



TRADE & INDUSTRIAL POLICY STRATEGIES

INDUSTRIAL DEVELOPMENT PROJECTS MOTORCYCLE COMPONENTS

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**A contribution to South Africa's Post COVID-19 Recovery Plan:
Tapping into new and unmet sources of demand to support
the establishment of new companies, factories,
value chains and employment opportunities**

Trade & Industrial Policy Strategies (TIPS) is a research organisation that facilitates policy development and dialogue across three focus areas: trade and industrial policy, inequality and economic inclusion, and sustainable growth

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INTRODUCTION

As South Africa responds to COVID-19 and aims to stimulate the economy and job creation post lockdown, an opportunity should not be missed to consider investing in new product markets which could increase the size and dynamism of the manufacturing sector. Such a package could contribute to arresting the current trend of deindustrialisation and shift the trajectory of the industrial base into new, sustainable growth areas and value chains. This would result in new factories, new downstream demand for primary and intermediate inputs, new export products, increased foreign exchange earnings, and importantly new direct and indirect long-term jobs.

Using the idea of “business *unusual*” TIPS economists have put together a Post COVID-19 recovery programme in South Africa that could provide the impetus to arrest the current trend of deindustrialisation and herald in the beginning of a new generation of industrial activity.

Seven initial projects have been identified. They represent a wide array of economic activity in the special purpose machinery, agro-industries, bioplastics, shipping, alternative fuel, biochemicals and automotive component manufacturing sectors.

This project looks the production of Class A motorcycle components (only) for export to the African assembly and after-sales markets.

For more information on this or other projects please contact Sandy Lowitt at 082 373 1150.

MOTOCYCLE COMPONENTS

PROJECT SUMMARY SHEET

TITLE	Production of Class A motorcycle components (ONLY) for export to the African assembly and after-sales markets.
LEAD DEPARTMENT	Department of Trade, Industry and Competition
PROJECT SUMMARY	The project aims to establish black-owned, local small, medium and micro enterprises (SMMEs) to manufacture component parts for the Class A motorcycle and scooter market. New production facilities will leverage off the capacity and capability of existing automotive component manufacturers. Production should qualify for the Automotive Incentive Scheme (AIS) and earn a Production Incentive (PI) in line with the benefit level applied to light vehicle component production. As production will be for the African export market new production facilities should be situated in a Special Economic Zone (SEZ) to increase commercial viability. The project will create new jobs, increase the value added component manufacturing industry as per the Automotive Master Plan and Re-Imagined Industrial Strategy and more importantly can play a leading role in establishing the first regional automotive value chain. It is proposed that Class A motorcycle assembly activity be undertaken by non-South African countries (probably initially Ghana, Kenya and Nigeria) and that South Africa provide components to these assemblers and the spares distribution network throughout Africa.
APPROXIMATE BUDGET	R40 million to R60 million
STAKEHOLDERS	<ul style="list-style-type: none"> • Chinese OEM producer with largest African market share; • Small South African automotive component manufacturing firms; • Existing South African stakeholders to assist South African SMMEs through supplier development schemes; • Existing South African stakeholders to assist non-South African assemblers with skills and capacity accumulation as part of the Automotive Master Plan's long-term automotive sector goals¹ and the dtic's commitment to regional value chains.
CAPITAL INVESTMENT	<ul style="list-style-type: none"> • Physical infrastructure to build factory space in SEZ • Capital production equipment
OUTCOMES	<ul style="list-style-type: none"> • Job creation: The Automotive Master Plan calls for the doubling of the sector's employment by 2035. This new component manufacturing product line will contribute to that employment goal, especially as production to be SMME based. • Entirely new export product and export revenue stream for South Africa. • Implementation of a regional value chain and opportunity for increased inter-African trade and co-operation. (South Africa: Component manufacture; Other African countries: Class A motorcycle assembly) • A strategic intervention to assist in achieving the aims of the Automotive Master Plan.

