
TRADE & INDUSTRIAL POLICY STRATEGIES

# IMPORTS LOCALISATION AND SUPPLY CHAIN DISRUPTION STUDY: SECOND QUARTER 2020

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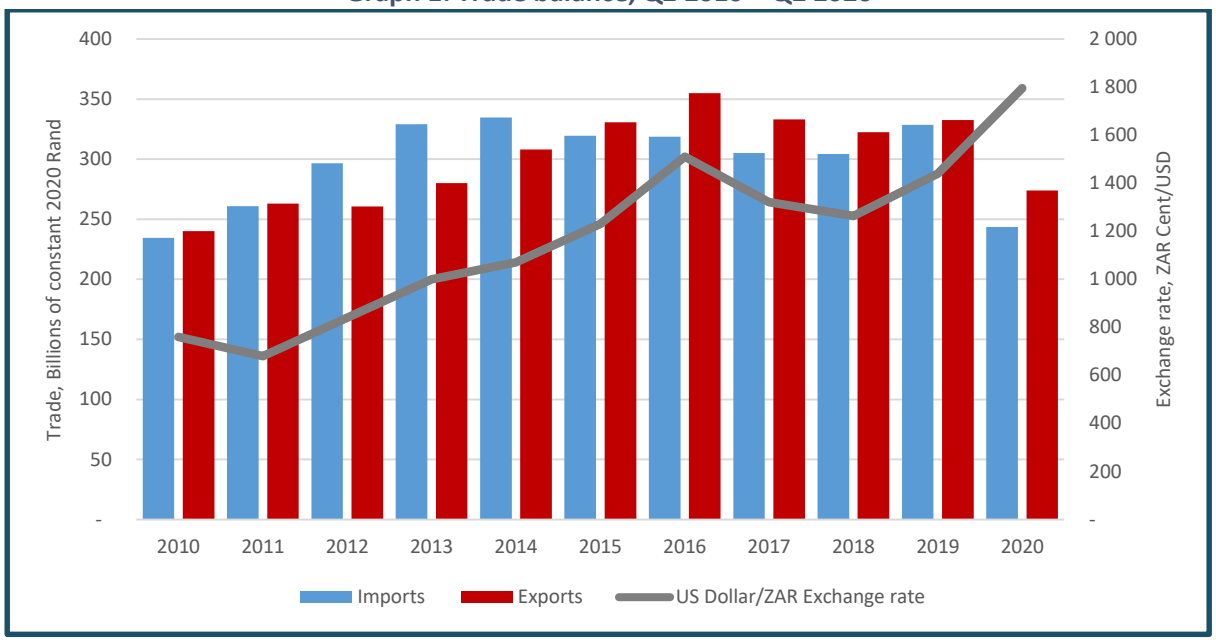
## TRADE ANALYSIS

South Africa's trade surplus grew to R30 billion in the second quarter of 2020, from R4 billion in the second quarter of 2019. With the exception of 2012 to 2014, the surplus is consistent with second quarter surpluses seen in the past decade. However, due to the COVID-19 pandemic, there was an overall decline in year-on-year trade, with imports declining by 26% and exports declining by 18% (see Graph 1).

**Graph 1: Trade balance, Q2 2010 – Q2 2020**




*Source:* Calculated from South African Revenue Service (SARS) and South African Reserve Bank (SARB).

## PRODUCT ANALYSIS

### Product 1: Urea, whether or not in aqueous solution

Urea, whether or not in aqueous solution (HS 31021000) is a major import commodity for various local industries such as agriculture and pharmaceuticals. The product is ranked 39th on the Top 100 imports by Rand value. Annual imports of this product amounted to R3.1 billion in 2019, while exports amounted to R308.9 million. Table 1 shows the key data for this product, including the Rand value of imports, import quantities, as well as the designation status.

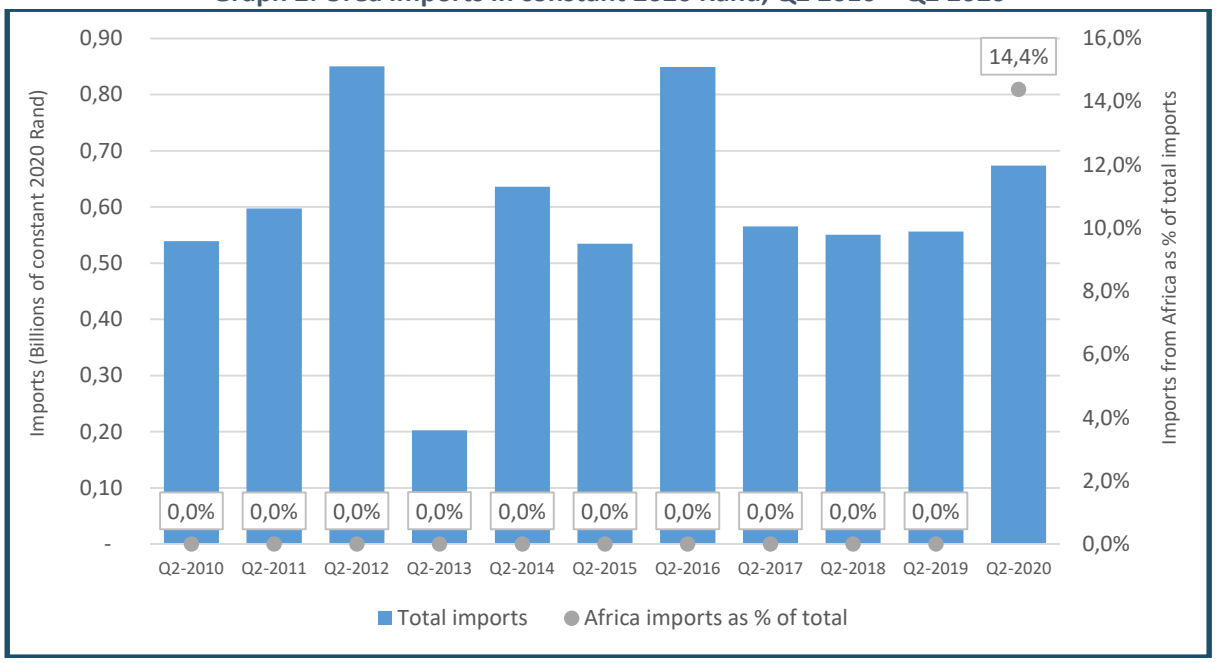
**Table 1: Product key data – Urea, Q2 2020**

| KEY DATA | NOT PREVIOUSLY MADE IN SA | PREVIOUSLY MADE BUT CAN'T COMPETE IN FACE OF LOW COST COMPETITORS | CURRENTLY MADE IN SA AND IMPORTS INCREASING OVER TIME |
|---|---|---|---|
| **Rank in Top 100 imports by Rand value** | | 39th | |
| **Rand value of imports** | | R677.9 million | |
| **Rank in Top 50 imports by quantity** | | 8th | |
| **Quantity of imports** | | 155.1 million kg | |
| **Capital good or consumer good** | | Capital goods | |
| **If intermediate good; what value chain?** | | Various (pharmaceuticals, agriculture etc.) | |
| **Good for final consumption (yes/no)** | | No | |
| **Designation status** | | Not designated | |

Synthetic urea is a vital commodity for the agriculture industry where it is valued for its use as both a nitrogen rich fertiliser and in the production of other nitrogen fertilisers. It is produced by combining ammonia and carbon dioxide (Perdaman Industries, 2018). Given its nitrogen richness, urea is one of the cheapest fertilisers to transport, making it relatively cheap to import. Outside of agriculture, urea has applications in industries such as pharmaceuticals, where it is used in the production of sedatives and sleeping pills; and in the manufacture of resins in the plastics industry; as well as its use as a flame-proofing agent for dry chemical fire extinguishers, among other uses.

Data on local urea production is not readily available. However, it appears that there has not been any considerable local production of urea since the restructuring of AECI in the early 2000s, when about 320 000 tonnes of urea were produced locally per annum. Quantities imported grew from 684 908 tonnes in 2010 to 808 421 tonnes in 2019, while the annual Rand value of imports grew from R2.5 billion to R3.1 billion over the same period, in constant 2019 Rand. On a quarterly basis, imports grew from R540 million in the second quarter of 2010 to R677.9 million in the second quarter of 2020 (see Graph 2). Qatar is the largest supplier of urea to South Africa, with the United Arab Emirates and Saudi Arabia also providing significant quantities. Egypt exported urea to South Africa for the first time in the second quarter of 2020, which amounted to R96.9 million. With the exception of Egypt, there are no other significant regional suppliers of this product.

