride, \$2-7	IN	CH	NL	TR	JP	IT	TH	PL	CZ	US											
Gabon	(51243) Other phenols and phenol-alcohols, \$66-324	AT	SI	DK	GB	US	DE	MA	TR	IT	GR											
Gabon	(51692) Sugars, pure (other than sucrose, lactose, maltose, glucose and fructose), \$167-757	FR	US	AT	SI	DE	IT	EG	HR	RU	ES											
Gabon	(77882) Electrical signalling, safety or traffic control equipment for railways,, \$0-101	PK	IN	PH	HK	BR	NO	BW	CH	CO	EG											
Gambia	(51385) Cyclanic, cyclenic or cycloterpenic polycarboxylic acids, their anhydride, \$2-7	IN	CH	NL	TR	JP	IT	TH	PL	CZ	US											
Gambia	(43131) Fatty acids; acid oils from refining, \$2-4	JP	EG	BR	AT	FR	TR	RU	CZ	SG	MX											
Gambia	(77882) Electrical signalling, safety or traffic control equipment for railways,, \$0-101	PK	IN	PH	HK	BR	NO	BW	CH	CO	EG											
Gambia	(67442) Flat-rlid prod. iron,n/a steel, coated with chromium oxides or with chromi, \$0-0	IN	IT	DE	PH	SG	JP	PL	BG	TN	NL											
Gambia	(67531) Flat-rlid prod. of stnls steel, hotrlid, of a width of 600 mm or more and, \$2-4	KR	VN	PL	TH	IT	BE	ID	NL	TR	IN											
Gambia	(51485) Diazo-, azo-, and azoxy-compounds, \$4-27	NL	IT	BR	TH	US	HK	DE	TR	RO	BE											
Gambia	(59818) Wood tar; wood tar oils; wood creosote; wood naphtha; vegetable pitch; br, \$1-13	KZ	NL	FR	DK	NZ	HU	DE	ES	IN	KR											
Gambia	(23213) Isobutene-isoprene (butyl) rubber (IIR); halo-isobutene-isoprene rubber (, \$2-5	US	TH	KR	BE	ID	BR	MX	HU	TR	PL											
Gambia	(52595) Compounds, inorganic or organic, of rare earth metals, of yttrium or of s, \$16-119	TH	IN	JP	US	ES	IT	PH	MK	MY	EE											
Gambia	(57291) Styrene-acrylonitrile (SAN) copolymers, \$1-3	TH	CA	ID	IT	VN	BR	ES	IN	RU	IE											
Ghana	(57399) Other polymers of vinyl chloride or of other halogenated olefins, \$13-31	SE	AU	CH	JP	CA	IN	HK	IE	FR	ES											
Ghana	(74351) Cream separators, \$85-5164	MY	CO	AR	CA	PE	CL	MM														
Ghana	(73163) Other grinding machines, numerically controlled, in which the positioning, \$0-5360	NL	DK	FR	MY	PT	GB	CZ	PK	SE	EG											
Ghana	(77879) Parts of the electrical machines and apparatus of subgroup 778.7, \$46-447	QA	MD	GE	SR	ST																
Ghana	(66335) Mica, worked, and articles of mica (including agglomerated or reconstitut, \$37-78	US	BA	FR	CH	GB	CO	AT	HR	NL	ES											
Ghana	(51241) Phenol (hydroxybenzene), pure, and its salts, \$0-1	IN	JP	KR	ID	TH	AU	TR	LV	CO	SE											
Ghana	(51385) Cyclanic, cyclenic or cycloterpenic polycarboxylic acids, their anhydride, \$2-7	IN	CH	NL	TR	JP	IT	TH	PL	CZ	US											
Ghana	(43131) Fatty acids; acid oils from refining, \$2-4	JP	EG	BR	AT	FR	TR	RU	CZ	SG	MX											
Ghana	(53221) Tanning extracts of vegetable origin; tannins and their salts, ethers, es, \$17-41	JP	AT	US	GE	MX	FR	IN	CA	CZ	SG											
Ghana	(73165) Sharpening (tool- or cutter-grinding) machines, numerically controlled, \$0-2244	PH	MY	BE	BG	FR	PL	GB	CL	EG	FI											
Guinea	(73163) Other grinding machines, numerically controlled, in which the positioning, \$0-5360	NL	DK	FR	MY	PT	GB	CZ	PK	SE	EG											
Guinea	(77879) Parts of the electrical machines and apparatus of subgroup 778.7, \$46-447	QA	MD	GE	SR	ST																
Guinea	(51244) Halogenated, sulphonated, nitrated or nitrosated derivatives of phenols o, \$0-6	KR	IN	NL	CA	DE	HK	US	MY	BE	JP											
Guinea	(66335) Mica, worked, and articles of mica (including agglomerated or reconstitut, \$37-78	US	BA	FR	CH	GB	CO	AT	HR	NL	ES											
Guinea	(52265) Hydroxide and peroxide of magnesium; oxides, hydroxides and peroxides, of, \$0-1	JP	GB	CA	ID	ES	KR	PT	US	AT	SG											
Guinea	(51613) Oxirane (ethylene oxide), \$0-1	BE	SK	FR	ES	SE	ID	CH	VN	PH	CZ											
Guinea	(51385) Cyclanic, cyclenic or cycloterpenic polycarboxylic acids, their anhydride, \$2-7	IN	CH	NL	TR	JP	IT	TH	PL	CZ	US											
Guinea	(43131) Fatty acids; acid oils from refining, \$2-4	JP	EG	BR	AT	FR	TR	RU	CZ	SG	MX											
Guinea	(51489) Compounds with other nitrogen function, \$22-224	US	IE	KR	FR	HK	SE	BW	BE	PT	NL											
Guinea	(72847) Machinery and apparatus for isotopic separation, and parts thereof, n.e.s, \$11-92	DE	ES	ZM	CI	BE	LV	IS	PL	GT	GB											
Guinea-Bissau	(77882) Electrical signalling, safety or traffic control equipment for railways,, \$101-1766	CH	NO	EG	IN	CL	BW	PH	MY	AM	LA											
Guinea-Bissau	(53353) Prepared driers, \$4-11	ID	GB	MX	CA	US	VN	IT	ES	NO	TH											
Guinea-Bissau	(69431) Nails, tacks, drawing-pins, staples and similar articles, of copper or of, \$5-36	CZ	ID	PL	GB	NL	VN	PT	HU	AT	BE											
Guinea-Bissau	(74913) Moulding patterns, \$9-38	ID	PH	TH	TR	SK	BG	VN	MA	BR	EG											
Guinea-Bissau	(73154) Milling machines, n.e.s., \$790-8537	FR	DE	PT	SG	AU	NL	RS	PH	ES	BE											
Guinea-Bissau	(65793) Tyre cord fabric of high tenacity yarn of nylon or other polyamides, poly, \$3-18	DE	VN	CA	TH	RO	NL	ID	PT	US	RS											

Country	(SITC) description, unit value range (\$)	Top 10 growing markets											
Guinea-Bissau	(88576) Wall clocks, battery, accumulator or mains powered, \$0-5	FR	US	DE	NL	KR	MX	IT	RU	ID	BR		
Guinea-Bissau	(51482) Carboxyimide-function compounds (including saccharin and its salts) and i, \$6-27	US	CH	BR	NL	TH	ID	GB	ZA	RU	CA		
Guinea-Bissau	(67352) Flat-rlid prod. iron,n/a steel, not coated, n.e.s., of a width of 600 mm o, \$1-7	IL	PK	EG	TH	BA	RO	GH	NL	CA	SC		
Guinea-Bissau	(87463) Pressure regulators and controllers (manostats), \$0-20	DE	MX	FR	ES	IN	TR	IT	BR	DK	RS		
Guyana	(51626) Halogenated, sulphonated, nitrated or nitrosated derivatives of the produ, \$193-320	IN	AT	ES	NL	HU	TR	DK	MA	SI	GR		
Guyana	(73163) Other grinding machines, numerically controlled, in which the positioning, \$0-5360	NL	DK	FR	MY	PT	GB	CZ	PK	SE	EG		
Guyana	(51385) Cyclanic, cyclenic or cyclosterpenic polycarboxylic acids, their anhydride, \$2-7	IN	CH	NL	TR	JP	IT	TH	PL	CZ	US		
Guyana	(43131) Fatty acids; acid oils from refining, \$2-4	JP	EG	BR	AT	FR	TR	RU	CZ	SG	MX		
Guyana	(74414) Works trucks, electrical, self-propelled, not fitted with lifting or hand, \$2957-14306	RU	DE	VN	FR	PL	MA	CZ	GB	AU	MX		
Guyana	(43141) Vegetable waxes (other than triglycerides), whether or not refined or col, \$4-16	DE	CA	US	ES	BE	ID	IN	PL	TR	AR		
Guyana	(71332) Spark-ignition reciprocating or rotary internal combustion piston marine, \$526-7792	CA	NL	BE	JM	BR	SE	IT	RU	NO	NA		
Guyana	(51571) Heterocyclic compounds with nitrogen hetero-atom(s) only, containing an u, \$19-141	BR	DE	CH	ES	BE	JP	CA	IN	FR	SG		
Guyana	(51631) Phosphoric esters and their salts (including lactophosphates); their halo, \$0-2	DE	TH	KR	NL	BE	RU	PL	TR	ID	GB		
Guyana	(89123) Airgun pellets and parts of cartridges for shotguns, \$3-21	PH	GB	FR	IT	CG	DE	ES	SK	GR	JM		
Iran (Islamic Republic of)	(51612) Acetals and hemiacetals, whether or not with other oxygen function, and t, \$0-6	FR	CH	IT	CA	US	IN	NL	TR	KR	GR		
Iran (Islamic Republic of)	(67646) Other bars and rods of other alloy steel (except high speed or silico-man, \$11-53	US	GB	JP	RO	DK	SG	KR	DE	NO	PL		
Iran (Islamic Republic of)	(73165) Sharpening (tool- or cutter-grinding) machines, numerically controlled, \$2244-106861	VN	GB	RU	ID	TR	PL	ES	SK	CZ	US		
Iran (Islamic Republic of)	(51133) Tetrachloroethylene (perchloroethylene), \$0-0	TR	BR	IN	KR	EG	ZA	IT	MA	CO	GT		
Iran (Islamic Republic of)	(57399) Other polymers of vinyl chloride or of other halogenated olefins, \$13-31	SE	AU	CH	JP	CA	IN	HK	IE	FR	ES		
Iran (Islamic Republic of)	(74917) Moulds for mineral materials, \$47-173	DE	MY	ES	GB	CH	NO	PL	IN	ZA	BE		
Iran (Islamic Republic of)	(72345) Tamping or compacting machinery, not self-propelled, \$3823-8730	PH	FR	US	PE	ES	CO	IT	EG	CZ	HR		
Iran (Islamic Republic of)	(65183) Yarn containing < 85% synthetic fibres, for retail sale, \$24-46	FR	CH	VN	GR	DE	JP	AU	AT	US	HU		
Iran (Islamic Republic of)	(67532) Flat-rlid prod. of stnls steel, hotrlid, of a width of 600 mm or more and, \$0-1	FR	IN	IT	MY	TR	DE	RU	BR	JP	NL		
Iran (Islamic Republic of)	(69991) Tungsten,wrght.artcl.nes, \$260-561	NO	CH	FR	RU	CO	BG	IT	DE	PL	BE		
Iraq	(74916) Moulds for glass, \$50-98	MX	DE	EG	FR	BE	CZ	IT	HU	TR	DK		
Iraq	(72525) Machines for making cartons, boxes, cases, tubes, drums or similar contai, \$79950-136837	US	CH	CL	HR	AR	TH	SE	AT	RS	IT		
Iraq	(67353) Flat-rlid prod. iron,n/a steel, not coated, n.e.s., of a width of less tha, \$6-14	US	BR	GB	CA	FR	IN	TR	PL	JP	ZA		
Iraq	(89437) Playing-cards, \$0-8	SG	LA	NO	AM	CO	BR	BW	IN	MG	PK		
Iraq	(74414) Works trucks, electrical, self-propelled, not fitted with lifting or hand, \$0-2957	CA	FR	BE	BR	ES	UZ	IE	PH	TR	GR		
Iraq	(24402) Cork, natural, debacked or roughly squared, or in rectangular blocks, pla, \$3-23	PT	NL	ZA	US	CH	FR	AU	SK	HR	AM		
Iraq	(77882) Electrical signalling, safety or traffic control equipment for railways,, \$0-101	PK	IN	PH	HK	BR	NO	BW	CH	CO	EG		
Iraq	(67442) Flat-rlid prod. iron,n/a steel, coated with chromium oxides or with chromi, \$0-0	IN	IT	DE	PH	SG	JP	PL	BG	TN	NL		
Iraq	(51481) Quaternary ammonium salts and hydroxides; lecithins and other phosphoamin, \$10-22	KR	CZ	FR	GB	GT	SG	CA	IE	AT	TR		
Iraq	(67531) Flat-rlid prod. of stnls steel, hotrlid, of a width of 600 mm or more and, \$2-4	KR	VN	PL	TH	IT	BE	ID	NL	TR	IN		
Jamaica	(73165) Sharpening (tool- or cutter-grinding) machines, numerically controlled, \$2244-106861	VN	GB	RU	ID	TR	PL	ES	SK	CZ	US		
Jamaica	(51378) Oleic, linoleic or linolenic acids, their salts and esters, \$0-1	FR	NL	ID	ES	IT	IE	ZA	IL	DK	VN		
Jamaica	(73163) Other grinding machines, numerically controlled, in which the positioning, \$5360-222710	VN	IN	ID	RU	JP	CA	AT	ES	BG	TR		
Jamaica	(74351) Cream separators, \$85-5164	MY	CO	AR	CA	PE	CL	MM					
Jamaica	(73163) Other grinding machines, numerically controlled, in which the positioning, \$0-5360	NL	DK	FR	MY	PT	GB	CZ	PK	SE	EG		
Jamaica	(73167) Honing or lapping machines, \$0-210	CA	NL	PL	BE	GB	EG	ES	YE	BW	PE		