¹ It is suggested by industry experts that South Africa would need to support some automotive sector involvement in Africa in order for African countries to change policies on cheap cars from the EU entering their markets and decreasing sales from South Africa. As the African motorcycle market dwarfs that of South Africa, supporting motorcycle assembly outside of South Africa will be a strategic intervention in line with the broader ambitions of South Africa's automotive industry.

Production of Class A motorcycle components (only) for export the African assembly and after-sales market

Introduction

Forty years ago the motorcycle market was a small, niche market in both developed and developing countries. The market was dominated by a handful of OEMs, notably upmarket well-known brands from Japan, Germany and Italy. At that time, some mopeds and motor scooters were used in urban areas, medium-sized Japanese “trail” bikes were used by agricultural extension workers and non-governmental organisation personnel in rural areas, and a small number of powerful motorcycles were used by the police and rich enthusiasts. The market changed in the 1990s when China, India and some other Asian countries (Indonesia, Vietnam, Thailand, Cambodia) began the mass production of medium-sized motorcycles (defined as Class A scooters and motorcycles with an engine capacity lower than 150cc). Creating a mass market and enjoying economies of scale, these new producers brought down entry-level product prices from US\$2 000 in 1990 to US\$600 in 2010 and current prices as low as US\$420 (Starkey 2016; Mtanga and McCamel, 2019).

At these reduced prices, demand for Class A motorcycles in rural and urban areas in Latin America, Africa and Southeast Asia rocketed such that in many developing countries motorcycles are now the dominant mode of transport. Researchers (Olurinola 2010; Starkey and Hine, 2014; Bray and Holyoak 2015; Starkey 2016; Pochet, 2017) show that rural adoption is driven by low volume road infrastructure (tracks and trails) and a lack of public or private transport services due to low population densities and poor access. Urban adoption occurs rapidly, especially where there is a lack of public transport, high levels of congestion, and poor quality road infrastructure. In both urban and rural settings there are two submarkets that characterise the demand for motorcycles: sales for private household usage; and demand for cycles to be used as motorcycle taxis that convey passengers and goods as a transport service business (commercial usage). Across Africa the commercial use of motorcycles dominates private household usage which is very low.

In Africa, the earliest adoption of Class A motorcycles is traced back to the West African nations of Burkina Faso, Benin, Nigeria and Cameroon. Later adoption spread to the East with Uganda, Kenya and Rwanda seeing a substantial rise in the demand for motorcycles around the turn of the century. Interestingly, acceptance and adoption in SSA has failed to achieve critical mass. This is attributed to the role of South Africa and the legacy of apartheid. It is essentially argued that under apartheid the norm was for private car ownership for the white elite and only formally state sanctioned public transport (train and bus and later minibuses) for the black majority. This established “norm” influenced neighbouring countries. Starkey (2016) and the Research for Community Access Partnership (2014) suggest that motorcycle usage behaviour from the north will eventually spread to Southern Africa and that the take-up rate will be rapid, spontaneous and unplanned. They cite as an example the amazing case of Tanzania which had only 2 000 registered motorcycles in 2003 and 800 000 in 2014 (a growth rate of 40 000%). Some South African experts disagree that motorcycle usage will gain momentum in SSA.

In 2019, 89.7% of all motorcycles imported onto the African continent were Class A motorcycles. The majority of these are imported from India or China and arrive as Completely Built Units (CBUs). In the SADC market China has a 49% market share and India a 15% market share. In terms of motorcycle parts China commands 57% of the SADC market and India 7% (TIPS, 2019). Most importing African countries do not have automotive sector capabilities either for the production of components or the assembling of semi knocked down or completely knocked down motorcycle kits. There is, however, a strong desire for the creation of African regional value chains which would

support the broadening of African economies' industrial bases and propel economies up the value addition and technology ladders. Assembling Class A motorcycles has been identified as one such opportunity.

Given South Africa's existing capacity and capability in the manufacture of components for light, light commercial, medium and heavy commercial, passenger and sports utility vehicles it has been proposed that South Africa could expand its automotive component manufacturing base to include Class A motorcycle and scooter parts. These components could be exported to African markets which are currently (or interested in establishing) motorcycle assembly industries, and to supply replacement parts in the after sales and service markets in non-assembling countries.