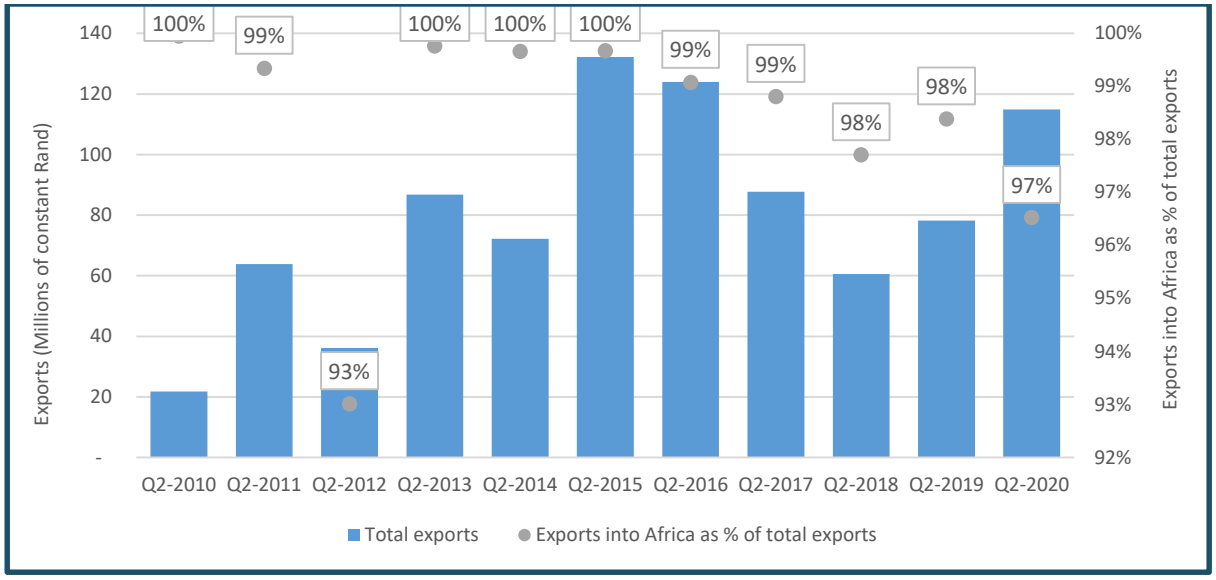
**Graph 2: Urea imports in constant 2020 Rand, Q2 2010 – Q2 2020**




*Source:* Calculated from ITC Trade Map data. Downloaded from https://www.trademap.org in September 2020.

South Africa's exports of urea are low, although there has been some growth over the years. Between the second quarter of 2010 and the second quarter of 2020, urea exports grew more than 400%, from R22 million to R115 million. The bulk of the exports (97% by the second quarter of 2020) went to other African countries, with the balance going to France (R3.8 million). Graph 3 shows urea exports for 2010 to 2020.

Graph 3: Exports of urea in constant 2020 Rand, Q2 2010 – Q2 2020




*Source:* Calculated from ITC Trade Map data. Downloaded from https://www.trademap.org in September 2020.

According to the Industrial Development Corporation (IDC, 2017), a local manufacturing facility producing urea was under development. It is not clear what happened to this project, but the IDC's 2019 integrated report lists this as one of the projects under development, which could mean the project is still in the feasibility stage.

## Product 2: Dextrins and other modified starches

Dextrins and other modified starches (HS 35051000) are obtained through the heating of starch using moisture and an acid.[1] Dextrins can be manufactured from any starch, including maize and cassava for instance. Depending on their composition and classification (white dextrins, yellow dextrins as well as British gums), dextrins have applications in various industries, particularly as an adhesive used in paper products, water-soluble glue, binding agents for pharmaceuticals, along with binding and stabilising agents for food products. Table 2 shows the product data for dextrins, including its rank in the Top 100, the Rand value of imports, as well as the designation status.

Table 2: Product key data – dextrins, Q2 2020

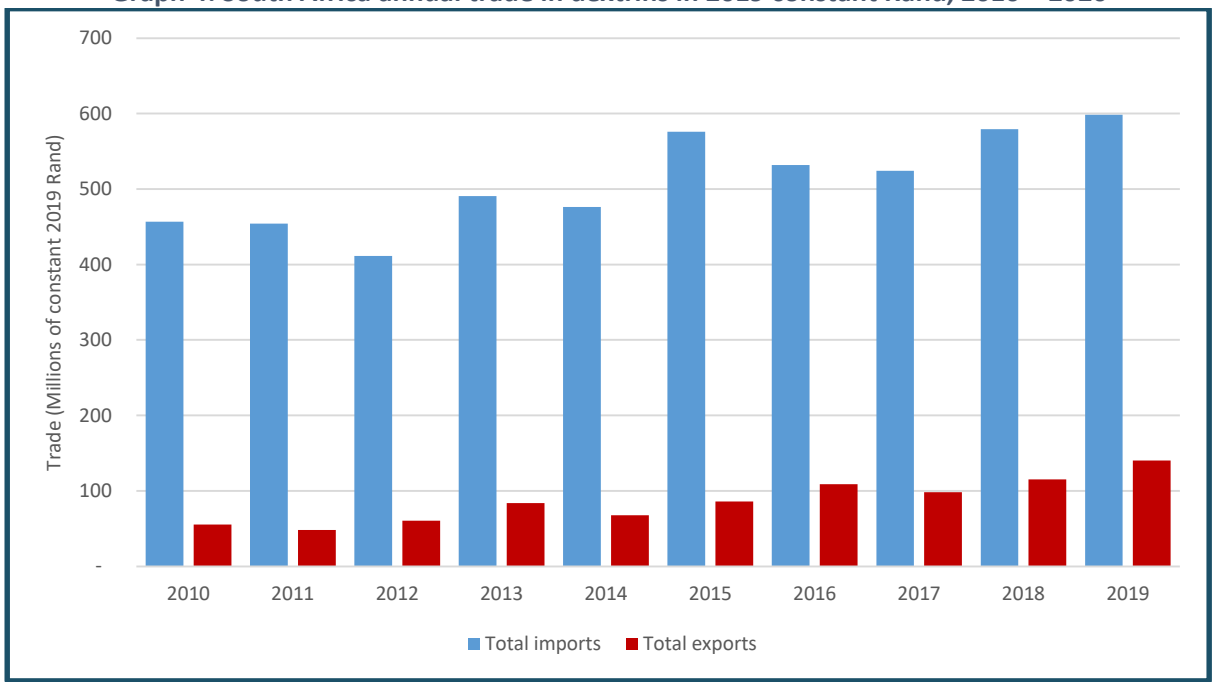
| KEY DATA | NOT PREVIOUSLY MADE IN SA | PREVIOUSLY MADE BUT CAN'T COMPETE IN FACE OF LOW COST COMPETITORS | CURRENTLY MADE IN SA AND IMPORTS INCREASING OVER TIME |
|---|---|---|---|
| **Rank in Top 100 imports by Rand value** | | | 90th |
| **Rand value of imports** | | | R279 million |
| **Rank in Top 50 imports by quantity** | | | N/A |
| **Quantity of imports** | | | 17 million kg |
| **Capital good or consumer good** | | | Capital good |
| **If intermediate good; what value chain?** | | | Various (paper, food) |
| **Good for final consumption (yes/no)** | | | No |
| **Designation status** | | | Not designated |

[1] https://www.sciencedirect.com/topics/neuroscience/dextrin.

The extent of local production of dextrins is not clear. Tongaat Hulett has reported converting more than 670 000 tonnes of maize per annum into starch and other starch-based products. Chigumira, et al. (2016) noted that between 2005 and 2012, maize starch accounted for the highest share of starch demand (60%), followed by cassava starch at 20%, with these compositions changing little over the years. South Africa has the highest demand for starch and dextrins within the continent, and meets the bulk of this demand with imports.

Graph 4 shows South Africa's annual imports and exports of dextrins and other modified starches for the period between 2010 and 2020. Although exports grew at a higher rate (154%) than imports (31%) over this period, South Africa remains a net importer of dextrins.

**Graph 4: South Africa annual trade in dextrins in 2019 constant Rand, 2010 – 2020**

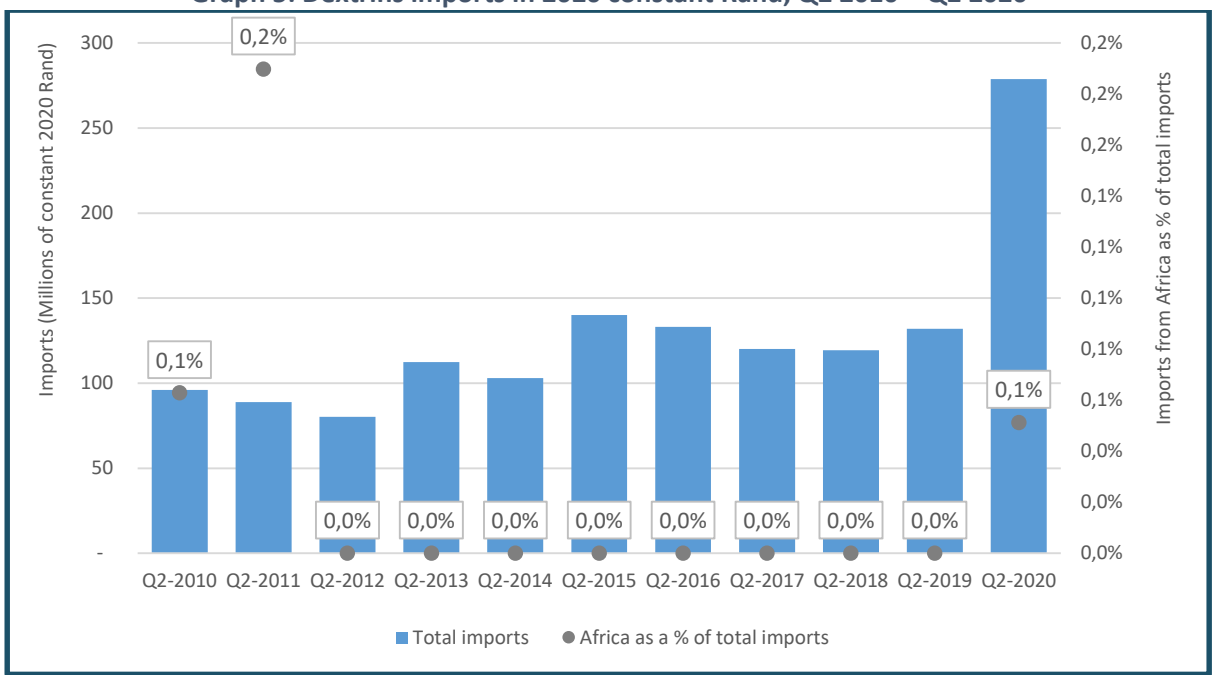



*Source:* Calculated from ITC Trade Map data. Downloaded from https://www.trademap.org in September 2020.