Technological transformation and innovation for economic diversification and structural transformation in CDDCs

Country	(SITC) description, unit value range (\$)	Top 10 growing markets									
Jamaica	(51396) Carboxylic acids with additional oxygen functions, n.e.s., their anhydrid, \$159-1037	IE	KR	US	MA	BR	HK	PE	IN	IT	PT
Jamaica	(66335) Mica, worked, and articles of mica (including agglomerated or reconstitut, \$37-78	US	BA	FR	CH	GB	CO	AT	HR	NL	ES
Jamaica	(74473) Other continuous-action elevators and conveyors, bucket-type, \$24852-52644	JP	UZ	MX	PH	CH	CA	SV	DE	NO	CO
Jamaica	(51385) Cyclanic, cyclenic or cycloterpenic polycarboxylic acids, their anhydride, \$2-7	IN	CH	NL	TR	JP	IT	TH	PL	CZ	US
Kenya	(51394) Other carboxylic acids with phenol function but without other oxygen func, \$636+	ES	BR								
Kenya	(72345) Tamping or compacting machinery, not self-propelled, \$3823-8730	PH	FR	US	PE	ES	CO	IT	EG	CZ	HR
Kenya	(64174) Kraft paper,coated with kaolin (China clay), weight < 150 g/m2, \$0-1	NL	IN	FR	CL	AU	TN	EG	AR	LA	GR
Kenya	(67542) Flat-rid prod. of other alloy steel, hotrid, of a width of 600 mm or more, \$4-10	KR	TR	US	GB	SG	BG	AR	BE	TH	CO
Kenya	(73163) Other grinding machines, numerically controlled, in which the positioning, \$0-5360	NL	DK	FR	MY	PT	GB	CZ	PK	SE	EG
Kenya	(52255) Cobalt oxides and hydroxides; commercial cobalt oxides, \$25-58	TR	NL	UZ	CA	RU	RO	AT	BG	EG	SE
Kenya	(77879) Parts of the electrical machines and apparatus of subgroup 778.7, \$46-447	QA	MD	GE	SR	ST					
Kenya	(73167) Honing or lapping machines, \$0-210	CA	NL	PL	BE	GB	EG	ES	YE	BW	PE
Kenya	(74185) Driers for wood, paper pulp, paper or paperboard, \$11377-72345	DE	US	RU	VN	FR	TR	HR	ID	MY	IT
Kenya	(72631) Machinery, apparatus and equipment (other than the machine tools of subgr, \$38759-95043	JP	IT	US	MX	GB	BR	ID	NL	ES	DK
Kiribati	(73163) Other grinding machines, numerically controlled, in which the positioning, \$0-5360	NL	DK	FR	MY	PT	GB	CZ	PK	SE	EG
Kiribati	(77879) Parts of the electrical machines and apparatus of subgroup 778.7, \$46-447	QA	MD	GE	SR	ST					
Kiribati	(66335) Mica, worked, and articles of mica (including agglomerated or reconstitut, \$37-78	US	BA	FR	CH	GB	CO	AT	HR	NL	ES
Kiribati	(51385) Cyclanic, cyclenic or cycloterpenic polycarboxylic acids, their anhydride, \$2-7	IN	CH	NL	TR	JP	IT	TH	PL	CZ	US
Kiribati	(43131) Fatty acids; acid oils from refining, \$2-4	JP	EG	BR	AT	FR	TR	RU	CZ	SG	MX
Kiribati	(71332) Spark-ignition reciprocating or rotary internal combustion piston marine, \$526-7792	CA	NL	BE	JM	BR	SE	IT	RU	NO	NA
Kiribati	(77882) Electrical signalling, safety or traffic control equipment for railways,, \$0-101	PK	IN	PH	HK	BR	NO	BW	CH	CO	EG
Kiribati	(51571) Heterocyclic compounds with nitrogen hetero-atom(s) only, containing an u, \$19-141	BR	DE	CH	ES	BE	JP	CA	IN	FR	SG
Kiribati	(51622) Other aldehydes, whether or not with other oxygen function; cyclic polyme, \$21-45	FR	SE	US	IN	BE	PL	DE	JP	AU	IE
Kiribati	(51631) Phosphoric esters and their salts (including lactophosphates); their halo, \$0-2	DE	TH	KR	NL	BE	RU	PL	TR	ID	GB
Kuwait	(54143) Caffeine and its salts, \$28-54	GB	TR	DK	TN	PE	NO	AU	NL	CH	BE
Kuwait	(73165) Sharpening (tool- or cutter-grinding) machines, numerically controlled, \$2244-106861	VN	GB	RU	ID	TR	PL	ES	SK	CZ	US
Kuwait	(74917) Moulds for mineral materials, \$47-173	DE	MY	ES	GB	CH	NO	PL	IN	ZA	BE
Kuwait	(72345) Tamping or compacting machinery, not self-propelled, \$3823-8730	PH	FR	US	PE	ES	CO	IT	EG	CZ	HR
Kuwait	(64174) Kraft paper,coated with kaolin (China clay), weight < 150 g/m2, \$0-1	NL	IN	FR	CL	AU	TN	EG	AR	LA	GR
Kuwait	(73163) Other grinding machines, numerically controlled, in which the positioning, \$5360-222710	VN	IN	ID	RU	JP	CA	AT	ES	BG	TR
Kuwait	(73163) Other grinding machines, numerically controlled, in which the positioning, \$0-5360	NL	DK	FR	MY	PT	GB	CZ	PK	SE	EG
Kuwait	(67688) Angles, shapes and sections, of other alloy steel, \$8-20	US	FR	NO	SE	GB	QA	NL	ES	PT	CO
Kuwait	(52255) Cobalt oxides and hydroxides; commercial cobalt oxides, \$25-58	TR	NL	UZ	CA	RU	RO	AT	BG	EG	SE
Kuwait	(77879) Parts of the electrical machines and apparatus of subgroup 778.7, \$46-447	QA	MD	GE	SR	ST					
Lao People's Democratic Republic	(73165) Sharpening (tool- or cutter-grinding) machines, numerically controlled, \$2244-106861	VN	GB	RU	ID	TR	PL	ES	SK	CZ	US
Lao People's Democratic Republic	(51378) Oleic, linoleic or linolenic acids, their salts and esters, \$0-1	FR	NL	ID	ES	IT	IE	ZA	IL	DK	VN
Lao People's Democratic Republic	(73163) Other grinding machines, numerically controlled, in which the positioning, \$5360-222710	VN	IN	ID	RU	JP	CA	AT	ES	BG	TR
Lao People's Democratic Republic	(74351) Cream separators, \$85-5164	MY	CO	AR	CA	PE	CL	MM			
Lao People's Democratic Republic	(73163) Other grinding machines, numerically controlled, in which the positioning, \$0-5360	NL	DK	FR	MY	PT	GB	CZ	PK	SE	EG
Lao People's Democratic Republic	(77879) Parts of the electrical machines and apparatus of subgroup 778.7, \$46-447	QA	MD	GE	SR	ST					
Lao People's Democratic Republic	(51396) Carboxylic acids with additional oxygen functions, n.e.s., their anhydrid, \$159-1037	IE	KR	US	MA	BR	HK	PE	IN	IT	PT
Lao People's Democratic Republic	(74473) Other continuous-action elevators and conveyors, bucket-type, \$24852-52644	JP	UZ	MX	PH	CH	CA	SV	DE	NO	CO

Country	(SITC) description, unit value range (\$)	Top 10 growing markets									
Lao People's Democratic Republic	(51385) Cyclanic, cyclenic or cycloterpenic polycarboxylic acids, their anhydride, \$2-7	IN	CH	NL	TR	JP	IT	TH	PL	CZ	US
Lao People's Democratic Republic	(43131) Fatty acids; acid oils from refining, \$2-4	JP	EG	BR	AT	FR	TR	RU	CZ	SG	MX
Libya	(73163) Other grinding machines, numerically controlled, in which the positioning, \$0-5360	NL	DK	FR	MY	PT	GB	CZ	PK	SE	EG
Libya	(51385) Cyclanic, cyclenic or cycloterpenic polycarboxylic acids, their anhydride, \$2-7	IN	CH	NL	TR	JP	IT	TH	PL	CZ	US
Libya	(72847) Machinery and apparatus for isotopic separation, and parts thereof, n.e.s, \$11-92	DE	ES	ZM	CI	BE	LV	IS	PL	GT	GB
Libya	(67554) Flat-rlid prod. of stnls steel, coldrlid,w>600mm,0.5<th<1mm, \$3-5	DK	IT	FI	FR	DE	CG	NO	RS	GB	TN
Libya	(67241) Ingots of iron (other than iron of heading 671.33) or n/a steel, \$0-6	ES	US	JP	RO	HU	GB	PH	AU	SE	AT
Libya	(51121) Cyclohexane, \$1-13	CL	NL	IN	FR	BE	QA	HK	ZA	CO	ZW
Libya	(67531) Flat-rlid prod. of stnls steel, hotrlid, of a width of 600 mm or more and, \$2-4	KR	VN	PL	TH	IT	BE	ID	NL	TR	IN
Libya	(73123) Multi-station transfer machines, \$1212-155579	TR	US	MY	PL	IN	FR	SE	CA	PT	BE
Libya	(59818) Wood tar; wood tar oils; wood creosote; wood naphtha; vegetable pitch; br, \$1-13	KZ	NL	FR	DK	NZ	HU	DE	ES	IN	KR
Libya	(52351) Nitrites, \$0-0	NL	ZA	ZM	CA	PL	CH	TH	AU	TR	CZ
Madagascar	(67532) Flat-rlid prod. of stnls steel, hotrlid, of a width of 600 mm or more and, \$0-1	FR	IN	IT	MY	TR	DE	RU	BR	JP	NL
Madagascar	(62112) Solutions, rubber, compounded, unvulcanized; dispersions, rubber, compoun, \$18-41	SE	JP	NO	SI	TN	DK	RU	CH	IN	GR
Madagascar	(73163) Other grinding machines, numerically controlled, in which the positioning, \$0-5360	NL	DK	FR	MY	PT	GB	CZ	PK	SE	EG
Madagascar	(74441) Built-in jacking systems of a type used in garages, \$3029-6315	CH	GB	CA	BE	ES	SE	DE	PL	RO	NL
Madagascar	(57391) Vinyl chloride-vinyl acetate copolymers, \$4-9	NL	IT	EG	JP	HK	SI	FR	IN	PL	NZ
Madagascar	(72631) Machinery, apparatus and equipment (other than the machine tools of subgr, \$38759-95043	JP	IT	US	MX	GB	BR	ID	NL	ES	DK
Madagascar	(52265) Hydroxide and peroxide of magnesium; oxides, hydroxides and peroxides, of, \$0-1	JP	GB	CA	ID	ES	KR	PT	US	AT	SG
Madagascar	(51613) Oxirane (ethylene oxide), \$0-1	BE	SK	FR	ES	SE	ID	CH	VN	PH	CZ
Madagascar	(51385) Cyclanic, cyclenic or cycloterpenic polycarboxylic acids, their anhydride, \$2-7	IN	CH	NL	TR	JP	IT	TH	PL	CZ	US
Madagascar	(33531) Pitch obtained from coal tar or from other mineral tars, \$0-1	US	BR	ID	AU	QA	SK	GR	AT	NO	BA
Malawi	(59867) Prepared culture media for development of micro-organisms, \$34-140	QA	MD	GE	SR						
Malawi	(73165) Sharpening (tool- or cutter-grinding) machines, numerically controlled, \$2244-106861	VN	GB	RU	ID	TR	PL	ES	SK	CZ	US
Malawi	(26671) Synthetic staple fibres, processed for spinning, of nylon or other polyam, \$4-20	IN	TR	CZ	BG	VN	SN	US	SK	SV	ZA
Malawi	(57542) Melamine resins, \$4-7	AU	TR	SV	UZ	JP	ZA	AT	HK	CH	FR
Malawi	(51455) Aromatic polyamines and their derivatives; salts thereof, \$73-349	RU	SG	FR	HK	AT	KZ	US	LV	GT	BR
Malawi	(51473) Ureines and their derivatives; salts thereof, \$8-41	ID	BR	TH	MX	IT	TR	RU	CL	GR	DE
Malawi	(67542) Flat-rlid prod. of other alloy steel, hotrlid, of a width of 600 mm or more, \$4-10	KR	TR	US	GB	SG	BG	AR	BE	TH	CO
Malawi	(74916) Moulds for glass, \$50-98	MX	DE	EG	FR	BE	CZ	IT	HU	TR	DK
Malawi	(62112) Solutions, rubber, compounded, unvulcanized; dispersions, rubber, compoun, \$18-41	SE	JP	NO	SI	TN	DK	RU	CH	IN	GR
Malawi	(74351) Cream separators, \$85-5164	MY	CO	AR	CA	PE	CL	MM			
Maldives	(73163) Other grinding machines, numerically controlled, in which the positioning, \$0-5360	NL	DK	FR	MY	PT	GB	CZ	PK	SE	EG
Maldives	(51385) Cyclanic, cyclenic or cycloterpenic polycarboxylic acids, their anhydride, \$2-7	IN	CH	NL	TR	JP	IT	TH	PL	CZ	US
Maldives	(77882) Electrical signalling, safety or traffic control equipment for railways,, \$0-101	PK	IN	PH	HK	BR	NO	BW	CH	CO	EG
Maldives	(67442) Flat-rlid prod. iron,n/a steel, coated with chromium oxides or with chromi, \$0-0	IN	IT	DE	PH	SG	JP	PL	BG	TN	NL
Maldives	(51485) Diazo-, azo-, and azoxy-compounds, \$4-27	NL	IT	BR	TH	US	HK	DE	TR	RO	BE
Maldives	(23213) Isobutene-isoprene (butyl) rubber (IIR); halo-isobutene-isoprene rubber (, \$2-5	US	TH	KR	BE	ID	BR	MX	HU	TR	PL
Maldives	(63321) Blocks, plates, sheets, strip; tiles and solid cylinders of agglomerated, \$17-36	GR	CH	AT	TR	DE	GE	BR	HU	NL	IE
Maldives	(52595) Compounds, inorganic or organic, of rare earth metals, of yttrium or of s, \$16-119	TH	IN	JP	US	ES	IT	PH	MK	MY	EE
Maldives	(74521) Dishwashing machines (other than household-type), \$3078-6403	GB	FR	CH	BE	PL	TR	SE	IN	DE	US
Maldives	(51214) Octanol (octyl alcohol) and isomers thereof, \$1-9	ID	VN	FR	US	IT	MY	NL	CH	EG	DK
Mali	(57542) Melamine resins, \$4-7	AU	TR	SV	UZ	JP	ZA	AT	HK	CH	FR
Mali	(62112) Solutions, rubber, compounded, unvulcanized; dispersions, rubber, compoun, \$18-41	SE	JP	NO	SI	TN	DK	RU	CH	IN	GR
Mali	(73163) Other grinding machines, numerically controlled, in which the positioning, \$0-5360	NL	DK	FR	MY	PT	GB	CZ	PK	SE	EG
Mali	(73135) Other lathes, numerically controlled, \$0-13317	PH	BR	GB	ES	TR	RS	SG	GE	CZ	FR
Mali	(51613) Oxirane (ethylene oxide), \$0-1	BE	SK	FR	ES	SE	ID	CH	VN	PH	CZ
Mali	(89437) Playing-cards, \$0-8	SG	LA	NO	AM	CO	BR	BW	IN	MG	PK