In a Final Recommendations document prepared for the dtic on a Post-2020 Automotive Production and Development Programme (APDP) Automotive Master Plan it is proposed that from 2021 to 2035 motorcycle component manufacturers should qualify for the AIS and earn a PI in line with the benefit level applied to light vehicle component production. The recommendations further argue that no Volume Assembly Localisation Allowance be applied so as NOT to encourage domestic motorcycle assembly (Barnes et al, 2017).

The proposed project is a catalyst for the implementation of such a regional value chain approach and would see new economic activity and job creation in the South African economy while simultaneously supporting value added activity and industrial broadening in other African countries assembling motorcycles. In countries without assembly capacity or ambition, such a project would substitute African manufactured parts for Asian manufactured parts in line with continental and regional approaches to increase inter-African integration, trade and co-operation. As will be shown, the SADC market is likely to be too small to support such a project and a broader continental view (or at a minimum a SADC and East African collaboration) would need to be considered. The proposal is based on research conducted by TIPS in 2017 on the motorcycle industry in Africa as part of the SA-TIED project supported by UNU-Wider.

Urban and rural demand for Class A motorcycles

Research by UN-Habitat, the Partnership on Sustainable, Low Carbon Transport and DIFID (2014), Research for Community Access Partnership (2016), Pochet et al. (2017) and Ehebrecht et al. (2018) all show that most of the world's poor people live in rural areas isolated by distance, terrain, basic or non-existent infrastructure (paths, trails) and no (or limited) access to transport services. This rural isolation is associated with low agricultural productivity (linked to poor market access and usage of fertilisers and modern agricultural technologies), poor health care and low school enrolment. The main way rural people access markets and services is through tracks and trails that connect rural communities to feeder roads which service market towns. Rural communities typically have to walk (sometimes up to a whole day) to reach a feeder road or market town. The research shows that investments in low volume, all-season rural roads (even unsophisticated substitutes for roads such as trails and tracks) supports the creation of rural transport solutions, most notably the use of motorcycle-based taxi services which offer transport of passengers and goods.

Rural transport services are most often provided by informal sector entrepreneurs using buses, trucks, rural taxis (minibuses or estate cars), motorcycles, bicycles, tricycles, animal drawn carts and pack animals. In most countries these "intermediate means of transport" provide most access between villages and market towns. In many rural areas, infrastructure is too poor for conventional transport (trucks, minibuses, buses). Market concentration of potential passengers is too low to make regular transport routes commercially viable. As such the formal private sector and the public sector tend not to service this market. In these cases the research shows that motorcycle taxi

services are a good solution to rural transportation access. These taxi services offer door to door service, are highly flexible, can operate on remote and poor quality tracks and difficult terrain and can move passengers and goods either from villages to main feeder roads (where public transport can be accessed) or from villages to market towns. Besides providing a crucial service to rural communities, motorcycle taxis also offer employment opportunities for young men in rural areas. Barriers to entry are low and bikes can be bought or hired from operators (details below).

Improved rural access via increased infrastructure and access to transport services has been shown to increase the usage and decrease the cost of agricultural inputs (especially fertiliser) which has been shown to increase yields, enhance production and increase living standards. Similarly access to rural transport allows greater access to markets and is shown to increase household income and reduce poverty. Evidence from Southeast Asia and some African country studies also support the link that improved basic rural infrastructure and access to transport services improves access to health services and allows community health workers to access more remote rural areas. The literature shows a direct correlation between rural access to transport infrastructure and services and improved health outcomes and healthier rural communities. Similarly improved rural access to transport services improves school enrolment and increases teacher access to rural communities, resulting in improved learner outcomes. As such, motorcycle taxis are on the whole seen as improving the quality of life of rural communities and supporting improved health, educational and livelihood outcomes.