Graph 5 shows dextrins imports for the period between the second quarter of 2010 and the second quarter of 2020. Generally, quarterly imports remained below R150 million, with the exception of the second quarter of 2020 when imports reached R279 million. The share of imports from the region is insignificant. Although the surge in imports might be a once-off occurrence driven by COVID-19 (given its use in essential sectors like pharmaceuticals, food, clothing and textiles, and paper and paper packaging manufacturing), this is a commodity for which there is high local and international demand, and South Africa can possibly reap benefits from local manufacturing.

Raw materials for dextrins and other modified starch production already exist locally and regionally. South Africa produces more than 10 million tonnes of maize per annum and about 1.5 million tonnes of wheat per annum, and continental cassava production was last estimated at about 158 million tonnes per annum.

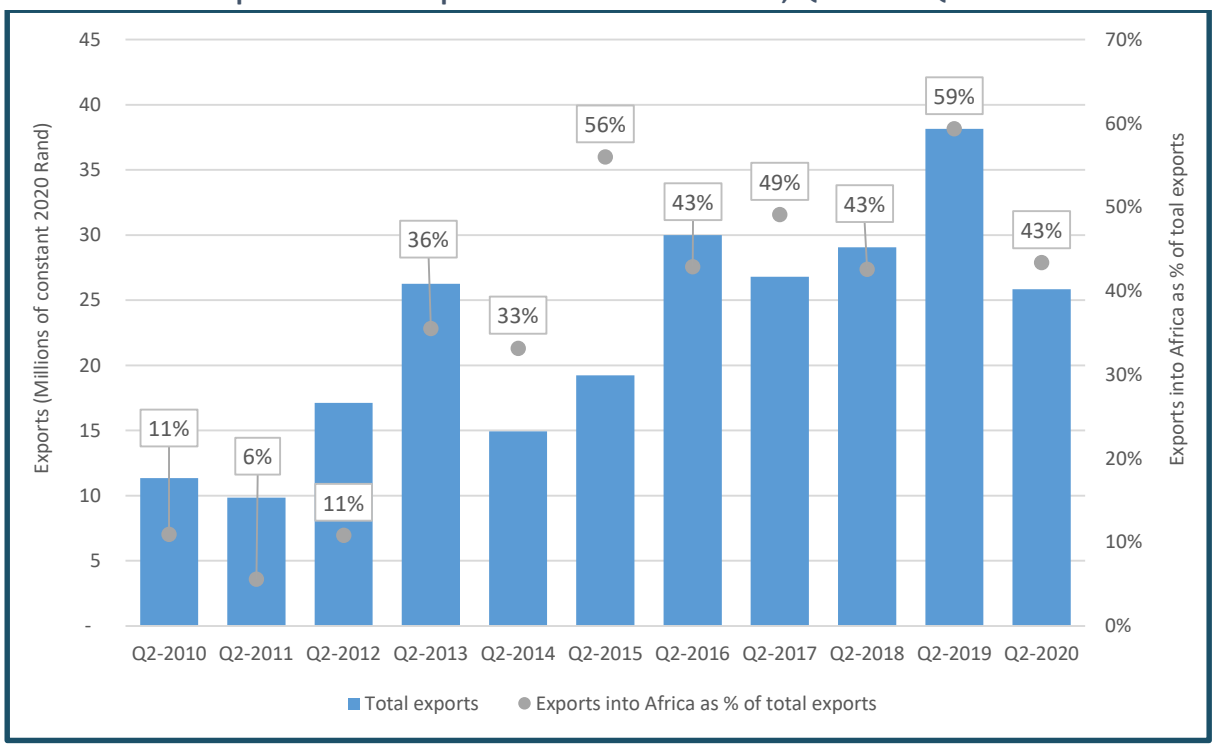
**Graph 5: Dextrins imports in 2020 constant Rand, Q2 2010 – Q2 2020**




*Source:* Calculated from ITC Trade Map data. Downloaded from https://www.trademap.org in September 2020.

Graph 6 shows dextrins exports for the period between the second quarter of 2010 and the second quarter of 2020. Overall, exports grew by 154% over that period, with regional exports growing from R1.2 million (11% of total exports) in 2010 to R11.2 million (43% of total exports) in 2020. Exports to Australia and the Philippines accounted for a combined 37% of total export; while Kenya, Zambia and Zimbabwe accounted for a combined 26.8% of total exports.

**Graph 6: Dextrins exports in 2020 constant Rand, Q2 2010 – Q2 2020**




*Source:* Calculated from ITC Trade Map data. Downloaded from https://www.trademap.org in September 2020.

## Product 3: Cards incorporating one or more electronic integrated circuit "smart cards": digital

Cards incorporating one or more electronic integrated circuit "smart cards" (HS 85235210) refers to a variety of devices that require physical contact or use a contactless radio frequency to connect to a reader.[2] Smart cards use microcontrollers (which are reprogrammable circuit boards) or microchips (non-reprogrammable circuit boards) to store data and perform a range of functions. Smart cards have applications in various industries such as telecommunications (for sim cards), banking (for bank cards), and identification cards (for Smart ID cards), among other uses. The product was ranked 66th in the Top 100 list, with imports amounting to R375 million in the second quarter of 2020 (see Table 3).

**Table 3: Product key data – smart cards, Q2 2020**

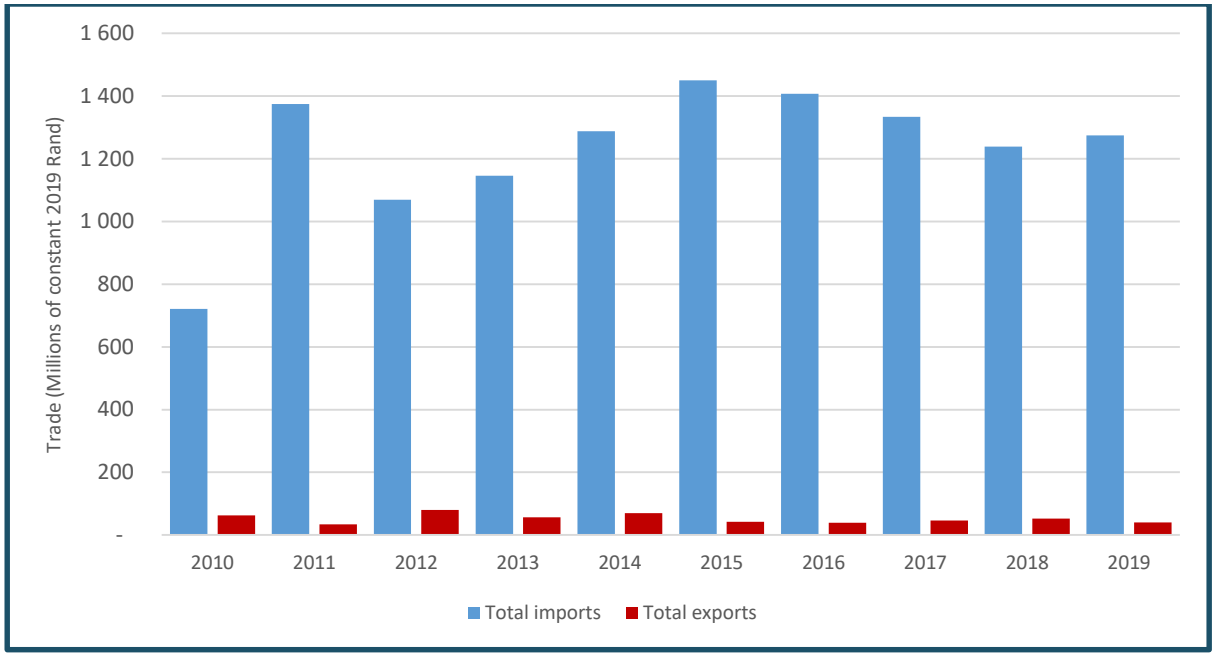
| KEY DATA | NOT PREVIOUSLY MADE IN SA | PREVIOUSLY MADE BUT CANNOT COMPETE IN FACE OF LOW COST COMPETITORS | CURRENTLY MADE IN SA AND IMPORTS INCREASING OVER TIME |
|---|---|---|---|
| **Rank in Top 100 imports by Rand value** | | | 66th |
| **Rand value of imports** | | | R375 million |
| **Rank in Top 50 imports by quantity** | | | 20th |
| **Quantity of imports** | | | 65.9 million units |
| **Capital good or consumer good** | | | Capital goods |
| **If intermediate good; what value chain?** | | | Various (Telecommunications, banking etc.) |
| **Good for final consumption (yes/no)** | | | No |
| **Designation status** | | | Not designated |

South Africa manufactures an estimated 12 to 30 million smart cards a year through private and state manufacturers. Following its acquisition of Prism, Net1 now manufacturers between 12 and 15 million International Organization for Standardization (ISO) 9002[3] compliant smart cards; with the Government Printing Works (GPW) reporting another three million in Smart ID card production. Other local card manufacturers include Card Technology Services, which prints about 1.5 million cards a month.

The 30 million smart cards represent 10.8% of total annual imports, which amounted to 277.1 million cards in 2019. South Africa is a net importer of smart cards, with the bulk (30.9%) of the 2019 supply coming from China, followed by another 22.9% from India. Exports amounted to 8.3 million smart cards in 2019, with the bulk (57%) going to Namibia and another 18% going to Zambia. Graph 7 shows annual imports and exports of smart cards in 2019 constant Rand for the period between 2010 and 2020. Over this period, imports rose by 76.7%, compared to a 35.5% decline for exports, in Rand terms.

[2] https://www.securetechalliance.org/smart-cards-faq/
[3] Accreditation relating to quality procedures.