Technological transformation and innovation for economic diversification and structural transformation in CDDCs

Country	(SITC) description, unit value range (\$)	Top 10 growing markets											
Mali	(43131) Fatty acids; acid oils from refining, \$2-4	JP	EG	BR	AT	FR	TR	RU	CZ	SG	MX		
Mali	(74414) Works trucks, electrical, self-propelled, not fitted with lifting or hand, \$2957-14306	RU	DE	VN	FR	PL	MA	CZ	GB	AU	MX		
Mali	(72847) Machinery and apparatus for isotopic separation, and parts thereof, n.e.s, \$11-92	DE	ES	ZM	CI	BE	LV	IS	PL	GT	GB		
Mali	(43141) Vegetable waxes (other than triglycerides), whether or not refined or col, \$4-16	DE	CA	US	ES	BE	ID	IN	PL	TR	AR		
Mauritania	(73163) Other grinding machines, numerically controlled, in which the positioning, \$0-5360	NL	DK	FR	MY	PT	GB	CZ	PK	SE	EG		
Mauritania	(77879) Parts of the electrical machines and apparatus of subgroup 778.7, \$46-447	QA	MD	GE	SR	ST							
Mauritania	(77889) Electrical parts of machinery or apparatus, n.e.s., \$6-124	ST	GE	AG									
Mauritania	(66335) Mica, worked, and articles of mica (including agglomerated or reconstituted), \$37-78	US	BA	FR	CH	GB	CO	AT	HR	NL	ES		
Mauritania	(52265) Hydroxide and peroxide of magnesium; oxides, hydroxides and peroxides, of, \$0-1	JP	GB	CA	ID	ES	KR	PT	US	AT	SG		
Mauritania	(51241) Phenol (hydroxybenzene), pure, and its salts, \$0-1	IN	JP	KR	ID	TH	AU	TR	LV	CO	SE		
Mauritania	(69987) Zirconium, wrought, and articles of zirconium, n.e.s., \$40-229	CA	US	GB	TH	RO	BE	ID	PT	IN	IL		
Mauritania	(51612) Acetals and hemiacetals, whether or not with other oxygen function, and t, \$6-39	MY	BR	DE	GB	IE	JP	IL	CH	ID	PH		
Mauritania	(52595) Compounds, inorganic or organic, of rare earth metals, of yttrium or of s, \$16-119	TH	IN	JP	US	ES	IT	PH	MK	MY	EE		
Mauritania	(74521) Dishwashing machines (other than household-type), \$3078-6403	GB	FR	CH	BE	PL	TR	SE	IN	DE	US		
Micronesia (Federated States of)	(77541) Shavers with self-contained electric motor, \$0-16	US	CA	SG	FR	NL	BE	AU	CH	PT	CL		
Micronesia (Federated States of)	(77324) Electrical insulators of materials other than glass or ceramics, \$42-89	JP	GB	PL	RU	DE	TR	IN	FR	CH	IT		
Micronesia (Federated States of)	(74419) Parts of the trucks and tractors of headings 744.14 and 744.15, \$12-51	NL	SE	SG	DK	TH	MM	RO	ID	BE	PH		
Micronesia (Federated States of)	(88433) Filters, \$86-399	VN	EG	US	PH	GB	SG	TH	DE	IN	IL		
Micronesia (Federated States of)	(71111) Steam or other vapour-generating boilers (excluding central heating hot w, \$6-31	ID	TR	UZ	TH	PH	CL	IL	MM	AR	GB		
Micronesia (Federated States of)	(06193) Glucose (dextrose) and glucose syrup, not containing fructose or containi, \$0-0	FR	DK	VN	DE	US	ID	NL	PH	SE	MY		
Micronesia (Federated States of)	(89594) Typewriter or similar ribbons, inked or otherwise prepared for giving imp, \$0-1	FR	SZ	AR	DE	VN	GT	IL	LA	CI	BJ		
Micronesia (Federated States of)	(52329) Other chlorides, chloride oxides and chloride hydroxides; bromides and br, \$0-0	CA	FR	DK	KR	VN	ES	ZA	ID	HK	MY		
Micronesia (Federated States of)	(69752) Sanitary ware and parts thereof, n.e.s., of copper, \$14-43	DE	TH	ID	IT	AT	VN	FR	NL	PH	NO		
Micronesia (Federated States of)	(78425) Bodies (including cabs), for the motor vehicles of groups 722, 782 and 78, \$412-9813	PL	CA	US	BR	FR	ES	CZ	MX	DE	CH		
Mongolia	(73165) Sharpening (tool- or cutter-grinding) machines, numerically controlled, \$2244-106861	VN	GB	RU	ID	TR	PL	ES	SK	CZ	US		
Mongolia	(73163) Other grinding machines, numerically controlled, in which the positioning, \$0-5360	NL	DK	FR	MY	PT	GB	CZ	PK	SE	EG		
Mongolia	(77879) Parts of the electrical machines and apparatus of subgroup 778.7, \$46-447	QA	MD	GE	SR	ST							
Mongolia	(51385) Cyclanic, cyclenic or cycloterpenic polycarboxylic acids, their anhydride, \$2-7	IN	CH	NL	TR	JP	IT	TH	PL	CZ	US		
Mongolia	(57432) Alkyd resins, \$3-5	DE	IN	PK	SE	CA	BE	CH	BR	KR	AT		
Mongolia	(72847) Machinery and apparatus for isotopic separation, and parts thereof, n.e.s, \$11-92	DE	ES	ZM	CI	BE	LV	IS	PL	GT	GB		
Mongolia	(74414) Works trucks, electrical, self-propelled, not fitted with lifting or hand, \$0-2957	CA	FR	BE	BR	ES	UZ	IE	PH	TR	GR		
Mongolia	(77882) Electrical signalling, safety or traffic control equipment for railways., \$0-101	PK	IN	PH	HK	BR	NO	BW	CH	CO	EG		
Mongolia	(51571) Heterocyclic compounds with nitrogen hetero-atom(s) only, containing an u, \$19-141	BR	DE	CH	ES	BE	JP	CA	IN	FR	SG		
Mongolia	(51121) Cyclohexane, \$1-13	CL	NL	IN	FR	BE	QA	HK	ZA	CO	ZW		
Mozambique	(73163) Other grinding machines, numerically controlled, in which the positioning, \$0-5360	NL	DK	FR	MY	PT	GB	CZ	PK	SE	EG		
Mozambique	(73167) Honing or lapping machines, \$0-210	CA	NL	PL	BE	GB	EG	ES	YE	BW	PE		
Mozambique	(66335) Mica, worked, and articles of mica (including agglomerated or reconstituted), \$37-78	US	BA	FR	CH	GB	CO	AT	HR	NL	ES		
Mozambique	(51613) Oxirane (ethylene oxide), \$0-1	BE	SK	FR	ES	SE	ID	CH	VN	PH	CZ		
Mozambique	(51385) Cyclanic, cyclenic or cycloterpenic polycarboxylic acids, their anhydride, \$2-7	IN	CH	NL	TR	JP	IT	TH	PL	CZ	US		
Mozambique	(51628) Other cyclanic, cyclenic or cycloterpenic ketones without other oxygen fu, \$31-74	DE	GB	SG	US	CH	BR	ES	FR	JP	TR		
Mozambique	(74414) Works trucks, electrical, self-propelled, not fitted with lifting or hand, \$2957-14306	RU	DE	VN	FR	PL	MA	CZ	GB	AU	MX		
Mozambique	(72847) Machinery and apparatus for isotopic separation, and parts thereof, n.e.s, \$11-92	DE	ES	ZM	CI	BE	LV	IS	PL	GT	GB		
Mozambique	(43141) Vegetable waxes (other than triglycerides), whether or not refined or col, \$4-16	DE	CA	US	ES	BE	ID	IN	PL	TR	AR		
Mozambique	(67554) Flat-rlid prod. of stnls steel, coldrld,w>600mm,0.5<th<1mm, \$3-5	DK	IT	FI	FR	DE	CG	NO	RS	GB	TN		
Myanmar	(73163) Other grinding machines, numerically controlled, in which the positioning, \$0-5360	NL	DK	FR	MY	PT	GB	CZ	PK	SE	EG		