In the urban context, the emergence and use of the motorcycle follows a different logic. Ehebrecht et al. (2018) argues that historically public transport in most African countries was provided by large private companies during the colonial era. In post-colonial times new independent nation states often nationalised these companies and formed state or municipal public transport providers which subsequently gained monopoly status. During the fiscal crises of the 1980s and 1990s, and due to mismanagement, corruption and a lack of ability of the state to continue to provide subsidies, these monopolised state run companies started declining and reducing their service offering. This resulted in un-met demand. Invariably this has led to the rapid growth of non-conventional means of public transport such as shared taxis and vans and more recently motorcycle taxis. These alternative modes of transport provide important complementary services, and in many countries represent the only mobility option for those who would otherwise be excluded from access to public transport.

Pochet et al. (2017) shows that private use of motorcycles in Africa is limited. Motorcycles are seen as an inferior substitute to a car in an urban setting but are still socially selective and preferred to dependence on public transport. The research goes on to show that those who can afford to buy a Class A motorcycle for personal use are relatively limited and includes the upper middle classes, employees in the formal sector and those with public administration jobs, and students with sufficient financial means. Private ownership and usage for personal means is thus a tiny fragment of the market as even with price decreases overtime the cost of a Class A motorcycle is beyond the reach of most lower-class and poor urban residents. Instead the bulk of the motorcycle market in African urban areas is for commercial use – commonly referred to as the motor taxis.

Demand arises both from pull and push factors. On the demand pull side, consumers demand motor taxi rides because of failing public transport supply; traffic congestion which makes travel by motor taxi faster and more convenient than minivan, car or bus; poor road quality which again makes travel by motor taxi faster than by four-wheeled conveyance; and personal choice. With regard to personal choice, in most African countries motor taxis are hailed using a mobile phone and requesting a pickup. This allows flexibility in time and removes the need to wait in line for scheduled

public transport or minibus taxis. In addition, motor taxis provide a door to door service which negates the need for walking the first and last mile which most often occurs with public transport. Most people using motor taxis in Africa are: people who are unemployed; people working in the informal economy; and people getting off public transport and needing transport to their final destination. More than half the trips taken by motor taxi in Africa in 2015 were between one km and three km and only one third of trips were more than three km to five km. As such motor taxis are focused on short trips with longer trips being undertaken by more conventional forms of public transport.

There is also a very strong push component to the creation of the motor taxi industry. Operating a motor taxi is an attractive option for unemployed youth who want to establish some form of livelihood. Barriers to entry into the sector tend to be very low. Capital costs are low for a Class A bike, maintenance and running costs are low, there are often no regulations or if there are there is little enforcement of them and motorcycles (and specifically scooters) are easy to drive and require no training or experience. Almost all motor taxi activity is informal sector activity.² There are three models in the industry: owner/drivers who own their own cycle and drive it for fares which they keep; driver renters who rent a bike from an owner and pay a rental fee to the owner and then keep a portion of the fares; and the owner/manager who has a small or large fleet of motorcycles and earns a living by hiring a workforce to operate his cycles. In a range of studies it is shown that although working conditions are poor and hours long, riding a motor taxi can provide a subsistence living for the unemployed and in most cases (Ehebrecht et al, 2018) provides an income greater than that which could be earned at a job paying national minimum wage. In Kenya, authorities have argued that the creation of the motor taxi industry has had a positive socioeconomic effect.³

Importantly, all the literature points out that motorcycle usage for private and motor taxi use is not without its negative externalities. Motor taxis are often vilified for driver's aggressive driving behaviour, failure to follow the rules of the road, adding to congestion, taking up parking places, increasing air pollution⁴ and very importantly increased road accidents and fatalities. In Accra, 72% of all motor taxi passengers reported that they had been involved in a traffic accident on a motor taxi and in 2013 Tanzania documented 1 000 deaths and 6 000 serious injuries related to motor taxis. Due to this, as well as the informal nature of the sector, motor taxis are not seen by most African countries as a long-term solution to urban public transport. Rather they are seen as a short-to medium-term solution which will partially or totally be replaced by mass transit systems developed and implemented by the public sector over time. Researchers show that in Tanzania for example, where 800 000 motor taxis are registered, motor taxis and motorcycles in general are absent in any official transport policy and no consideration of motorcycles is included in any account of either public transport planning or urban or town planning.