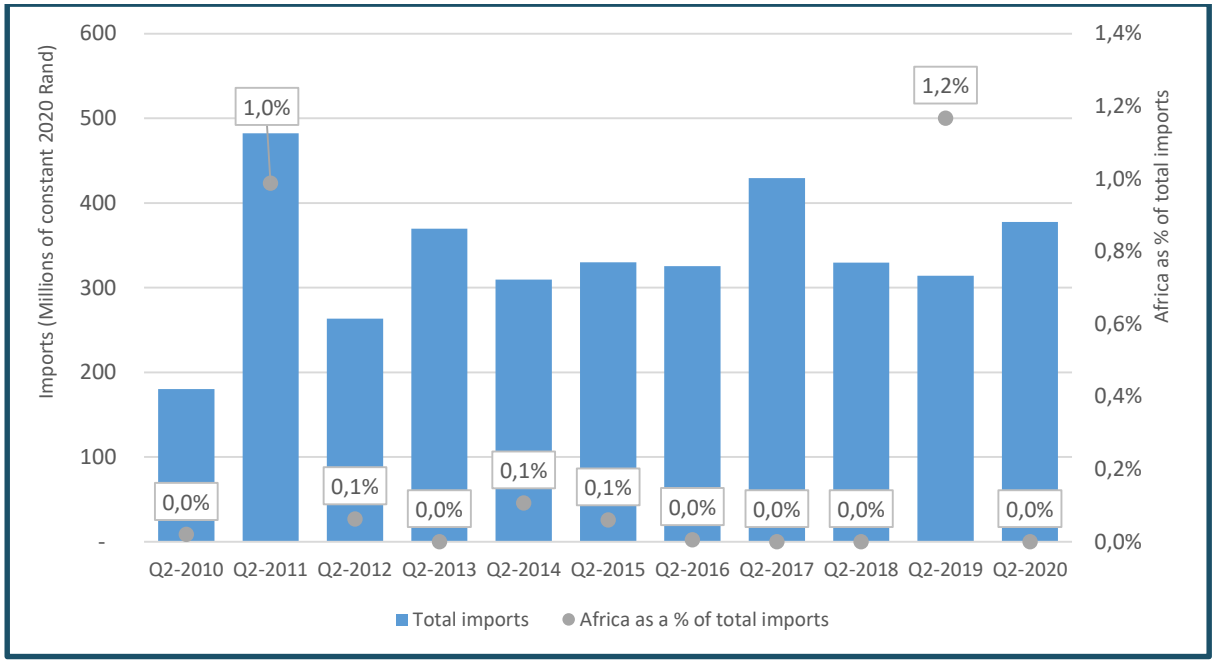
**Graph 7: South Africa annual trade in smart cards in 2019 constant Rand, 2010 – 2020**




*Source:* Calculated from ITC Trade Map data. Downloaded from https://www.trademap.org in October 2020.

The extent of regional production of smart cards is not clear. However, there are some sporadic imports from the region (see Graph 8). The share of imports from the region peaked at 1% in the second quarter of 2011, accounting for R3.1 million of the total R482 million. Although second quarter imports for 2019 saw the share of regional imports increase to 1.2%, these were reimports[4] from South Africa and therefore do not represent actual imports from the region.

**Graph 8: Smart cards imports in 2020 constant Rand, Q2 2010 - Q2 2020**

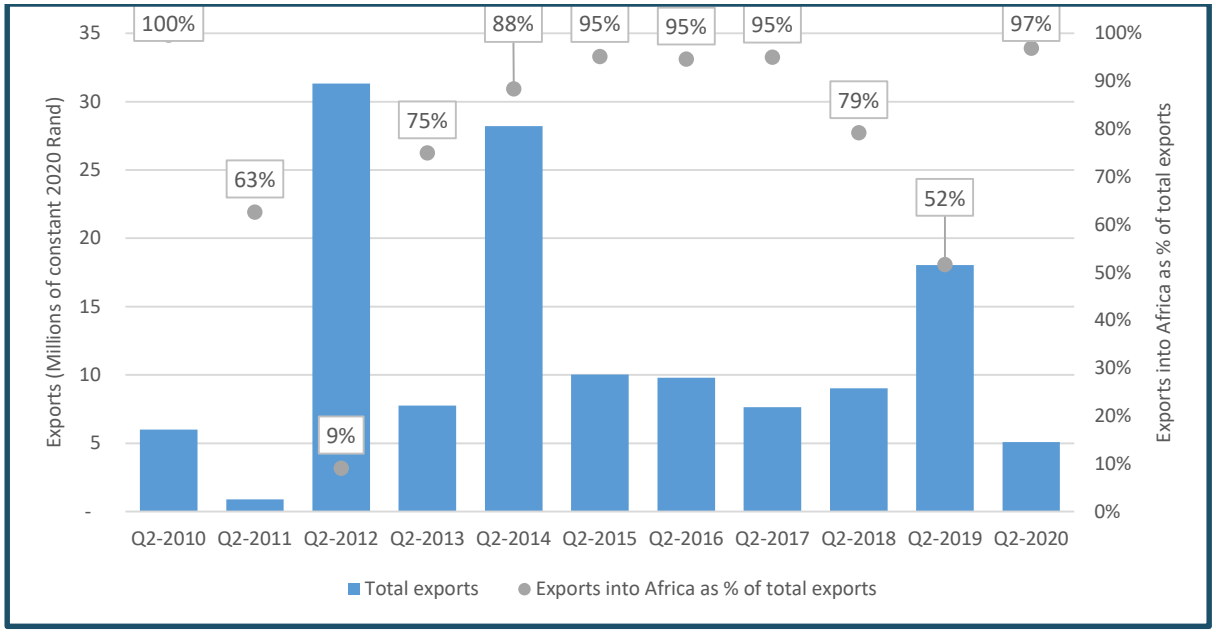



*Source:* Calculated from ITC Trade Map data. Downloaded from https://www.trademap.org in September 2020.

South Africa's smart cards exports are small, amounting to R5 million in the second quarter of 2020. Generally, exports are low, peaking at R31 million in 2012 (see Graph 9). The bulk of the exports (97% in the second quarter of 2020) go into the rest of the continent.

[4] According to Trade Map, reimports refer to imports of goods in the same state as previously exported.

**Graph 9: Smart cards exports in 2020 constant Rand, Q2 2010 – Q2 2020**




*Source:* Calculated from ITC Trade Map data. Downloaded from https://www.trademap.org in September 2020.

Although exports of smart cards are low, these can be increased, along with local production. With annual imports at R1.3 billion (compared to R40 million for exports), this represents a significant field for local manufacturers to enter or to increase their current production capacity. Further, this level of imports illustrates significant local demand, which will likely continue to be high given the product's use in various sectors. South Africa's R187 billion per annum telecommunications sector is one customer for smart cards (in the form of sim cards), with banking also requiring new smart cards, along with cards for retail and banking loyalty programmes. Lastly, although the printing of Smart ID cards is done directly by the state through GPW, this also represents an avenue for local demand.

Besides Smart ID cards, another state demand for smart cards is social security cards issued by the South African Social Security Agency (SASSA), whose beneficiaries use a range of smart cards, including about 10 million debit MasterCard cards. With talks of an introduction of a universal basic income grant, the demand for smart cards will likely continue to increase, especially as local banks are also working to get the unbanked into the banking system.

There are, however, some factors to consider about the local production of smart cards. The first is the climate crisis, particularly as it relates to production and waste. Given that smart cards use plastic materials like polyester, polyvinyl chloride (PVC), and polycarbonate, the production of smart cards has environmental implications, particularly with emissions in the production process of the cards. As Montmasson-Clair (2020: 5) notes, the global transition to sustainable development will impact value chains, especially in the kind of inputs used, emissions from the production process, and consumer consumption. Environmental concerns will have implications for the kinds of goods that are traded, and for the kinds of investments being taken up, as investors look to transition to goods and investments with a lower carbon footprint.

South Africa already has a plastics recycling industry. However, Plastics SA (2019) notes that PVC waste from post-consumer use is harder to recycle than PVC waste from post-industrial use, as industrial users pre-sort their waste. Given this, opportunities are opening for more sustainable bio-plastics, with plastics manufacturers responding to the problems of PVC recyling by shifting to polyethylene terephthalete (PET), which is sustainable and can be recycled numerous times.

Another factor to consider is that the rise in digital banking will disrupt the banking industry, although admittedly this will be over a longer term. Digital banks exist locally, although key players TymeBank

and Discovery Bank use smart cards extensively. Nevertheless, with the rise in the use of digital payments using smartphones, current banking will be disrupted, together with the demand for bank cards.

### Product 4: Machines for the reception, conversion and transmission or regeneration of voice, images or other data, including switching and routing apparatus: other

Rather than include one specific product, machines for the reception, conversion and transmission or regeneration of voice, images or other data, including switching and routing apparatus (HS 85176290) appears to include both routers and set-top boxes. Imports of these products amounted to R2.6 billion in the second quarter of 2020. These machines were ranked 7th in the Top 100 by Rand value list. Table 4 shows the product key data for routers and set-top boxes for the second quarter of 2020.