Country	(SITC) description, unit value range (\$)	Top 10 growing markets											
Myanmar	(77879) Parts of the electrical machines and apparatus of subgroup 778.7, \$46-447	QA	MD	GE	SR	ST							
Myanmar	(74185) Driers for wood, paper pulp, paper or paperboard, \$11377-72345	DE	US	RU	VN	FR	TR	HR	ID	MY	IT		
Myanmar	(66335) Mica, worked, and articles of mica (including agglomerated or reconstituted, \$37-78	US	BA	FR	CH	GB	CO	AT	HR	NL	ES		
Myanmar	(67353) Flat-rolled prod. iron, n/a steel, not coated, n.e.s., of a width of less than 600 mm, \$6-14	US	BR	GB	CA	FR	IN	TR	PL	JP	ZA		
Myanmar	(51385) Cyclanic, cyclenic or cycloolefinic polycarboxylic acids, their anhydride, \$2-7	IN	CH	NL	TR	JP	IT	TH	PL	CZ	US		
Myanmar	(88552) Watch movements, neither battery nor accumulator powered, complete and assembled, \$0-20	FR	SG	US	CH	GB	ES	BE	EG	AM	PK		
Myanmar	(43131) Fatty acids; acid oils from refining, \$2-4	JP	EG	BR	AT	FR	TR	RU	CZ	SG	MX		
Myanmar	(74414) Works trucks, electrical, self-propelled, not fitted with lifting or hand, \$2957-14306	RU	DE	VN	FR	PL	MA	CZ	GB	AU	MX		
Myanmar	(43141) Vegetable waxes (other than triglycerides), whether or not refined or colored, \$4-16	DE	CA	US	ES	BE	ID	IN	PL	TR	AR		
Namibia	(59867) Prepared culture media for development of micro-organisms, \$34-140	QA	MD	GE	SR								
Namibia	(57399) Other polymers of vinyl chloride or of other halogenated olefins, \$13-31	SE	AU	CH	JP	CA	IN	HK	IE	FR	ES		
Namibia	(57542) Melamine resins, \$4-7	AU	TR	SV	UZ	JP	ZA	AT	HK	CH	FR		
Namibia	(74917) Moulds for mineral materials, \$47-173	DE	MY	ES	GB	CH	NO	PL	IN	ZA	BE		
Namibia	(72345) Tamping or compacting machinery, not self-propelled, \$3823-8730	PH	FR	US	PE	ES	CO	IT	EG	CZ	HR		
Namibia	(67532) Flat-rolled prod. of stainless steel, hot-rolled, of a width of 600 mm or more and, \$0-1	FR	IN	IT	MY	TR	DE	RU	BR	JP	NL		
Namibia	(51455) Aromatic polyamines and their derivatives; salts thereof, \$73-349	RU	SG	FR	HK	AT	KZ	US	LV	GT	BR		
Namibia	(51473) Ureines and their derivatives; salts thereof, \$8-41	ID	BR	TH	MX	IT	TR	RU	CL	GR	DE		
Namibia	(73163) Other grinding machines, numerically controlled, in which the positioning, \$0-5360	NL	DK	FR	MY	PT	GB	CZ	PK	SE	EG		
Namibia	(77879) Parts of the electrical machines and apparatus of subgroup 778.7, \$46-447	QA	MD	GE	SR	ST							
Nauru	(52595) Compounds, inorganic or organic, of rare earth metals, of yttrium or of scandium, \$16-119	TH	IN	JP	US	ES	IT	PH	MK	MY	EE		
Nauru	(74521) Dishwashing machines (other than household-type), \$3078-6403	GB	FR	CH	BE	PL	TR	SE	IN	DE	US		
Nauru	(64193) Filter blocks, slabs and plates, of paper pulp, \$0-5	IT	CA	RU	TR	US	TH	PL	ES	IN	LT		
Nauru	(57291) Styrene-acrylonitrile (SAN) copolymers, \$1-3	TH	CA	ID	IT	VN	BR	ES	IN	RU	IE		
Nauru	(51214) Octanol (octyl alcohol) and isomers thereof, \$1-9	ID	VN	FR	US	IT	MY	NL	CH	EG	DK		
Nauru	(67538) Flat-rolled prod. of stainless steel, hot-rolled, of a width of less than 600 mm, \$0-2	PL	FI	GB	DE	PK	FR	IN	SE	GH	BE		
Nauru	(69752) Sanitary ware and parts thereof, n.e.s., of copper, \$43-85	IN	DE	ES	GB	LT	DK	CH	SE	RU	MA		
Nauru	(89935) Parts of lighters, n.e.s., other than flints and wicks, \$16-60	ID	US	MY	VN	PH	ES	TN	IN	IT	SE		
Nauru	(77627) Other valves and tubes, \$27-922	PH	US	GB	FR	NL	IT	CA	BE	MX	MY		
Nauru	(65719) Felt, impregnated, coated, covered or laminated, n.e.s., \$22-50	PL	MY	DE	KR	GB	CA	CH	NL	BR	CZ		
Niger	(73163) Other grinding machines, numerically controlled, in which the positioning, \$0-5360	NL	DK	FR	MY	PT	GB	CZ	PK	SE	EG		
Niger	(66335) Mica, worked, and articles of mica (including agglomerated or reconstituted, \$37-78	US	BA	FR	CH	GB	CO	AT	HR	NL	ES		
Niger	(67512) Flat-rolled prod. of silicon-electrical steel, width < 600 mm, \$0-1	SI	DE	KR	VN	ID	BR	BE	RS	CZ	PK		
Niger	(51385) Cyclanic, cyclenic or cycloolefinic polycarboxylic acids, their anhydride, \$2-7	IN	CH	NL	TR	JP	IT	TH	PL	CZ	US		
Niger	(74414) Works trucks, electrical, self-propelled, not fitted with lifting or hand, \$2957-14306	RU	DE	VN	FR	PL	MA	CZ	GB	AU	MX		
Niger	(54143) Caffeine and its salts, \$11-28	IE	FR	IT	SG	US	CA	KR	CL	ES	TH		
Niger	(51612) Acetals and hemiacetals, whether or not with other oxygen function, and their derivatives, \$6-39	MY	BR	DE	GB	IE	JP	IL	CH	ID	PH		
Niger	(67561) Flat-rolled prod. of other alloy steel, cold-rolled, width > 600 mm, \$0-2	ID	MX	TH	IN	VN	JP	ES	CA	DE	CZ		
Niger	(62121) Camel-back strips for retreading rubber tyres, \$2-14	NL	PL	KR	LT	BE	DK	ES	IE	RU	PT		
Niger	(77882) Electrical signalling, safety or traffic control equipment for railways, \$0-101	PK	IN	PH	HK	BR	NO	BW	CH	CO	EG		
Nigeria	(57399) Other polymers of vinyl chloride or of other halogenated olefins, \$13-31	SE	AU	CH	JP	CA	IN	HK	IE	FR	ES		
Nigeria	(72345) Tamping or compacting machinery, not self-propelled, \$3823-8730	PH	FR	US	PE	ES	CO	IT	EG	CZ	HR		
Nigeria	(67561) Flat-rolled prod. of other alloy steel, cold-rolled, width > 600 mm, \$2-4	US	SE	RU	PL	KR	IN	GB	DE	FR	TH		
Nigeria	(51455) Aromatic polyamines and their derivatives; salts thereof, \$73-349	RU	SG	FR	HK	AT	KZ	US	LV	GT	BR		
Nigeria	(51473) Ureines and their derivatives; salts thereof, \$8-41	ID	BR	TH	MX	IT	TR	RU	CL	GR	DE		
Nigeria	(69991) Tungsten, wrought, articles, \$260-561	NO	CH	FR	RU	CO	BG	IT	DE	PL	BE		
Nigeria	(67542) Flat-rolled prod. of other alloy steel, hot-rolled, of a width of 600 mm or more, \$4-10	KR	TR	US	GB	SG	BG	AR	BE	TH	CO		
Nigeria	(74916) Moulds for glass, \$50-98	MX	DE	EG	FR	BE	CZ	IT	HU	TR	DK		
Nigeria	(73171) Shaping or slotting machines, \$232-7443	US	IN	CA	MY	FR	SG	GB	MM	PL	CZ		
Nigeria	(62112) Solutions, rubber, compounded, unvulcanized; dispersions, rubber, compound, \$18-41	SE	JP	NO	SI	TN	DK	RU	CH	IN	GR		
Oman	(59867) Prepared culture media for development of micro-organisms, \$34-140	QA	MD	GE	SR								
Oman	(73165) Sharpening (tool- or cutter-grinding) machines, numerically controlled, \$2244-106861	VN	GB	RU	ID	TR	PL	ES	SK	CZ	US		

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Country	(SITC) description, unit value range (\$)	Top 10 growing markets											
Oman	(26671) Synthetic staple fibres, processed for spinning, of nylon or other polyam, \$4-20	IN	TR	CZ	BG	VN	SN	US	SK	SV	ZA		
Oman	(57542) Melamine resins, \$4-7	AU	TR	SV	UZ	JP	ZA	AT	HK	CH	FR		
Oman	(72345) Tamping or compacting machinery, not self-propelled, \$3823-8730	PH	FR	US	PE	ES	CO	IT	EG	CZ	HR		
Oman	(51455) Aromatic polyamines and their derivatives; salts thereof, \$73-349	RU	SG	FR	HK	AT	KZ	US	LV	GT	BR		
Oman	(51473) Ureines and their derivatives; salts thereof, \$8-41	ID	BR	TH	MX	IT	TR	RU	CL	GR	DE		
Oman	(88134) Parts and accessories for the equipment of headings 881.31 through 881.33, \$165-375	US	KR	ZA	NO	IT	ES	DK	CO	PT	PL		
Oman	(67542) Flat-rlid prod. of other alloy steel, hotrlid, of a width of 600 mm or more, \$4-10	KR	TR	US	GB	SG	BG	AR	BE	TH	CO		
Oman	(73163) Other grinding machines, numerically controlled, in which the positioning, \$5360-222710	VN	IN	ID	RU	JP	CA	AT	ES	BG	TR		
Papua New Guinea	(57399) Other polymers of vinyl chloride or of other halogenated olefins, \$13-31	SE	AU	CH	JP	CA	IN	HK	IE	FR	ES		
Papua New Guinea	(24402) Cork, natural, debacked or roughly squared, or in rectangular blocks, pla, \$3-23	PT	NL	ZA	US	CH	FR	AU	SK	HR	AM		
Papua New Guinea	(51485) Diazo-, azo-, and azoxy-compounds, \$4-27	NL	IT	BR	TH	US	HK	DE	TR	RO	BE		
Papua New Guinea	(52595) Compounds, inorganic or organic, of rare earth metals, of yttrium or of s, \$16-119	TH	IN	JP	US	ES	IT	PH	MK	MY	EE		
Papua New Guinea	(77871) Particle accelerators, \$42-3323	IN	NO	CL	MX	AZ	TH	AM	MN	PE	MM		
Papua New Guinea	(64193) Filter blocks, slabs and plates, of paper pulp, \$0-5	IT	CA	RU	TR	US	TH	PL	ES	IN	LT		
Papua New Guinea	(57291) Styrene-acrylonitrile (SAN) copolymers, \$1-3	TH	CA	ID	IT	VN	BR	ES	IN	RU	IE		
Papua New Guinea	(57219) Polystyrene, other, \$2-3	US	GB	ES	DE	NL	DK	SI	ZA	FR	KR		
Papua New Guinea	(67538) Flat-rlid prod. of stnls steel, hotrlid, of a width of less than 600 mm, \$0-2	PL	FI	GB	DE	PK	FR	IN	SE	GH	BE		
Papua New Guinea	(67555) Flat-rlid prod. of stnls steel, coldrlid,w>600mm,th<0.5mm, \$2-5	ID	EG	TR	VN	CA	GB	NL	CH	PT	SK		
Paraguay	(51378) Oleic, linoleic or linolenic acids, their salts and esters, \$0-1	FR	NL	ID	ES	IT	IE	ZA	IL	DK	VN		
Paraguay	(73163) Other grinding machines, numerically controlled, in which the positioning, \$0-5360	NL	DK	FR	MY	PT	GB	CZ	PK	SE	EG		
Paraguay	(51385) Cyclanic, cyclenic or cycloterpenic polycarboxylic acids, their anhydride, \$2-7	IN	CH	NL	TR	JP	IT	TH	PL	CZ	US		
Paraguay	(72525) Machines for making cartons, boxes, cases, tubes, drums or similar contai, \$42025-79950	KR	GB	VN	NL	RU	TR	DE	BE	FR	IT		
Paraguay	(77882) Electrical signalling, safety or traffic control equipment for railways,, \$0-101	PK	IN	PH	HK	BR	NO	BW	CH	CO	EG		
Paraguay	(51571) Heterocyclic compounds with nitrogen hetero-atom(s) only, containing an u, \$19-141	BR	DE	CH	ES	BE	JP	CA	IN	FR	SG		
Paraguay	(51622) Other aldehydes, whether or not with other oxygen function; cyclic polyme, \$21-45	FR	SE	US	IN	BE	PL	DE	JP	AU	IE		
Paraguay	(89123) Airgun pellets and parts of cartridges for shotguns, \$3-21	PH	GB	FR	IT	CG	DE	ES	SK	GR	JM		
Paraguay	(67531) Flat-rlid prod. of stnls steel, hotrlid, of a width of 600 mm or more and, \$2-4	KR	VN	PL	TH	IT	BE	ID	NL	TR	IN		
Paraguay	(51485) Diazo-, azo-, and azoxy-compounds, \$4-27	NL	IT	BR	TH	US	HK	DE	TR	RO	BE		
Peru	(51215) Undenatured ethyl alcohol of an alcoholic strength by volume of 80% or hi, \$28-63	SG	SI	GE	PT	BW	CH	MG	ES	BR	MD		
Peru	(51375) Butyric acids, valeric acids, their salts and esters, \$9-19	SG	CH	BE	GB	SE	FR	IE	TR	PE	KR		
Peru	(73165) Sharpening (tool- or cutter-grinding) machines, numerically controlled, \$2244-106861	VN	GB	RU	ID	TR	PL	ES	SK	CZ	US		
Peru	(57399) Other polymers of vinyl chloride or of other halogenated olefins, \$13-31	SE	AU	CH	JP	CA	IN	HK	IE	FR	ES		
Peru	(57542) Melamine resins, \$4-7	AU	TR	SV	UZ	JP	ZA	AT	HK	CH	FR		
Peru	(51224) Mannitol, \$0-5	IN	FR	DE	EG	RU	PK	DK	US	TR	CL		
Peru	(65493) Fabrics, woven, of vegetable textile fibres, n.e.s.; woven fabrics of pap, \$211-368	AT	LV	CH									
Peru	(72345) Tamping or compacting machinery, not self-propelled, \$3823-8730	PH	FR	US	PE	ES	CO	IT	EG	CZ	HR		
Peru	(67532) Flat-rlid prod. of stnls steel, hotrlid, of a width of 600 mm or more and, \$0-1	FR	IN	IT	MY	TR	DE	RU	BR	JP	NL		
Peru	(73163) Other grinding machines, numerically controlled, in which the positioning, \$5360-222710	VN	IN	ID	RU	JP	CA	AT	ES	BG	TR		
Qatar	(51455) Aromatic polyamines and their derivatives; salts thereof, \$73-349	RU	SG	FR	HK	AT	KZ	US	LV	GT	BR		
Qatar	(69991) Tungsten,wrght.artcl.nes, \$260-561	NO	CH	FR	RU	CO	BG	IT	DE	PL	BE		
Qatar	(67353) Flat-rlid prod. iron,n/a steel, not coated, n.e.s., of a width of less tha, \$23-102	BR	SG	CH	PL	KR	ZA	AU	MG	SV	CZ		
Qatar	(88134) Parts and accessories for the equipment of headings 881.31 through 881.33, \$165-375	US	KR	ZA	NO	IT	ES	DK	CO	PT	PL		
Qatar	(73163) Other grinding machines, numerically controlled, in which the positioning, \$5360-222710	VN	IN	ID	RU	JP	CA	AT	ES	BG	TR		
Qatar	(73163) Other grinding machines, numerically controlled, in which the positioning, \$0-5360	NL	DK	FR	MY	PT	GB	CZ	PK	SE	EG		
Qatar	(77879) Parts of the electrical machines and apparatus of subgroup 778.7, \$46-447	QA	MD	GE	SR	ST							
Qatar	(51471) Acyclic amides (including acyclic carbamates) and their derivatives; salt, \$43-71	FR	SG	IE	KR	BE	DK	NO	RU	GB	AU		
Qatar	(73318) Presses for working metal or metal carbides, n.e.s., \$44142-139975	SI	TR	BE	DE	BG	BR	RO	MY	CH	PT		
Qatar	(66335) Mica, worked, and articles of mica (including agglomerated or reconstitut, \$37-78	US	BA	FR	CH	GB	CO	AT	HR	NL	ES		