The African market

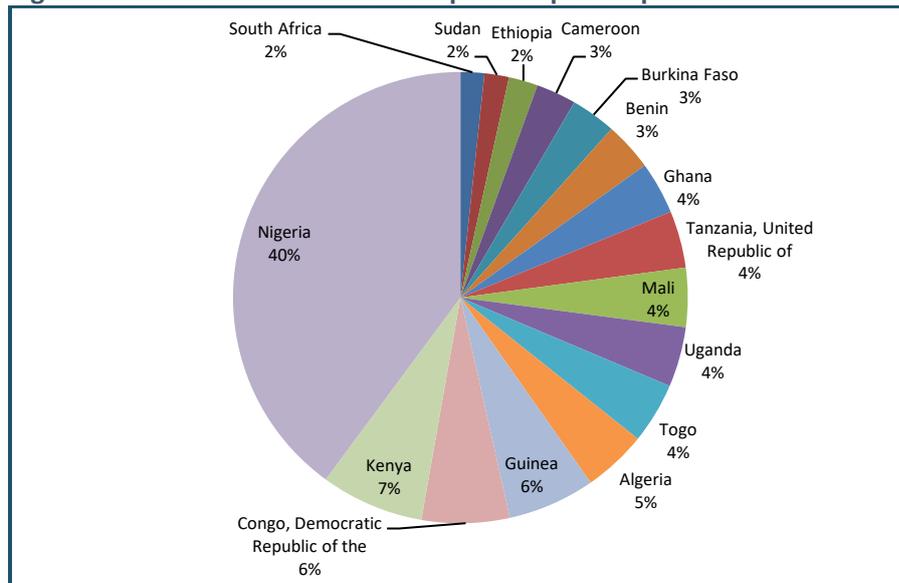
The Class A motorcycle market is dominated by Nigeria, followed by Kenya, Guinea and the DRC. South Africa and SADC countries collectively are small and insignificant sources of demand at present. As there are no continental producers of motorcycles all motorcycles are imported at present.

² Rwanda is one of the few African countries which has strongly regulated the motor taxi industry.

³ Kenya has put in place support systems to encourage the growth of the industry including negotiating with banks to increase access to funding for new operators.

⁴ Options regarding electric motorcycles are not considered in this proposal because higher unit prices, limited travel distance and long charging times, and access to recharging points and reliable electricity access make such products poor substitutes for petrol bikes.

Figure 1: African market share of imports Top 15 importers



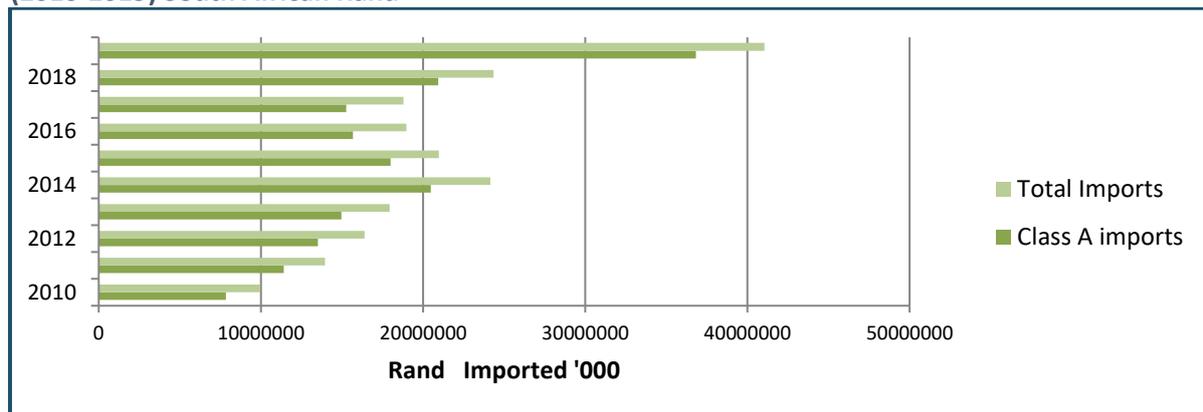
Source: Trade Map, <https://www.trademap.org>. (Accessed August 2020)

The motorcycle market is divided into four classes. D Class motorcycles are made up of quad bikes which have four wheels. Class C motorcycles are competition and off road bikes. B Class bikes are road bikes between 151cc and 800cc as well as cruisers. Class A are motorcycles with an engine between 0 cc and 150cc.