**Table 4: Product key data – routers and set-top boxes, Q2 2020**

| KEY DATA | NOT PREVIOUSLY MADE IN SA | PREVIOUSLY MADE BUT CAN'T COMPETE IN FACE OF LOW COST COMPETITORS | CURRENTLY MADE IN SA AND IMPORTS INCREASING OVER TIME |
|---|---|---|---|
| **Rank in Top 100 imports by Rand value** | | | 7th |
| **Rand value of imports** | | | R2.6 billion |
| **Rank in Top 50 imports by quantity** | | | N/A |
| **Quantity of imports** | | | 2.01 million units |
| **Capital good or consumer good** | | | Consumer goods |
| **If intermediate good; what value chain?** | | | Various (Telecommunications, television etc.) |
| **Good for final consumption (yes/no)** | | | Yes |
| **Designation status** | | | Set-top boxes 30% designated; routers not designated |

A set-top box is a device used to receive and display digital television broadcasts for users who have analogue televisions.[5] Colloquially, a set-top box is a decoder such as that used for DStv. A router is a device that allows for connection between a home network (such as a computer or phone) and the internet.[6] Set-top boxes have been in use for decades in South Africa. However, growth in local use of set-top boxes, and any decision to designate for local production, is linked to South Africa's 2006 commitment to the International Telecommunications Union to fully migrate the country to digital television by the June 2015 global deadline, as well as a general shift in consumer demand for video entertainment as disposable incomes increase. The June 2015 deadline for the local migration was not met, and a new deadline is set for 2021. The aim of the global shift to digital television was to free-up radio frequency spectrum, which is a scarce resource, so it can be used in other areas such as mobile broadband services.

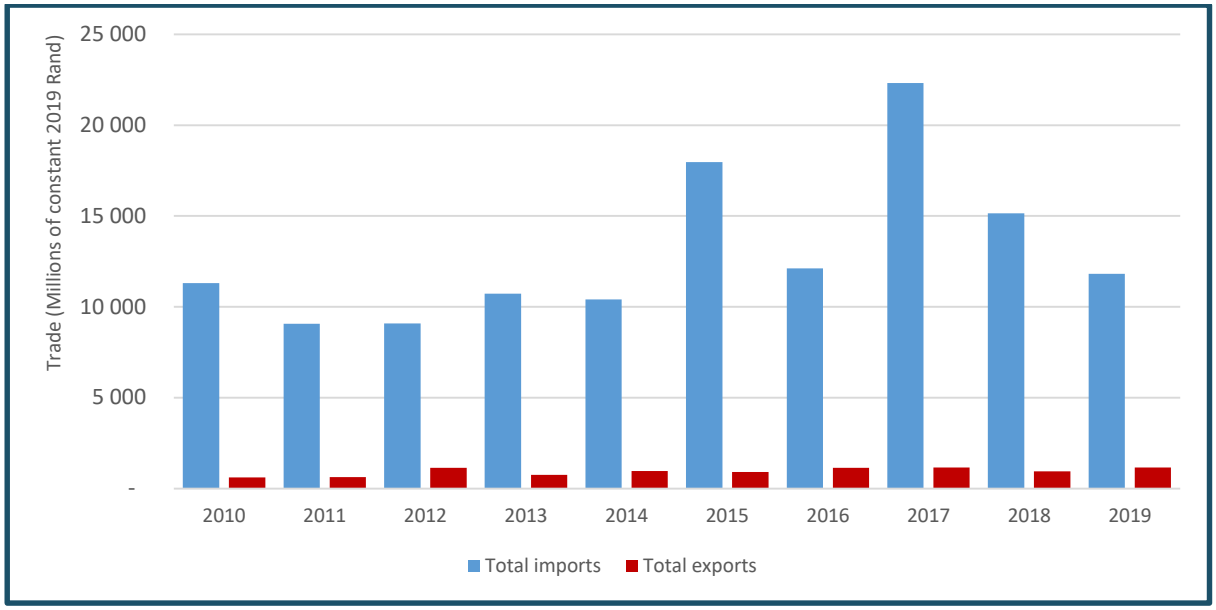
South Africa is a net importer of routers and set-top boxes. Annual imports amounted to R11.8 billion in 2019 (see Graph 10). Regional imports are miniscule, at R14.2 million in 2019. However, between 2010 and 2019, an average 27% of regional imports were reimports from South Africa, suggesting an

[5] https://www.sony.com/electronics/support/articles/00175652

[6] https://www.lifewire.com/what-is-a-router-2618162

even smaller share of imports from the rest of the continent. Exports grew 88% to R1.2 billion in 2019. Growth is driven by demand from Southern African Development Community (SADC) members. For instance, between 2010 and 2019, exports to Botswana grew 77% to R121.7 million, while exports to Namibia, Zimbabwe and eSwatini more than doubled to R74.7 million, R38.4 million and R34.2 million, respectively.

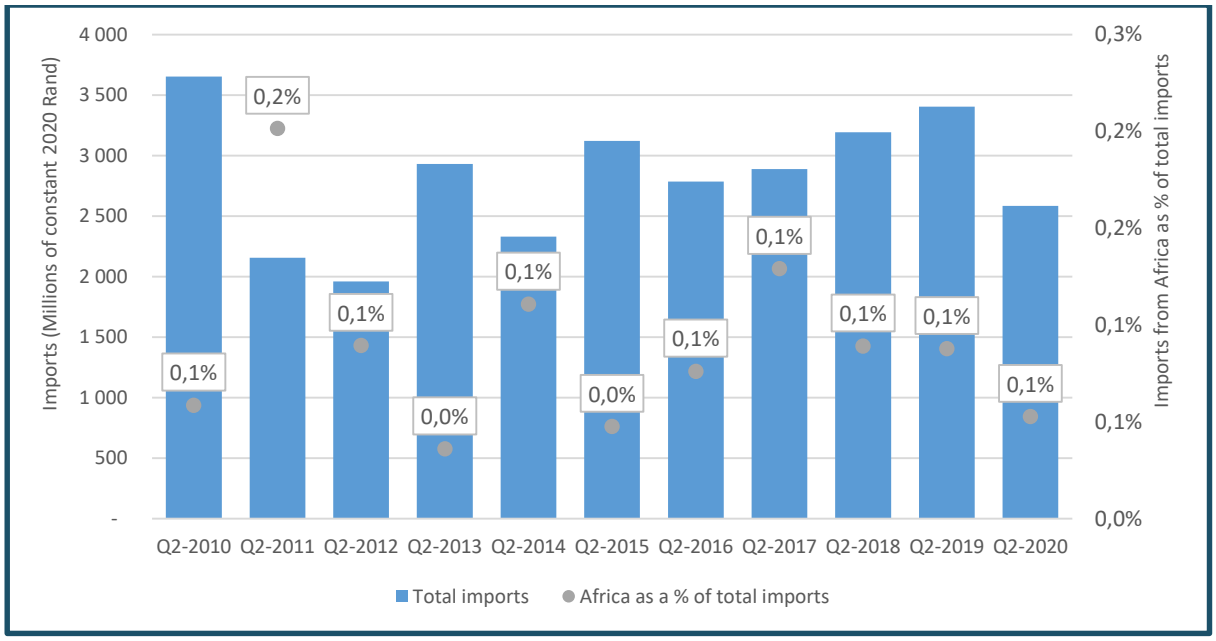
**Graph 10: South Africa annual trade in routers and set-top boxes in 2019 constant Rand, 2010 – 2020**




*Source:* Calculated from ITC Trade Map data. Downloaded from https://www.trademap.org in October 2020.

Graph 11 shows quarterly imports for routers and set-top boxes from the second quarter of 2010 to the second quarter of 2020. Quarterly imports declined by 29% over this period, with regional imports declining by 36% from R2.1 million in the second quarter of 2010 to R1.4 million in the second quarter of 2020.

**Graph 11: Routers and set-top boxes imports in 2020 constant Rand, Q2 2010 - Q2 2020**

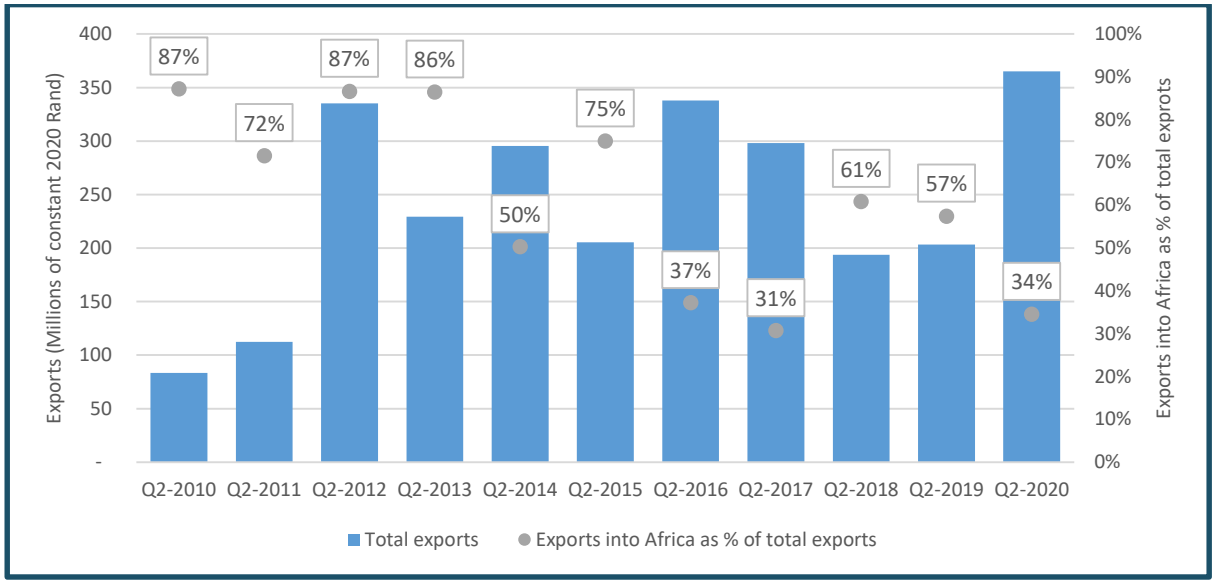



*Source:* Calculated from ITC Trade Map data. Downloaded from https://www.trademap.org in September 2020.