Country	(SITC) description, unit value range (\$)	Top 10 growing markets											
Rwanda	(51394) Other carboxylic acids with phenol function but without other oxygen func, \$636+	ES	BR										
Rwanda	(53221) Tanning extracts of vegetable origin; tannins and their salts, ethers, es, \$17-41	JP	AT	US	GE	MX	FR	IN	CA	CZ	SG		
Rwanda	(74414) Works trucks, electrical, self-propelled, not fitted with lifting or hand, \$2957-14306	RU	DE	VN	FR	PL	MA	CZ	GB	AU	MX		
Rwanda	(52595) Compounds, inorganic or organic, of rare earth metals, of yttrium or of s, \$16-119	TH	IN	JP	US	ES	IT	PH	MK	MY	EE		
Rwanda	(64193) Filter blocks, slabs and plates, of paper pulp, \$0-5	IT	CA	RU	TR	US	TH	PL	ES	IN	LT		
Rwanda	(51214) Octanol (octyl alcohol) and isomers thereof, \$1-9	ID	VN	FR	US	IT	MY	NL	CH	EG	DK		
Rwanda	(67538) Flat-rlid prod. of stnls steel, hotrlid, of a width of less than 600 mm, \$0-2	PL	FI	GB	DE	PK	FR	IN	SE	GH	BE		
Rwanda	(67555) Flat-rlid prod. of stnls steel, coldrlid,w>600mm,th<0.5mm, \$2-5	ID	EG	TR	VN	CA	GB	NL	CH	PT	SK		
Rwanda	(57419) Other polyethers, \$11-58	SG	KR	DE	AT	US	MY	FR	JO	GR	FI		
Rwanda	(57597) Ion exchangers based on polymers of heading 571.11 to 575.95, \$21-48	US	KR	CA	HU	ES	NL	PL	IE	CL	DK		
Sao Tome and Principe	(77879) Parts of the electrical machines and apparatus of subgroup 778.7, \$46-447	QA	MD	GE	SR	ST							
Sao Tome and Principe	(66335) Mica, worked, and articles of mica (including agglomerated or reconstitut, \$37-78	US	BA	FR	CH	GB	CO	AT	HR	NL	ES		
Sao Tome and Principe	(77882) Electrical signalling, safety or traffic control equipment for railways,, \$0-101	PK	IN	PH	HK	BR	NO	BW	CH	CO	EG		
Sao Tome and Principe	(51571) Heterocyclic compounds with nitrogen hetero-atom(s) only, containing an u, \$19-141	BR	DE	CH	ES	BE	JP	CA	IN	FR	SG		
Sao Tome and Principe	(67442) Flat-rlid prod. iron,n/a steel, coated with chromium oxides or with chromi, \$0-0	IN	IT	DE	PH	SG	JP	PL	BG	TN	NL		
Sao Tome and Principe	(51481) Quaternary ammonium salts and hydroxides; lecithins and other phosphoamin, \$10-22	KR	CZ	FR	GB	GT	SG	CA	IE	AT	TR		
Sao Tome and Principe	(51485) Diazo-, azo-, and azoxy-compounds, \$4-27	NL	IT	BR	TH	US	HK	DE	TR	RO	BE		
Sao Tome and Principe	(59818) Wood tar; wood tar oils; wood creosote; wood naphtha; vegetable pitch; br, \$1-13	KZ	NL	FR	DK	NZ	HU	DE	ES	IN	KR		
Sao Tome and Principe	(23213) Isobutene-isoprene (butyl) rubber (IIR); halo-isobutene-isoprene rubber (, \$2-5	US	TH	KR	BE	ID	BR	MX	HU	TR	PL		
Sao Tome and Principe	(57434) Other polyesters, unsaturated, \$5-11	US	KR	IE	FR	ZM	GB	MX	DE	IN	JP		
Saudi Arabia	(57393) Vinylidene chloride polymers, \$5-10	NL	NZ	IT	IN	CZ	US	MY	BR	KR	RU		
Saudi Arabia	(72472) Dry-cleaning machines, \$2114-28864	ID	EG	PH	FI	KR	CH	RU	VN	KZ	LV		
Saudi Arabia	(87143) Other microscopes for photomicrography, cinephotomicrography or microproj, \$4149-10002	FR	CH	HK	DE	TH	IN	PT	IE	ES	RO		
Saudi Arabia	(74175) Machinery for liquefying air or other gases, \$0-939	PE	MM	MY	US	MG	CA	CH	YE	BN	CO		
Saudi Arabia	(25151) Chemical wood pulp, soda or sulphate, bleached, coniferous, \$3-6	ZA	LT	SE	IT	KG	PE	FI					
Saudi Arabia	(67646) Other bars and rods of other alloy steel (except high speed or silico-man, \$11-53	US	GB	JP	RO	DK	SG	KR	DE	NO	PL		
Saudi Arabia	(51133) Tetrachloroethylene (perchloroethylene), \$0-0	TR	BR	IN	KR	EG	ZA	IT	MA	CO	GT		
Saudi Arabia	(57399) Other polymers of vinyl chloride or of other halogenated olefins, \$13-31	SE	AU	CH	JP	CA	IN	HK	IE	FR	ES		
Saudi Arabia	(52255) Cobalt oxides and hydroxides; commercial cobalt oxides, \$107-145	KR	DK	GB	BE	CO	TR	AT	GR				
Saudi Arabia	(57542) Melamine resins, \$4-7	AU	TR	SV	UZ	JP	ZA	AT	HK	CH	FR		
Senegal	(67646) Other bars and rods of other alloy steel (except high speed or silico-man, \$11-53	US	GB	JP	RO	DK	SG	KR	DE	NO	PL		
Senegal	(72339) Other moving, grading, levelling, scraping, excavating, compacting or ext, \$0-5049	BW	LA	SG	EG	MM	IN	CL	CA	UZ	PE		
Senegal	(67532) Flat-rlid prod. of stnls steel, hotrlid, of a width of 600 mm or more and, \$0-1	FR	IN	IT	MY	TR	DE	RU	BR	JP	NL		
Senegal	(62112) Solutions, rubber, compounded, unvulcanized; dispersions, rubber, compoun, \$18-41	SE	JP	NO	SI	TN	DK	RU	CH	IN	GR		
Senegal	(73163) Other grinding machines, numerically controlled, in which the positioning, \$0-5360	NL	DK	FR	MY	PT	GB	CZ	PK	SE	EG		
Senegal	(57391) Vinyl chloride-vinyl acetate copolymers, \$4-9	NL	IT	EG	JP	HK	SI	FR	IN	PL	NZ		
Senegal	(77869) Parts of electrical capacitors, \$94-201	JP	BE	DE	FI	FR	CH	NL	GR	IT	ES		
Senegal	(77326) Insulating fittings for electrical machines, appliances or equipment, bei, \$312-809	RU	KR	BR	GB	IE	PH	CZ	IT	ZA	RO		
Senegal	(51385) Cyclanic, cyclenic or cycloterpenic polycarboxylic acids, their anhydride, \$2-7	IN	CH	NL	TR	JP	IT	TH	PL	CZ	US		
Senegal	(77883) Parts of the equipment of heading 778.82, \$628-1623	KR	SK	ES	IN	KZ	UZ	IT	BG	AT	ZA		
Seychelles	(69991) Tungsten,wrght.artcl.nes, \$260-561	NO	CH	FR	RU	CO	BG	IT	DE	PL	BE		
Seychelles	(75121) Electronic calculators capable of operation without an external source of, \$82-121	GR	US	CA	MX	EE	SE	CH	PE	FR	CY		
Seychelles	(73163) Other grinding machines, numerically controlled, in which the positioning, \$5360-222710	VN	IN	ID	RU	JP	CA	AT	ES	BG	TR		
Seychelles	(74351) Cream separators, \$85-5164	MY	CO	AR	CA	PE	CL	MM					

Technological transformation and innovation for economic diversification and structural transformation in CDDCs