Graph 12 shows exports of set-top boxes and routers for the period between the second quarter of 2010 and the second quarter of 2020. Total exports grew 338% between the second quarter of 2010 and the second quarter of 2020, with regional exports growing from R73 million to R126 million. The

graph also shows that, as quarterly exports have grown over the years, the share of regional exports against total exports has declined (to 34% in 2020 compared to 87% in 2010). In quantity terms, local exports have grown from 8 084 units in the second quarter of 2010 to 119 906 units in the second quarter of 2020.

**Graph 12: Routers and set-top boxes exports in 2020 constant Rand, Q2 2010 – Q2 2020**




*Source:* Calculated from ITC Trade Map data. Downloaded from https://www.trademap.org in September 2020.

Set-top boxes have a 30% designation for local content. There is local production of set-top boxes, but the capacity is unclear. Estimates suggest upwards of two million set-top boxes are produced locally per annum. As part of the local migration, government sought to procure these devices from local manufacturers, with a R4.3 billion contract issued by the Universal Services and Access Agency of South Africa in 2015 to meet the demand for roughly four million devices to be supplied to low-income consumers and those on social grants.

Through this process, the state is one source of demand for set-top boxes. The other source of demand is through various broadcasting services which provide content for local viewers. As they are supplying households, these broadcasters are under no obligation to comply with designation policies, which would thus explain the high imports. Although DStv for instance has its set-top boxes made locally, it is not clear if the new Explora Ultra and the DStv Streama are imported or made locally.

For local production, the broadcaster DStv has a number of manufacturers producing its set-top boxes in Durban, East London and Johannesburg. Another local manufacturer is CZ Electronics, a Boksburg-based contract manufacturer producing audio and visual equipment such as set-top boxes and televisions, and some electronics such as tracking devices and printed circuit boards, for which they employ between 400 and 500 people (CZ Electronics, 2020). The company does not currently produce routers, but indicated that it has the technology to do so, and would likely see a product out soon. The products it makes include some imported components such as the underlying electronic components. The company noted that even if it procures these electronic components locally, the supplier would have to import because these items are not locally manufactured. Given the head start that Asian countries have had in electronics manufacturing, and their economies of scale, it would not appear to be viable to manufacture the electronic components locally, especially considering the cost and technology required to do so. There are, however, significant opportunities in the local assembly of the products.

Increased local production of set-top boxes and routers would also present an opportunity for local smart card producers. Both these products require a smart card to function. For instance, broadcasters

use smart cards for their set-top boxes to decrypt/descramble a scrambled programme. South Africa already has smart card manufacturing, and can therefore easily handle this.

Besides climate considerations (as discussed under Product 3), a decision to increase local production of set-top boxes must be made with due consideration of the rise in the use of smart TVs. The global smart TV market was estimated at US$135.5 billion in 2016, and is expected to rise to US$292.6 billion by 2025 (Grand View Research, 2017). In contrast, the set-top box market is expected to grow to US$26.9 billion by 2027. Smart TVs have internet connectivity, which allows the owner to access a range of applications such as video streaming sites and social media sites. Smart TV prices are already dropping, which is one influencing factor along with growing demand for ditigal content.

### Product 5: Photosensitive semiconductor devices, including photovoltaic cells

Photosensitive semiconductor devices, including photovoltaic cells (HS 85414010), in this case refer to photovoltaic cells, which are a technology used to convert solar energy into usable electricity.[7] The product is used to manufacture solar panels for electricity generation. This product is ranked 43rd in the Top 100 list by Rand value, with imports amounting to R628.7 million in the second quarter of 2020. Table 5 shows the key data for the product, including the value of imports, designation status and quantity of imports for the quarter.

**Table 5: Product key data – photovoltaic cells, Q2 2020**

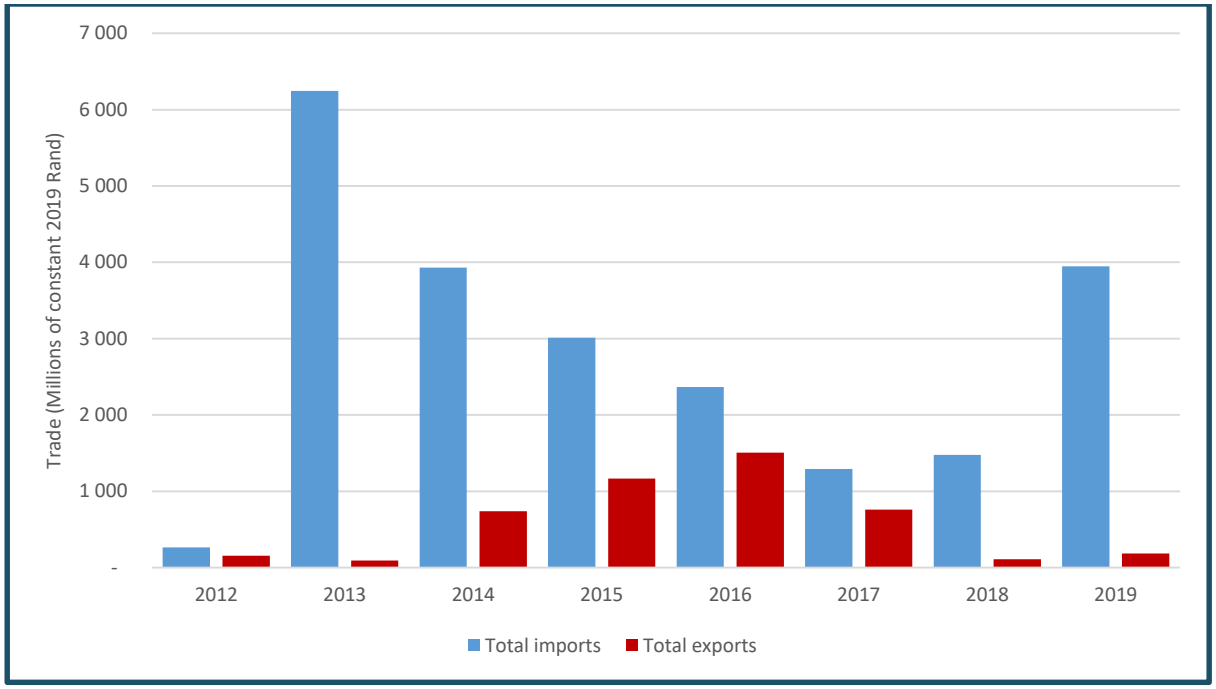
| KEY DATA | NOT PREVIOUSLY MADE IN SA | PREVIOUSLY MADE BUT CAN'T COMPETE IN FACE OF LOW COST COMPETITORS | CURRENTLY MADE IN SA AND IMPORTS INCREASING OVER TIME |
|---|---|---|---|
| **Rank in Top 100 imports by Rand value** | | | 43th |
| **Rand value of imports** | | | R628.7 million |
| **Rank in Top 50 imports by quantity** | | | N/A |
| **Quantity of imports** | | | 11.9 million units |
| **Capital good or consumer good** | | | Capital goods |
| **If intermediate good; what value chain?** | | | Energy |
| **Good for final consumption (yes/no)** | | | No |
| **Designation status** | | | 15% designated |

According to Planete Energies (2019), photovoltaic cells are produced from semiconductor materials that “absorb the photons emitted by the sun and generate a flow of electrons”. Photovoltaic cells are primarily made from three materials: crystalline silicon cells, thin-film cells and organic cells. As the name suggests, crystalline silicon cells use silicon as a raw material, and account for more than 90% of the photovoltaic cells market. In 2018, the global photovoltaic cells market was valued at about US$53.9 million, and is expected to grow to US$333.7 million by 2026 (Chaudhary, et al., 2019).

South Africa is a net importer of photovoltaic cells, with imports amounting to R3.9 billion in 2019, compared to R183 million for exports (see Graph 13). Local trade of photovoltaic cells began in 2012, as the graph shows. Overall, imports grew more than 1000% between 2010 and 2019, although they reached a high of R6.2 billion in 2013. In contrast, exports grew 19% over the same period, with a peak to R1.5 billion in 2016.

[7] https://energyeducation.ca/encyclopedia/Photovoltaic_cell

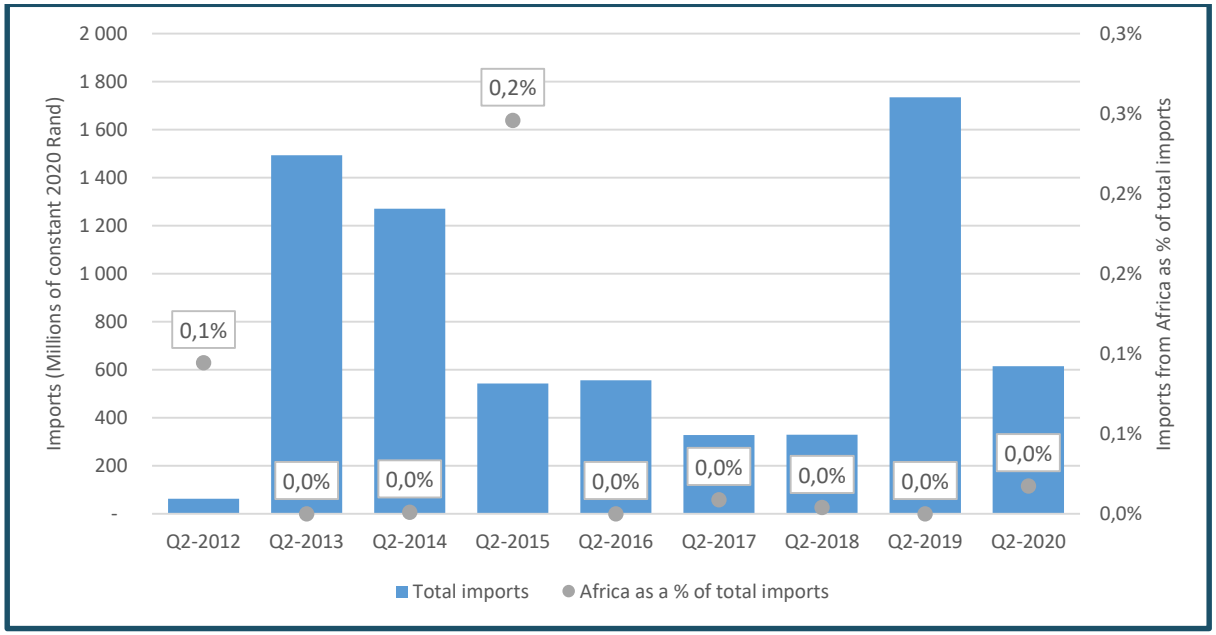
**Graph 13: South Africa annual trade in photovoltaic cells in 2019 constant Rand, 2012 – 2020**




*Source:* Calculated from ITC Trade Map data. Downloaded from https://www.trademap.org in October 2020.

Graph 14 shows quarterly imports of photovoltaic cells from the second quarter of 2012 to the second quarter of 2020. The share of imports from the region is insignificant, rising to 0.2% of total imports in the second quarter of 2015. The composition of imports has changed significantly over the years, with China accounting for 97% of total imports in the second quarter of 2020, compared to 60% in the second quarter of 2012. Sweden, Germany and the United States of America (US) have lost market share, at 0%, 0.1% and 0.2%, respectively, from 13.7%, 7.7% and 3.1% in the second quarter of 2012.

**Graph 14: Photovoltaic cells imports in 2020 constant Rand, Q2 2012 - Q2 2020**

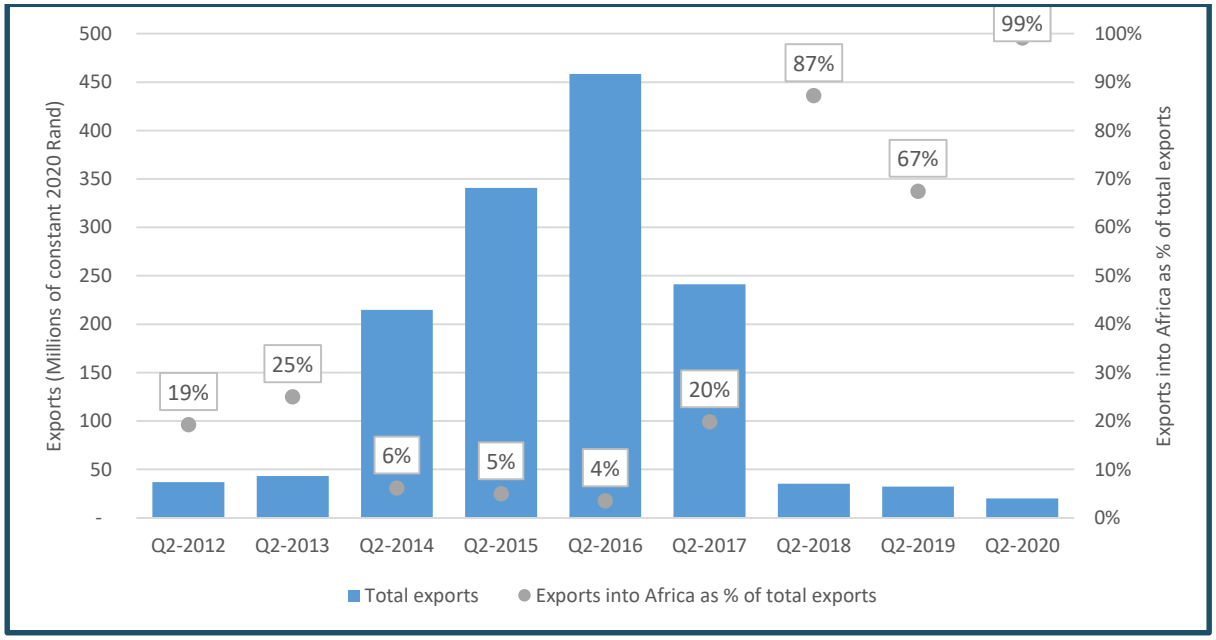



*Source:* Calculated from ITC Trade Map data. Downloaded from https://www.trademap.org in September 2020.

With the exception of the second quarters of 2014 to 2017, photovoltaic cells exports have remained low (see Graph 15). Total exports declined 46% between the second quarter of 2012 and the second quarter of 2020. However, regional exports have more than doubled over this period, largely driven by demand from Namibia. Although there has been growth in regional exports, its growth as a share

of total exports has largely been due to a decline in overseas exports. For instance, in the four quarters during which exports were high, this was due to high imports from the US, Netherlands and the United Kingdom.

**Graph 15: Photovoltaic cells exports in 2020 constant Rand, Q2 2012 - Q2 2020**




*Source:* Calculated from ITC Trade Map data. Downloaded from https://www.trademap.org in September 2020.

There is local production of photovoltaic cells in South Africa, with some world-class innovation. But the extent of local production is unclear, particularly as it has mainly focused on thin-film cells. Local work on photovoltaic cells has largely been driven by Professor Vivian Alberts, CEO of Photovoltaic Technology Intellectual Property (Pty) Ltd, who has driven the use of thin-film for solar cells. Thin-film generally has lower production costs, and because thin-film cells use less semiconductor material, they are cheaper than crystalline silicon cells (Barbee, 2016). This technology has been licensed to various companies over the years (mostly overseas-based producers), and does not appear to be gaining traction with local manufacturers of solar panels. However, increased used by local manufacturers would likely see significant decreases in price for solar panels due to lower input costs. In addition, there is potential to support various industries, particularly with Eskom not able to meet South Africa's energy demands.

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## ANNEXURE 1: TOP 100 IMPORT PRODUCTS BY RAND VALUE, Q2 2020

| RANK | HS CODE | PRODUCT DESCRIPTION | IMPORT VALUE, RAND BILLION | CHANGE IN RANK Q2 2019 – Q2 2020 | DESIGNATION STATUS |
|---|---|---|---|---|---|
| **1** | **27090000** | Crude oil | 16.71 | No change | Not designated |
| **2** | **27101230** | Diesel | 6.13 | 1 | Not designated |
| **3** | **98010030** | Automotive components: for motor cars | 5.69 | -1 | Not designated |
| **4** | **63079010** | Made-up articles of textile materials, including dress patterns, not elsewhere specified (n.e.s) | 4.86 | 797 | 100% designated |
| **5** | **98010040** | Original equipment components: for goods vehicles | 4,34 | -1 | Not designated |
| **6** | **85171210** | Cellphones | 3.08 | -1 | Not designated |
| **7** | **85176290** | Routers and set-top boxes: Other | 2.57 | 2 | Set-top boxes 30% designated; routers not designated |
| **8** | **63079090** | Made-up articles of textile materials, incl. dress patterns, n.e.s.: Other | 2.52 | 517 | 100% designated |
| **9** | **85023100** | Generating sets, wind-powered | 2.23 | 16 | Not designated |
| **10** | **49070010** | Postage stamps, revenue stamps and banknotes | 2.17 | No change | Not designated |
| **11** | **27101202** | Light oils and preparations: Petrol | 2.12 | No change | Not designated |
| **12** | **71081300** | Gold, in semi-manufactured forms, for non-monetary purposes | 2.09 | 25 | Not designated |
| **13** | **10063000** | Semi-milled or wholly milled rice, whether or not polished or glazed | 2.00 | 16 | Not designated |
| **14** | **38220000** | Diagnostic or laboratory reagents (pharmaceutical chemicals) | 2.00 | 21 | Not designated |
| **15** | **84715000** | Processing units for automatic data-processing machines | 1.91 | 1 | Not designated |
| **16** | **28182000** | Aluminium oxide | 1.56 | -3 | Not designated |
| **17** | **98010045** | Original equipment components: For goods vehicles | 1.46 | -9 | Not designated |
| **18** | **85044000** | Static converters | 1.40 | 6 | Not designated |
| **19** | **87032390** | Cars and related vehicles: Cylinder capacity 1 500 cm3 to 3 000 cm3 | 1.40 | -13 | Not designated |
| **20** | **90189000** | Medical instruments and appliances, n.e.s | 1.31 | 1 | Unclear |
| **21** | **87032290** | Cars and related vehicles: Cylinder capacity 1 000 cm3 to 1 500 cm3 | 1.26 | -14 | Not designated |