Country	(SITC) description, unit value range (\$)	Top 10 growing markets									
Seychelles	(77879) Parts of the electrical machines and apparatus of subgroup 778.7, \$46-447	QA	MD	GE	SR	ST					
Seychelles	(51385) Cyclanic, cyclenic or cycloaterpenic polycarboxylic acids, their anhydride, \$2-7	IN	CH	NL	TR	JP	IT	TH	PL	CZ	US
Seychelles	(43131) Fatty acids; acid oils from refining, \$2-4	JP	EG	BR	AT	FR	TR	RU	CZ	SG	MX
Seychelles	(43141) Vegetable waxes (other than triglycerides), whether or not refined or col, \$4-16	DE	CA	US	ES	BE	ID	IN	PL	TR	AR
Seychelles	(72525) Machines for making cartons, boxes, cases, tubes, drums or similar contai, \$42025-79950	KR	GB	VN	NL	RU	TR	DE	BE	FR	IT
Seychelles	(77882) Electrical signalling, safety or traffic control equipment for railways,, \$0-101	PK	IN	PH	HK	BR	NO	BW	CH	CO	EG
Sierra Leone	(74917) Moulds for mineral materials, \$47-173	DE	MY	ES	GB	CH	NO	PL	IN	ZA	BE
Sierra Leone	(67532) Flat-rid prod. of stnls steel, hotrid, of a width of 600 mm or more and, \$0-1	FR	IN	IT	MY	TR	DE	RU	BR	JP	NL
Sierra Leone	(51473) Ureines and their derivatives; salts thereof, \$8-41	ID	BR	TH	MX	IT	TR	RU	CL	GR	DE
Sierra Leone	(64174) Kraft paper,coated with kaolin (China clay), weight < 150 g/m2, \$0-1	NL	IN	FR	CL	AU	TN	EG	AR	LA	GR
Sierra Leone	(67532) Flat-rid prod. of stnls steel, hotrid, of a width of 600 mm or more and, \$3-4	CA	MY	BE	AT	SK	KR	ES	FI	IN	CZ
Sierra Leone	(73163) Other grinding machines, numerically controlled, in which the positioning, \$0-5360	NL	DK	FR	MY	PT	GB	CZ	PK	SE	EG
Sierra Leone	(77879) Parts of the electrical machines and apparatus of subgroup 778.7, \$46-447	QA	MD	GE	SR	ST					
Sierra Leone	(66335) Mica, worked, and articles of mica (including agglomerated or reconstitut, \$37-78	US	BA	FR	CH	GB	CO	AT	HR	NL	ES
Sierra Leone	(52265) Hydroxide and peroxide of magnesium; oxides, hydroxides and peroxides, of, \$0-1	JP	GB	CA	ID	ES	KR	PT	US	AT	SG
Sierra Leone	(51613) Oxirane (ethylene oxide), \$0-1	BE	SK	FR	ES	SE	ID	CH	VN	PH	CZ
Solomon Islands	(72345) Tamping or compacting machinery, not self-propelled, \$3823-8730	PH	FR	US	PE	ES	CO	IT	EG	CZ	HR
Solomon Islands	(73163) Other grinding machines, numerically controlled, in which the positioning, \$0-5360	NL	DK	FR	MY	PT	GB	CZ	PK	SE	EG
Solomon Islands	(51385) Cyclanic, cyclenic or cycloaterpenic polycarboxylic acids, their anhydride, \$2-7	IN	CH	NL	TR	JP	IT	TH	PL	CZ	US
Solomon Islands	(67562) Flat-rid prod. of other alloy steel, coldrid,w<600mm, \$1-10	US	VN	DE	GB	TH	IT	NO	PL	BR	RO
Solomon Islands	(74414) Works trucks, electrical, self-propelled, not fitted with lifting or hand, \$2957-14306	RU	DE	VN	FR	PL	MA	CZ	GB	AU	MX
Solomon Islands	(43141) Vegetable waxes (other than triglycerides), whether or not refined or col, \$4-16	DE	CA	US	ES	BE	ID	IN	PL	TR	AR
Solomon Islands	(74414) Works trucks, electrical, self-propelled, not fitted with lifting or hand, \$0-2957	CA	FR	BE	BR	ES	UZ	IE	PH	TR	GR
Solomon Islands	(51542) Thiocarbamates and dithiocarbamates, \$3-7	BE	AU	PK	ID	TH	ZA	BR	MN	HU	DE
Solomon Islands	(67561) Flat-rid prod. of other alloy steel, coldrid,w>600mm, \$0-2	ID	MX	TH	IN	VN	JP	ES	CA	DE	CZ
Solomon Islands	(67249) Ingots and other primary forms of other alloy steel, \$1-9	IT	ES	LT	CA	ZA	MX	PL	CZ	GB	VN
Somalia	(72719) Parts for the machines of headings 721.27 and 727.11, \$90-138	IN	KR	RW	JP	FR	RU	EG	QA	AT	SN
Somalia	(67555) Flat-rid prod. of stnls steel, coldrid,w>600mm,th<0.5mm, \$2-5	ID	EG	TR	VN	CA	GB	NL	CH	PT	SK
Somalia	(73154) Milling machines, n.e.s., \$0-790	US	CA	IN	PL	BE	UZ	SG	AR	BR	FI
Somalia	(74523) Machinery for cleaning or drying bottles or other containers, \$1396-15949	CH	MX	SG	CL	CA	AR	GE	PK	AU	NZ
Somalia	(69752) Sanitary ware and parts thereof, n.e.s., of copper, \$43-85	IN	DE	ES	GB	LT	DK	CH	SE	RU	MA
Somalia	(77627) Other valves and tubes, \$27-922	PH	US	GB	FR	NL	IT	CA	BE	MX	MY
Somalia	(74911) Moulding boxes for metal foundry, \$9-56	IT	SG	DE	GB	ID	TH	IN	BE	AT	PK
Somalia	(51455) Aromatic polyamines and their derivatives; salts thereof, \$4-19	ID	BR	DE	ES	US	KR	IT	JP	PK	FR
Somalia	(51213) Butanols, \$1-7	BE	ID	FR	AT	SG	CH	KR	ES	DK	PE
Somalia	(51373) Methacrylic acid and its salts and esters, \$2-14	ID	CA	US	BE	NL	ES	GB	AT	SG	AR
South Sudan	(52595) Compounds, inorganic or organic, of rare earth metals, of yttrium or of s, \$16-119	TH	IN	JP	US	ES	IT	PH	MK	MY	EE
South Sudan	(74345) Hoods having a maximum horizontal side not exceeding 120 cm, \$563-878	US	DE	PH	SK	CA	MX	MY	SG	AU	RO
South Sudan	(57291) Styrene-acrylonitrile (SAN) copolymers, \$1-3	TH	CA	ID	IT	VN	BR	ES	IN	RU	IE
South Sudan	(51214) Octanol (octyl alcohol) and isomers thereof, \$1-9	ID	VN	FR	US	IT	MY	NL	CH	EG	DK
South Sudan	(67538) Flat-rid prod. of stnls steel, hotrid, of a width of less than 600 mm, \$0-2	PL	FI	GB	DE	PK	FR	IN	SE	GH	BE
South Sudan	(57419) Other polyethers, \$11-58	SG	KR	DE	AT	US	MY	FR	JO	GR	FI
South Sudan	(51575) Heterocyclic compounds containing a quinoline or isoquinoline ring-system, \$62-707	IE	CA	PL	NL	TR	IL	RU	PT	EG	IT
South Sudan	(67533) Flat-rid prod. of stnls steel, hotrid, of a width of 600 mm or more and, \$2-5	RO	ID	IN	VN	KR	TR	CZ	TH	PL	GE
South Sudan	(69651) Paper-knives, letter openers, erasing knives, pencil-sharpener and blade, \$73-144	DE	MA	NO	RU	JP	AT	KR	IS	CZ	TN
South Sudan	(69752) Sanitary ware and parts thereof, n.e.s., of copper, \$43-85	IN	DE	ES	GB	LT	DK	CH	SE	RU	MA
Sudan	(51473) Ureines and their derivatives; salts thereof, \$8-41	ID	BR	TH	MX	IT	TR	RU	CL	GR	DE
Sudan	(77879) Parts of the electrical machines and apparatus of subgroup 778.7, \$46-447	QA	MD	GE	SR	ST					
Sudan	(51396) Carboxylic acids with additional oxygen functions, n.e.s., their anhydrid, \$159-1037	IE	KR	US	MA	BR	HK	PE	IN	IT	PT
Sudan	(66335) Mica, worked, and articles of mica (including agglomerated or reconstitut, \$37-78	US	BA	FR	CH	GB	CO	AT	HR	NL	ES
Sudan	(65711) Needleloom felt and stitch-bonded fibre fabrics, \$36-94	HK	BG	US	DK	FR	KR	IT	ZA	SK	ES

Country	(SITC) description, unit value range (\$)	Top 10 growing markets																				
Sudan	(51613) Oxirane (ethylene oxide), \$0-1	BE	SK	FR	ES	SE	ID	CH	VN	PH	CZ											
Sudan	(74414) Works trucks, electrical, self-propelled, not fitted with lifting or hand, \$2957-14306	RU	DE	VN	FR	PL	MA	CZ	GB	AU	MX											
Sudan	(77882) Electrical signalling, safety or traffic control equipment for railways,, \$0-101	PK	IN	PH	HK	BR	NO	BW	CH	CO	EG											
Sudan	(51121) Cyclohexane, \$1-13	CL	NL	IN	FR	BE	QA	HK	ZA	CO	ZW											
Sudan	(51481) Quaternary ammonium salts and hydroxides; lecithins and other phosphoamin, \$10-22	KR	CZ	FR	GB	GT	SG	CA	IE	AT	TR											
Suriname	(77882) Electrical signalling, safety or traffic control equipment for railways,, \$0-101	PK	IN	PH	HK	BR	NO	BW	CH	CO	EG											
Suriname	(51481) Quaternary ammonium salts and hydroxides; lecithins and other phosphoamin, \$10-22	KR	CZ	FR	GB	GT	SG	CA	IE	AT	TR											
Suriname	(51485) Diazo-, azo-, and azoxy-compounds, \$4-27	NL	IT	BR	TH	US	HK	DE	TR	RO	BE											
Suriname	(23213) Isobutene-isoprene (butyl) rubber (IIR); halo-isobutene-isoprene rubber (, \$2-5	US	TH	KR	BE	ID	BR	MX	HU	TR	PL											
Suriname	(64193) Filter blocks, slabs and plates, of paper pulp, \$0-5	IT	CA	RU	TR	US	TH	PL	ES	IN	LT											
Suriname	(57291) Styrene-acrylonitrile (SAN) copolymers, \$1-3	TH	CA	ID	IT	VN	BR	ES	IN	RU	IE											
Suriname	(71122) Condensers for steam or other vapour power units, \$10-47	BR	ID	MY	US	PH	VN	TN	PL	IL	PK											
Suriname	(67538) Flat-rlid prod. of stnls steel, hotrlid, of a width of less than 600 mm, \$0-2	PL	FI	GB	DE	PK	FR	IN	SE	GH	BE											
Suriname	(67555) Flat-rlid prod. of stnls steel, coldrlid,w>600mm,th<0.5mm, \$2-5	ID	EG	TR	VN	CA	GB	NL	CH	PT	SK											
Suriname	(57419) Other polyethers, \$11-58	SG	KR	DE	AT	US	MY	FR	JO	GR	FI											
Syrian Arab Republic	(73163) Other grinding machines, numerically controlled, in which the positioning, \$0-5360	NL	DK	FR	MY	PT	GB	CZ	PK	SE	EG											
Syrian Arab Republic	(77879) Parts of the electrical machines and apparatus of subgroup 778.7, \$46-447	QA	MD	GE	SR	ST																
Syrian Arab Republic	(51385) Cyclanic, cyclenic or cycloaterpenic polycarboxylic acids, their anhydride, \$2-7	IN	CH	NL	TR	JP	IT	TH	PL	CZ	US											
Syrian Arab Republic	(43131) Fatty acids; acid oils from refining, \$2-4	JP	EG	BR	AT	FR	TR	RU	CZ	SG	MX											
Syrian Arab Republic	(71332) Spark-ignition reciprocating or rotary internal combustion piston marine, \$526-7792	CA	NL	BE	JM	BR	SE	IT	RU	NO	NA											
Syrian Arab Republic	(77882) Electrical signalling, safety or traffic control equipment for railways,, \$0-101	PK	IN	PH	HK	BR	NO	BW	CH	CO	EG											
Syrian Arab Republic	(67241) Ingots of iron (other than iron of heading 671.33) or n/a steel, \$0-6	ES	US	JP	RO	HU	GB	PH	AU	SE	AT											
Syrian Arab Republic	(51121) Cyclohexane, \$1-13	CL	NL	IN	FR	BE	QA	HK	ZA	CO	ZW											
Syrian Arab Republic	(67442) Flat-rlid prod. iron,n/a steel, coated with chromium oxides or with chromi, \$0-0	IN	IT	DE	PH	SG	JP	PL	BG	TN	NL											
Syrian Arab Republic	(57392) Other vinyl chloride copolymers, \$2-5	MX	TH	IN	US	RU	ID	VN	JP	MY	KR											
Timor-Leste	(88134) Parts and accessories for the equipment of headings 881.31 through 881.33, \$165-375	US	KR	ZA	NO	IT	ES	DK	CO	PT	PL											
Timor-Leste	(59883) Supported catalysts with precious metal or precious metal compounds as th, \$191-419	CZ	NL	SG	RO	DE	IN	ES	PL	FR	TH											
Timor-Leste	(69999) Base metals, wrought, n.e.s., and articles of these metals, n.e.s., \$37-444	US	FI	DE	AT	IT	CA	VN	CH	AU	BR											
Timor-Leste	(74523) Machinery for cleaning or drying bottles or other containers, \$1396-15949	CH	MX	SG	CL	CA	AR	GE	PK	AU	NZ											
Timor-Leste	(73175) Gear-cutting, gear-grinding or gear-finishing machines, \$0-755	IT	MY	PH	IE	BR	PL	SG	GR	NO	BW											
Timor-Leste	(69752) Sanitary ware and parts thereof, n.e.s., of copper, \$43-85	IN	DE	ES	GB	LT	DK	CH	SE	RU	MA											
Timor-Leste	(52364) Sodium triphosphate (sodium tripolyphosphate), \$1-1	US	ID	PH	BR	VN	NL	GB	DE	IS	BE											
Timor-Leste	(65792) Transmission or conveyor belts or belting, of textile material, whether o, \$76-167	RU	TR	FR	PH	KR	AR	DE	JP	FI	CO											
Timor-Leste	(66381) Fabricated asbestos fibres; mixtures with a basis of asbestos or with a b, \$59-142	US	RU	IT	ZA	SK	QA	TN	NL	FR	TR											
Timor-Leste	(57394) Fluoro-polymers, \$12-32	US	JP	NL	TH	KR	VN	ID	ES	IN	GB											
Togo	(74917) Moulds for mineral materials, \$47-173	DE	MY	ES	GB	CH	NO	PL	IN	ZA	BE											
Togo	(72345) Tamping or compacting machinery, not self-propelled, \$3823-8730	PH	FR	US	PE	ES	CO	IT	EG	CZ	HR											
Togo	(67562) Flat-rlid prod. of other alloy steel, coldrlid,w<600mm, \$0-1	FR	CA	CZ	PK	HU	IN	PL	MA	ES	NZ											
Togo	(74351) Cream separators, \$85-5164	MY	CO	AR	CA	PE	CL	MM														
Togo	(73163) Other grinding machines, numerically controlled, in which the positioning, \$0-5360	NL	DK	FR	MY	PT	GB	CZ	PK	SE	EG											
Togo	(77879) Parts of the electrical machines and apparatus of subgroup 778.7, \$46-447	QA	MD	GE	SR	ST																
Togo	(66335) Mica, worked, and articles of mica (including agglomerated or reconstitut, \$37-78	US	BA	FR	CH	GB	CO	AT	HR	NL	ES											
Togo	(51241) Phenol (hydroxybenzene), pure, and its salts, \$0-1	IN	JP	KR	ID	TH	AU	TR	LV	CO	SE											
Togo	(51385) Cyclanic, cyclenic or cycloaterpenic polycarboxylic acids, their anhydride, \$2-7	IN	CH	NL	TR	JP	IT	TH	PL	CZ	US											
Togo	(43131) Fatty acids; acid oils from refining, \$2-4	JP	EG	BR	AT	FR	TR	RU	CZ	SG	MX											
Tonga	(67538) Flat-rlid prod. of stnls steel, hotrlid, of a width of less than 600 mm, \$0-2	PL	FI	GB	DE	PK	FR	IN	SE	GH	BE											
Tonga	(88578) Other clocks, battery, accumulator or mains powered, \$0-5	FR	PL	BE	DE	MX	CH	DK	RO	PT	RS											
Tonga	(69752) Sanitary ware and parts thereof, n.e.s., of copper, \$43-85	IN	DE	ES	GB	LT	DK	CH	SE	RU	MA											
Tonga	(74911) Moulding boxes for metal foundry, \$9-56	IT	SG	DE	GB	ID	TH	IN	BE	AT	PK											
Tonga	(67131) Granules of pig-iron, spiegeleisen, iron or steel, \$0-2	ID	CA	IT	GB	VN	PL	TH	NO	BE	SG											

Technological transformation and innovation for economic diversification and structural transformation in CDDCs

Country	(SITC) description, unit value range (\$)	Top 10 growing markets											
Tonga	(51486) Organic derivatives of hydrazine or of hydroxylamine, \$4-42	CH	IN	JP	CA	IL	DE	NL	AT	ID	KR		
Tonga	(23221) Reclaimed rubber in primary forms or in plates, sheets or strip, \$0-3	ID	TH	NL	JP	BE	US	GR	CZ	MU	RO		
Tonga	(51631) Phosphoric esters and their salts (including lactophosphates); their halo, \$2-11	BR	FR	HU	IN	US	ES	CA	IT	RO	BE		
Tonga	(65191) Metallized yarn, being textile yarn, or strip or the like of heading 651., \$10-57	ID	TH	VN	HU	IN	RO	KR	CH	CZ	LT		
Tonga	(74916) Moulds for glass, \$18-50	US	RU	PH	PT	JP	CO	TH	AT	TR	GT		
Trinidad and Tobago	(23129) Other natural rubber, \$38-87	SE	NL	CH	DK	FI	FR	IN	IT	US	HU		
Trinidad and Tobago	(57399) Other polymers of vinyl chloride or of other halogenated olefins, \$13-31	SE	AU	CH	JP	CA	IN	HK	IE	FR	ES		
Trinidad and Tobago	(87143) Other microscopes for photomicrography, cinephotomicrography or microproj, \$0-247	NL	IT	CA	AU	SG	FR	PH	MY	PK	PE		
Trinidad and Tobago	(73163) Other grinding machines, numerically controlled, in which the positioning, \$0-5360	NL	DK	FR	MY	PT	GB	CZ	PK	SE	EG		
Trinidad and Tobago	(77869) Parts of electrical capacitors, \$94-201	JP	BE	DE	FI	FR	CH	NL	GR	IT	ES		
Trinidad and Tobago	(51396) Carboxylic acids with additional oxygen functions, n.e.s., their anhydrid, \$159-1037	IE	KR	US	MA	BR	HK	PE	IN	IT	PT		
Trinidad and Tobago	(88135) Apparatus and equipment for photographic (including cinematographic) labo, \$2610-6147	KR	US	VN	SG	GB	MY	TN	UZ	IT	CL		
Trinidad and Tobago	(52265) Hydroxide and peroxide of magnesium; oxides, hydroxides and peroxides, of, \$0-1	JP	GB	CA	ID	ES	KR	PT	US	AT	SG		
Trinidad and Tobago	(74473) Other continuous-action elevators and conveyors, bucket-type, \$24852-52644	JP	UZ	MX	PH	CH	CA	SV	DE	NO	CO		
Trinidad and Tobago	(72472) Dry-cleaning machines, \$0-2114	IN	MY	PK	PH	UZ	US	LA	HK	BW	GM		
Uganda	(72665) Gravure printing machinery, \$26758-65715	CH	MM	MN	EG	NO	PT						
Uganda	(77611) Television picture tubes, cathode-ray (including video monitor cathode-ra, \$36-795	BW	EG	PH	TH	IT	IE	CA	GE	HK	DE		
Uganda	(67542) Flat-rld prod. of other alloy steel, hotrld, of a width of 600 mm or more, \$4-10	KR	TR	US	GB	SG	BG	AR	BE	TH	CO		
Uganda	(74916) Moulds for glass, \$50-98	MX	DE	EG	FR	BE	CZ	IT	HU	TR	DK		
Uganda	(74351) Cream separators, \$85-5164	MY	CO	AR	CA	PE	CL	MM					
Uganda	(73163) Other grinding machines, numerically controlled, in which the positioning, \$0-5360	NL	DK	FR	MY	PT	GB	CZ	PK	SE	EG		
Uganda	(77879) Parts of the electrical machines and apparatus of subgroup 778.7, \$46-447	QA	MD	GE	SR	ST							
Uganda	(77889) Electrical parts of machinery or apparatus, n.e.s., \$6-124	ST	GE	AG									
Uganda	(51244) Halogenated, sulphonated, nitrated or nitrosated derivatives of phenols o, \$0-6	KR	IN	NL	CA	DE	HK	US	MY	BE	JP		
Uganda	(66335) Mica, worked, and articles of mica (including agglomerated or reconstitut, \$37-78	US	BA	FR	CH	GB	CO	AT	HR	NL	ES		
United Arab Emirates	(59867) Prepared culture media for development of micro-organisms, \$34-140	QA	MD	GE	SR								
United Arab Emirates	(74362) Machinery and apparatus for filtering or purifying beverages other than w, \$3921-22211	CL	LA	AR	CO	MM	US	BR	PE	MN	NO		
United Arab Emirates	(51612) Acetals and hemiacetals, whether or not with other oxygen function, and t, \$0-6	FR	CH	IT	CA	US	IN	NL	TR	KR	GR		
United Arab Emirates	(65313) Fabrics consisting of layers of parallel synthetic filament yarns superim, \$27-54	BE	RS	CH	EG	DE	FR	HU	IT	NL	FI		
United Arab Emirates	(73165) Sharpening (tool- or cutter-grinding) machines, numerically controlled, \$2244-106861	VN	GB	RU	ID	TR	PL	ES	SK	CZ	US		
United Arab Emirates	(72339) Other moving, grading, levelling, scraping, excavating, compacting or ext, \$0-5049	BW	LA	SG	EG	MM	IN	CL	CA	UZ	PE		
United Arab Emirates	(26671) Synthetic staple fibres, processed for spinning, of nylon or other polyam, \$4-20	IN	TR	CZ	BG	VN	SN	US	SK	SV	ZA		
United Arab Emirates	(57399) Other polymers of vinyl chloride or of other halogenated olefins, \$13-31	SE	AU	CH	JP	CA	IN	HK	IE	FR	ES		
United Arab Emirates	(57542) Melamine resins, \$4-7	AU	TR	SV	UZ	JP	ZA	AT	HK	CH	FR		
United Arab Emirates	(29231) Bamboos, \$4-9	DK	SI	ES	FR	MA	PT	AZ	HR	IT	DE		
United Republic of Tanzania	(73163) Other grinding machines, numerically controlled, in which the positioning, \$0-5360	NL	DK	FR	MY	PT	GB	CZ	PK	SE	EG		
United Republic of Tanzania	(72719) Parts for the machines of headings 721.27 and 727.11, \$90-138	IN	KR	RW	JP	FR	RU	EG	QA	AT	SN		
United Republic of Tanzania	(74441) Built-in jacking systems of a type used in garages, \$3029-6315	CH	GB	CA	BE	ES	SE	DE	PL	RO	NL		
United Republic of Tanzania	(77869) Parts of electrical capacitors, \$94-201	JP	BE	DE	FI	FR	CH	NL	GR	IT	ES		
United Republic of Tanzania	(77879) Parts of the electrical machines and apparatus of subgroup 778.7, \$46-447	QA	MD	GE	SR	ST							
United Republic of Tanzania	(73167) Honing or lapping machines, \$0-210	CA	NL	PL	BE	GB	EG	ES	YE	BW	PE		
United Republic of Tanzania	(51385) Cyclanic, cyclenic or cycloterpenic polycarboxylic acids, their anhydride, \$2-7	IN	CH	NL	TR	JP	IT	TH	PL	CZ	US		
United Republic of Tanzania	(43131) Fatty acids; acid oils from refining, \$2-4	JP	EG	BR	AT	FR	TR	RU	CZ	SG	MX		