| RANK | HS CODE | PRODUCT DESCRIPTION | IMPORT VALUE, RAND BILLION | CHANGE IN RANK Q2 2019 – Q2 2020 | DESIGNATION STATUS |
|---|---|---|---|---|---|
| **22** | **84314990** | Parts of machinery of heading 8426, 8429 and 8430, n.e.s.: Other | 1.21 | 4 | Not designated |
| **23** | **87041090** | Dumpers for off-highway use: Other | 1.11 | 7 | Not designated |
| **24** | **27111100** | Natural gas, liquefied | 1.07 | 9 | Not designated |
| **25** | **33021000** | Alcoholic and other solutions used in the food and drink industries | 1.05 | -5 | Not designated |
| **26** | **27160000** | Electrical energy | 1.01 | 12 | Not designated |
| **27** | **90251900** | Thermometers and pyrometers, not combined with other instruments (excluding liquid-filled thermometers for direct reading) | 0.96 | 764 | Not designated |
| **28** | **85177090** | Parts for telephones, routers and other telecoms devices | 0.96 | -13 | Not designated |
| **29** | **84439900** | Parts and accessories of printers, copying machines and facsimile machines, n.e.s. | 0.96 | -7 | Not designated |
| **30** | **98010015** | Automotive components: For tractors and buses | 0.93 | -2 | Not designated |
| **31** | **74081100** | Wire of refined copper, with a maximum cross-sectional dimension of > 6 mm | 0.88 | -12 | Not designated |
| **32** | **30022000** | Vaccines for human medicine | 0.85 | 8 | Not designated |
| **33** | **17011300** | Raw cane sugar, in solid form, not containing added flavouring or colouring matter | 0.84 | 20 | Not designated |
| **34** | **87033290** | Cars and related vehicles: Cylinder capacity 1 000 cm3 to 2 500 cm3 | 0.74 | -22 | Not designated |
| **35** | **71023100** | Non-industrial diamonds unworked or simply sawn, cleaved or bruted | 0.72 | -21 | Not designated |
| **36** | **87032190** | Cars and related vehicles: Cylinder capacity not exceeding 1 000 cm3 | 0.70 | -19 | Not designated |
| **37** | **23040000** | Oilcake and other solid residues from the extraction of soya-bean oil | 0.70 | 6 | Not designated |
| **38** | **87082900** | Parts and accessories of bodies for tractors and buses | 0.69 | -6 | Not designated |
| **39** | **31021000** | Urea, whether or not in aqueous solution | 0.68 | 16 | Not designated |
| **40** | **87033390** | Cars and related vehicles: Cylinder capacity exceeding 2 500 cm3 | 0.66 | -13 | Not designated |
| **41** | **98010025** | Original equipment components: for buses and taxis | 0.64 | 1 | Not designated |
| **42** | **84295200** | Self-propelled bulldozers, etc.: With 360 degree revolving superstructure | 0.64 | -3 | Not designated |
| **43** | **85414010** | Photosensitive semiconductor devices, including photovoltaic cells | 0.63 | -25 | 15% designated |
| **44** | **84717000** | Storage units for automatic data-processing machines | 0.61 | 15 | Not designated |

| RANK | HS CODE | PRODUCT DESCRIPTION | IMPORT VALUE, RAND BILLION | CHANGE IN RANK Q2 2019 – Q2 2020 | DESIGNATION STATUS |
|---|---|---|---|---|---|
| **45** | **87089990** | Parts and accessories for tractors and buses | 0.61 | -9 | Not designated |
| **46** | **82073000** | Interchangeable tools for pressing, stamping or punching | 0.58 | 771 | Not designated |
| **47** | **38112100** | Additives for oil lubricants containing petroleum oil or bituminous mineral oil | 0.57 | 26 | Not designated |
| **48** | **21069090** | Food preparations, n.e.s.: Other | 0.56 | 10 | Not designated |
| **49** | **28439000** | Inorganic or organic compounds of precious metals | 0.49 | 71 | Not designated |
| **50** | **69091900** | Ceramic wares for chemical or other technical uses | 0.49 | -9 | Not designated |
| **51** | **84433100** | Printers and fax machines | 0.47 | No change | Not designated |
| **52** | **87032490** | Cars and related vehicles: Cylinder capacity exceeding 3 000 cm3 | 0.47 | -18 | Not designated |
| **53** | **84733000** | Parts and accessories of automatic data-processing machines | 0.45 | 3 | Not designated |
| **54** | **84798990** | Machines and mechanical appliances, n.e.s. : Other | 0.44 | 8 | Not designated |
| **55** | **84089090** | Compression-ignition internal combustion piston engine “diesel or semi-diesel engine”: Other | 0.44 | 15 | Not designated |
| **56** | **39269090** | Articles of plastics and articles of other materials of heading 3901 to 3914, n.e.s: Other | 0.44 | -6 | Not designated |
| **57** | **84283900** | Continuous-action elevators and conveyors, for goods or materials | 0.43 | 314 | Not designated |
| **58** | **48115990** | Paper and paperboard (excl. bleached and weighing > 150 g/m², and adhesives): Other | 0.42 | 47 | Not designated |
| **59** | **84304100** | Self-propelled boring or sinking machinery for boring earth or extracting minerals or ores | 0.42 | 41 | Not designated |
| **60** | **85072000** | Lead acid accumulators (excl. spent and starter batteries) | 0.40 | 4 | Not designated |
| **61** | **33029090** | Mixtures of odoriferous substances and mixtures, incl. alcoholic solutions: Other | 0.40 | 32 | Not designated |
| **62** | **94019090** | Parts of seats, n.e.s.: Other | 0.39 | -13 | 85% – 100% designated |
| **63** | **38170010** | Mixed alkylbenzenes and mixed alkylnaphthalenes | 0.39 | 47 | Not designated |
| **64** | **72026000** | Ferro-nickel | 0.39 | 18 | 100% designated |

| RANK | HS CODE | PRODUCT DESCRIPTION | IMPORT VALUE, RAND BILLION | CHANGE IN RANK Q2 2019 – Q2 2020 | DESIGNATION STATUS |
|---|---|---|---|---|---|
| **65** | **39069090** | Acrylic polymers, in primary forms: Other | 0.38 | 36 | Not designated |
| **66** | **85235210** | Cards incorporating one or more electronic integrated circuit “smart cards”: Digital | 0.38 | 47 | Not designated |
| **67** | **73269090** | Articles of iron or steel, n.e.s: Other | 0.37 | 8 | 100% designated |
| **68** | **84295190** | Self-propelled front-end shovel loaders : Other | 0.37 | 10 | Not designated |
| **69** | **84749000** | Parts of machinery for working mineral substances of heading 8474, n.e.s. | 0.36 | 8 | Not designated |
| **70** | **29173600** | Terephthalic acid and its salts | 0.36 | -9 | Not designated |
| **71** | **33049990** | Beauty or make-up preparations and preparations for the care of the skin: Other | 0.36 | -11 | Not designated |
| **72** | **84099990** | Parts suitable for use solely or principally with diesel or semi-diesel engine, n.e.s.: Other | 0.35 | 14 | Not designated |
| **73** | **84291100** | Self-propelled bulldozers and angle dozers, track laying | 0.34 | -27 | Not designated |
| **74** | **29349900** | Nucleic acids and their salts, whether or not chemically defined | 0.34 | 43 | Not designated |
| **75** | **05040010** | Guts, bladders and stomachs of animals (other than fish): Sausage casings | 0.34 | 56 | Not designated |
| **76** | **21011190** | Extracts, essences and concentrates, of coffee: Other | 0.34 | 48 | Not designated |
| **77** | **27131200** | Petroleum coke, calcined | 0.34 | 64 | Not designated |
| **78** | **85258090** | Television cameras, digital cameras and video camera recorders: Other | 0.33 | 30 | Not designated |
| **79** | **90183900** | Needles, catheters, cannulae and the like | 0.33 | 13 | Not designated |
| **80** | **84834000** | Gears and gearing for machinery | 0.32 | 1 | Not designated |
| **81** | **29333990** | Heterocyclic compounds with nitrogen hetero-atom[s] only containing an unfused pyridine ring: Other | 0.32 | 273 | Not designated |
| **82** | **87083090** | Brakes and servo-brakes and their parts: Other | 0.32 | 2 | Not designated |
| **83** | **85437000** | Electrical machines and apparatus, having individual functions, n.e.s. | 0.32 | -4 | Not designated |
| **84** | **84219990** | Parts of machinery and apparatus for filtering or purifying liquids or gases: Other | 0.31 | 4 | Not designated |
| **85** | **22021010** | Waters, including mineral and aerated, with added sugar, sweetener or flavour | 0.30 | 49 | Not designated |

| RANK | HS CODE | PRODUCT DESCRIPTION | IMPORT VALUE, RAND BILLION | CHANGE IN RANK Q2 2019 – Q2 2020 | DESIGNATION STATUS |
|---|---|---|---|---|---|
| **86** | **30023000** | Vaccines for veterinary medicine | 0.30 | 109 | Not designated |
| **87** | **27011200** | Bituminous coal, whether or not pulverised, non-agglomerated | 0.29 | 958 | Not designated |
| **88** | **84271000** | Self-propelled trucks fitted with lifting or handling equipment, powered by an electric motor | 0.29 | -20 | Not designated |
| **89** | **29339990** | Heterocyclic compounds with nitrogen hetero-atom[s] only: Other | 0.29 | 132 | Not designated |
| **90** | **35051000** | Dextrins and other modified starches, e.g. pregelatinised or esterified starches | 0.28 | 203 | Not designated |
| **91** | **84139100** | Parts of pumps for liquids, n.e.s. | 0.28 | 4 | Not designated |
| **92** | **84314300** | Parts for boring or sinking machinery | 0.28 | 30 | Not designated |
| **93** | **84148000** | Air pumps, air or other gas compressors and ventilating or recycling hoods incorporating a fan | 0.27 | 6 | Not designated |
| **94** | **35079000** | Enzymes and prepared enzymes, n.e.s. (excluding rennet and concentrates thereof) | 0.27 | 70 | Not designated |
| **95** | **02071210** | Frozen fowls of the species Gallus domesticus: Mechanically deboned meat | 0.27 | -23 | Not designated |
| **96** | **79011100** | Unwrought zinc, not alloyed, containing by weight >= 99,99% of zinc | 0.27 | 13 | Not designated |
| **97** | **48109290** | Multi-ply paper and paperboard, coated on one or both sides with kaolin or other inorganic substances: Other | 0.27 | 93 | Not designated |
| **98** | **84143000** | Compressors for refrigerating equipment | 0.27 | 13 | Not designated |
| **99** | **64039990** | Footwear with outer soles: Other | 0.26 | -9 | 100% designated |
| **100** | **84839000** | Toothed wheels, chain sprockets and other transmission elements presented separately; parts of transmission shafts, ball screws, couplings and other articles of heading 8483, n.e.s. | 0.26 | 4 | Not designated |