Country	(SITC) description, unit value range (\$)	Top 10 growing markets									
United Republic of Tanzania	(74414) Works trucks, electrical, self-propelled, not fitted with lifting or hand, \$2957-14306	RU	DE	VN	FR	PL	MA	CZ	GB	AU	MX
United Republic of Tanzania	(67551) Flat-rlid prod. of stnls steel, coldrlid,w>600mm,th>4.75mm, \$0-2	PL	IT	CZ	ES	DK	CH	TR	SI	PH	JP
Uruguay	(73165) Sharpening (tool- or cutter-grinding) machines, numerically controlled, \$2244-106861	VN	GB	RU	ID	TR	PL	ES	SK	CZ	US
Uruguay	(72345) Tamping or compacting machinery, not self-propelled, \$3823-8730	PH	FR	US	PE	ES	CO	IT	EG	CZ	HR
Uruguay	(67532) Flat-rlid prod. of stnls steel, hotrlid, of a width of 600 mm or more and, \$0-1	FR	IN	IT	MY	TR	DE	RU	BR	JP	NL
Uruguay	(88134) Parts and accessories for the equipment of headings 881.31 through 881.33, \$165-375	US	KR	ZA	NO	IT	ES	DK	CO	PT	PL
Uruguay	(62112) Solutions, rubber, compounded, unvulcanized; dispersions, rubber, compoun, \$18-41	SE	JP	NO	SI	TN	DK	RU	CH	IN	GR
Uruguay	(73163) Other grinding machines, numerically controlled, in which the positioning, \$0-5360	NL	DK	FR	MY	PT	GB	CZ	PK	SE	EG
Uruguay	(74441) Built-in jacking systems of a type used in garages, \$3029-6315	CH	GB	CA	BE	ES	SE	DE	PL	RO	NL
Uruguay	(57391) Vinyl chloride-vinyl acetate copolymers, \$4-9	NL	IT	EG	JP	HK	SI	FR	IN	PL	NZ
Uruguay	(77879) Parts of the electrical machines and apparatus of subgroup 778.7, \$46-447	QA	MD	GE	SR	ST					
Uruguay	(73167) Honing or lapping machines, \$0-210	CA	NL	PL	BE	GB	EG	ES	YE	BW	PE
Vanuatu	(77882) Electrical signalling, safety or traffic control equipment for railways,, \$0-101	PK	IN	PH	HK	BR	NO	BW	CH	CO	EG
Vanuatu	(89123) Airgun pellets and parts of cartridges for shotguns, \$3-21	PH	GB	FR	IT	CG	DE	ES	SK	GR	JM
Vanuatu	(71122) Condensers for steam or other vapour power units, \$10-47	BR	ID	MY	US	PH	VN	TN	PL	IL	PK
Vanuatu	(57419) Other polyethers, \$11-58	SG	KR	DE	AT	US	MY	FR	JO	GR	FI
Vanuatu	(89935) Parts of lighters, n.e.s., other than flints and wicks, \$16-60	ID	US	MY	VN	PH	ES	TN	IN	IT	SE
Vanuatu	(26651) Synthetic staple fibres, not processed for spinning, of nylon or other po, \$4-22	US	HK	BE	DE	TR	FR	KR	GB	IN	SI
Vanuatu	(72846) Machinery for treating metal (including electric wire coil-winders), n.e., \$820-15997	MX	US	IN	CH	SG	BR	MM	LA	NO	MD
Vanuatu	(72631) Machinery, apparatus and equipment (other than the machine tools of subgr, \$0-1236	MY	NL	MX	BE	CA	MM	PH	FR	RO	IN
Vanuatu	(74362) Machinery and apparatus for filtering or purifying beverages other than w, \$23-1005	US	CH	IN	BR	GE	NO	AM	MD	AR	MY
Vanuatu	(89986) Parts of slide fasteners, \$36-75	PT	AT	HK	CZ	DK	SI	TN	MK	KR	RO
Venezuela	(73165) Sharpening (tool- or cutter-grinding) machines, numerically controlled, \$2244-106861	VN	GB	RU	ID	TR	PL	ES	SK	CZ	US
Venezuela	(51133) Tetrachloroethylene (perchloroethylene), \$0-0	TR	BR	IN	KR	EG	ZA	IT	MA	CO	GT
Venezuela	(57542) Melamine resins, \$4-7	AU	TR	SV	UZ	JP	ZA	AT	HK	CH	FR
Venezuela	(72345) Tamping or compacting machinery, not self-propelled, \$3823-8730	PH	FR	US	PE	ES	CO	IT	EG	CZ	HR
Venezuela	(67532) Flat-rlid prod. of stnls steel, hotrlid, of a width of 600 mm or more and, \$3-4	CA	MY	BE	AT	SK	KR	ES	FI	IN	CZ
Venezuela	(73163) Other grinding machines, numerically controlled, in which the positioning, \$0-5360	NL	DK	FR	MY	PT	GB	CZ	PK	SE	EG
Venezuela	(77869) Parts of electrical capacitors, \$94-201	JP	BE	DE	FI	FR	CH	NL	GR	IT	ES
Venezuela	(77879) Parts of the electrical machines and apparatus of subgroup 778.7, \$46-447	QA	MD	GE	SR	ST					
Venezuela	(52263) Sodium hydroxide in aqueous solution (soda lye or liquid soda), \$3-7	SK	SG	RU	JP	IE	FR	GR	HK	PH	NO
Venezuela	(65496) Terry towelling and similar woven terry fabrics of textile materials (oth, \$17-35	GB	NO	ES	CA	FR	RO	IT	LT	IS	TH
Yemen	(54143) Caffeine and its salts, \$11-28	IE	FR	IT	SG	US	CA	KR	CL	ES	TH
Yemen	(77882) Electrical signalling, safety or traffic control equipment for railways,, \$0-101	PK	IN	PH	HK	BR	NO	BW	CH	CO	EG
Yemen	(51121) Cyclohexane, \$1-13	CL	NL	IN	FR	BE	QA	HK	ZA	CO	ZW
Yemen	(51481) Quaternary ammonium salts and hydroxides; lecithins and other phosphoamin, \$10-22	KR	CZ	FR	GB	GT	SG	CA	IE	AT	TR
Yemen	(67531) Flat-rlid prod. of stnls steel, hotrlid, of a width of 600 mm or more and, \$2-4	KR	VN	PL	TH	IT	BE	ID	NL	TR	IN
Yemen	(51485) Diazo-, azo-, and azoxy-compounds, \$4-27	NL	IT	BR	TH	US	HK	DE	TR	RO	BE
Yemen	(23214) Chloroprene (chlorobutadiene) rubber (CR), \$3-7	MY	NL	BR	MX	GB	JP	PL	ZA	TH	CA
Yemen	(59818) Wood tar; wood tar oils; wood creosote; wood naphtha; vegetable pitch; br, \$1-13	KZ	NL	FR	DK	NZ	HU	DE	ES	IN	KR
Yemen	(23213) Isobutene-isoprene (butyl) rubber (IIR); halo-isobutene-isoprene rubber (, \$2-5	US	TH	KR	BE	ID	BR	MX	HU	TR	PL
Yemen	(52595) Compounds, inorganic or organic, of rare earth metals, of yttrium or of s, \$16-119	TH	IN	JP	US	ES	IT	PH	MK	MY	EE
Zambia	(73165) Sharpening (tool- or cutter-grinding) machines, numerically controlled, \$2244-106861	VN	GB	RU	ID	TR	PL	ES	SK	CZ	US
Zambia	(29231) Bamboos, \$4-9	DK	SI	ES	FR	MA	PT	AZ	HR	IT	DE
Zambia	(67532) Flat-rlid prod. of stnls steel, hotrlid, of a width of 600 mm or more and, \$0-1	FR	IN	IT	MY	TR	DE	RU	BR	JP	NL

Technological transformation and innovation for economic diversification and structural transformation in CDDCs

Country	(SITC) description, unit value range (\$)	Top 10 growing markets									
Zambia	(69991) Tungsten, wrght, artcl. nes, \$260-561	NO	CH	FR	RU	CO	BG	IT	DE	PL	BE
Zambia	(67349) Flat-rlid prod. iron, n/a steel, coldrlid, other, \$10-52	ES	DE	JP	KR	SG	QA	GT	IE	CH	ZA
Zambia	(52256) Titanium oxides, \$27-112	FR	GB	KR	AT	AU	BR	ES	CO	CL	RU
Zambia	(64174) Kraft paper, coated with kaolin (China clay), weight < 150 g/m2, \$0-1	NL	IN	FR	CL	AU	TN	EG	AR	LA	GR
Zambia	(73171) Shaping or slotting machines, \$232-7443	US	IN	CA	MY	FR	SG	GB	MM	PL	CZ
Zambia	(62112) Solutions, rubber, compounded, unvulcanized; dispersions, rubber, compoun, \$18-41	SE	JP	NO	SI	TN	DK	RU	CH	IN	GR
Zambia	(73163) Other grinding machines, numerically controlled, in which the positioning, \$0-5360	NL	DK	FR	MY	PT	GB	CZ	PK	SE	EG
Zimbabwe	(73163) Other grinding machines, numerically controlled, in which the positioning, \$0-5360	NL	DK	FR	MY	PT	GB	CZ	PK	SE	EG
Zimbabwe	(67512) Flat-rlid prod. of silicon-electrical steel, width < 600 mm, \$0-1	SI	DE	KR	VN	ID	BR	BE	RS	CZ	PK
Zimbabwe	(51385) Cyclanic, cyclenic or cycloterpenic polycarboxylic acids, their anhydride, \$2-7	IN	CH	NL	TR	JP	IT	TH	PL	CZ	US
Zimbabwe	(43141) Vegetable waxes (other than triglycerides), whether or not refined or col, \$4-16	DE	CA	US	ES	BE	ID	IN	PL	TR	AR
Zimbabwe	(54143) Caffeine and its salts, \$11-28	IE	FR	IT	SG	US	CA	KR	CL	ES	TH
Zimbabwe	(67249) Ingots and other primary forms of other alloy steel, \$1-9	IT	ES	LT	CA	ZA	MX	PL	CZ	GB	VN
Zimbabwe	(77882) Electrical signalling, safety or traffic control equipment for railways., \$0-101	PK	IN	PH	HK	BR	NO	BW	CH	CO	EG
Zimbabwe	(51571) Heterocyclic compounds with nitrogen hetero-atom(s) only, containing an u, \$19-141	BR	DE	CH	ES	BE	JP	CA	IN	FR	SG
Zimbabwe	(67241) Ingots of iron (other than iron of heading 671.33) or n/a steel, \$0-6	ES	US	JP	RO	HU	GB	PH	AU	SE	AT
Zimbabwe	(51631) Phosphoric esters and their salts (including lactophosphates); their halo, \$0-2	DE	TH	KR	NL	BE	RU	PL	TR	ID	GB

Source: UNCTAD.

Annex D – Data and methodology

Economic complexity index and product complexity

Data

UN COMTRADE dataset based on import data reporting bilateral trade using SITC commodity classification, Revision 3 (5-digit level) trade classification covering 240 economies in the period from 1995 to 2019.

Methodology

Differentiation of products according to unit value

The method to differentiate products according to differences in unit values follows the method proposed in Freire (2017):

1) The bilateral trade is initially sorted by the unit used to measure the quantity of the trade; such unit codes are part of the UN COMTRADE dataset and are based on the standards of quantity recommended by the World Customs Organization (WCO) (e.g., weight in kilograms, length in meters and volume in cubic meters). The quantity unit code is added to the 5-digit SITC classification to create an “artificial” 6-digit classification. The assumption is that if the products under the same 5-digit code are registered using different quantity unit codes then they may have different characteristics and could be classified as different products.

2) The bilateral trade flow in the same 6-digit classification is sorted by the unit value of the trade. The distribution of unit value (x) for the same 6-digit product is then divided into up to nine groups. The first 3 groups are:

- Group 1 if $x < q1(x)$
- Group 2 if $q1(x) \leq x \leq q3(x)$
- Group 3 if $q3(x) < x \leq q3(x) + (1.5 (q3(x) - q1(x)))$

Where $q1$ and $q3$ are the first and the third quartiles of the distribution, respectively.

For $y > q3(x) + 1.5 (q3(x) - q1(x))$, the distribution of the unit value (y) above this threshold is further divided into 4 quartiles and 3 more groups are created:

- Group 4 if $y < q1(y)$
- Group 5 if $q1(y) \leq y \leq q3(y)$
- Group 6 if $q3(y) < y \leq q3(y) + (1.5 (q3(y) - q1(y)))$

Again, for $z > q3(y) + 1.5 (q3(y) - q1(y))$, the distribution of the unit value (z) above this threshold is further divided into 4 quartiles and 3 more groups are created:

- Group 7 if $z < q1(z)$
- Group 8 if $q1(z) \leq z \leq q3(z)$
- Group 9 if $q3(z) < z \leq q3(z) + (1.5 (q3(z) - q1(z)))$

The group number is added to the 6-digit classification to create an “artificial” 7-digit classification. At the end of this procedure, each product is represented by such 7-digit classification code in which the first five digits correspond to the 6-digit SITC code, the 6th digit corresponds to the quantity unit code of the product and the 7th digit represents the unit value group that includes the unit value of the product.

Economic complexity index

The economic complexity index is calculated following Freire (2017) as a revised version of the method of reflections proposed by Hidalgo and Hausmann (2009). The method of reflections is used to estimate the capabilities associated with products and economies. The revised method used in this Report represents the network connecting countries to products using the adjacency matrix M_{cp} :

$$M_{cp} = \begin{cases} 1 & \text{if country } c \text{ exports product } p \\ 0 & \text{otherwise} \end{cases} \quad (1)$$

The method of reflections iteratively calculates measures of diversification ($k_{c,N}$) and ubiquity ($k_{p,N}$) that are generalized as follows:

$$k_{c,N} = \frac{1}{k_{c,0}} \sum_p M_{cp} k_{p,N-1} \quad (2)$$

$$k_{p,N} = \frac{1}{k_{p,0}} \sum_c M_{cp} k_{c,N-1} \quad (3)$$

for $N > 0$

In equations 2 and 3, $k_{c,0}$ represents the number of products exported by country c and $k_{p,0}$ represents the number of countries that export product p .

$$k_{c,0} = \sum_p M_{cp} \quad (4)$$

$$k_{p,0} = \sum_c M_{cp} \quad (5)$$

Therefore, the method of reflections produces, for each country c , an ordered list of N real numbers ($k_{c,0}, k_{c,1}, k_{c,2}, \dots, k_{c,N}$), where N is the number of iterations of the method of reflections.

The economic complexity is calculated as:

$$PCAP = \frac{k_{c,0} \times k_{c,2} \times k_{c,4} \times k_{c,6} \times k_{c,8} \times k_{c,10} \times k_{c,12} \times k_{c,14} \times k_{c,16} \times k_{c,18}}{k_{c,1} \times k_{c,3} \times k_{c,5} \times k_{c,7} \times k_{c,9} \times k_{c,11} \times k_{c,13} \times k_{c,15} \times k_{c,17} \times k_{c,19}} \quad (6)$$

And the index is calculated using the min-max normalization:

$$index = \frac{PCAP - \text{Min}(PCAP)}{\text{Max}(PCAP) - \text{Min}(PCAP)} \quad (7)$$

Product complexity index

The product complexity index is calculated as:

$$PCOMP = \frac{k_{p,5} - \overline{k_{p,5}}}{\sigma} \quad (8)$$

Where $\overline{k_{p,5}}$ is the mean and σ is the standard deviation of the distribution of $k_{p,5}$.

Proximity in the Product space

The measure of proximity between products A and B (Φ_{AB}) in the product space is calculated using a method similar to that proposed by (Hidalgo et al., 2007), as the minimum value between the conditional probability $P(A|B)$ of a country producing A given that it produces B and the conditional probability $P(B|A)$ of a country producing B given that it produces A :

$$\Phi_{AB} = \Phi_{BA} = \min(P(A|B), P(B|A)) \quad (9)$$

The proximity between two products, therefore, ranges from 0%, in the case in which no country produces both products, to 100% in the case in which all countries that produce one good also produces the other.

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