The Class A market is further broken down into five subcategories based on use: commercial use; agricultural use; personal use; scooters; and speciality motorcycles (kids bikes). The difference between a Class A motorcycle and a Class A scooter is that a scooter is an automatically operated vehicle with a constant velocity transmission and no gears or clutch. An A class motorcycle is a manually operated vehicle and has gears and a clutch. Scooters are thus easier to ride and control, require less experience to operate and tend to be lower maintenance than motorcycles as clutches are not worn out.

As no African country manufactures motorcycles, trends in the market are seen in terms of importation statistics. Figure 2 shows the African continental market is dominated by Class A imports which accounted for 89.7% of all motorcycle imports in 2019. This trend has been maintained as the market size has grown since 2010. In 2019 over R410 million of Class A motorcycles were imported into the African market. The two important trends shown in the Figure are the fact that imports have been growing strongly since 2010 and that the dominance of Class A imports has been maintained since 2010.

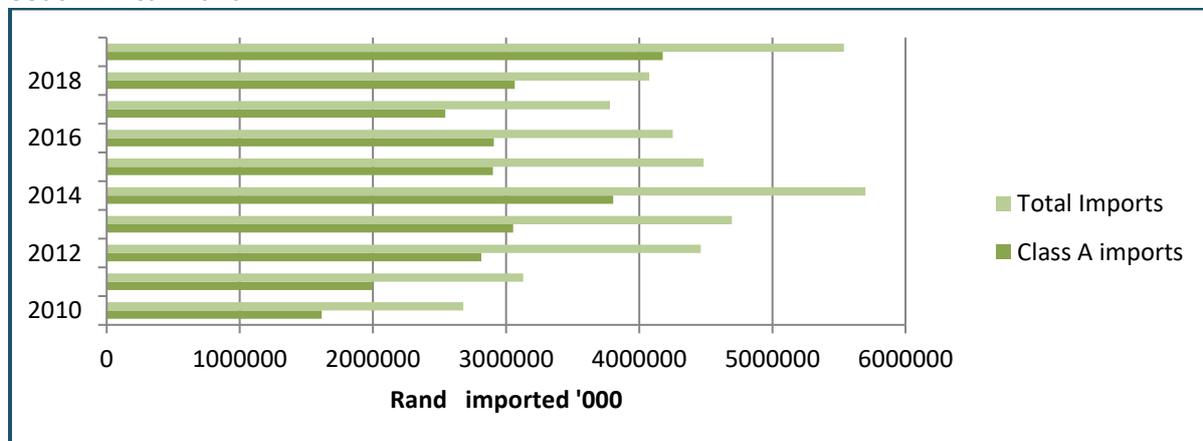
Figure 2: African continental imports of Class A motorcycles and total motorcycle imports (2010-2019) South African Rand



Source: Trade Map, <https://www.trademap.org>. (Accessed August 2020)

The market for imported Class A motorcycles in SADC in 2019 was approximately R50 million. SADC trends are similar to continental trends where Class A motorcycles dominate imports – but to a lesser extent than at the continental level (75% in 2019). The reason for this lower trend relates to the absence of a large motor taxi industry in South Africa and neighbouring countries and the existence of strong demand for 800cc Class B motorcycles for the wealthy leisure user and a strong demand for quad bikes (Class D) for the tourism industry. Interestingly (and importantly) the percentage of Class A imports to total imports is increasing over time (60% in 2010). This is due mainly to increased demand of Class A cycles in South Africa and a decrease in demand for Class D and Class B cycles due to poor economic growth. Detailed South African trends are shown below.

Figure 3: SADC imports of Class A motorcycles and total motorcycle Imports (2010-2019) South African Rand

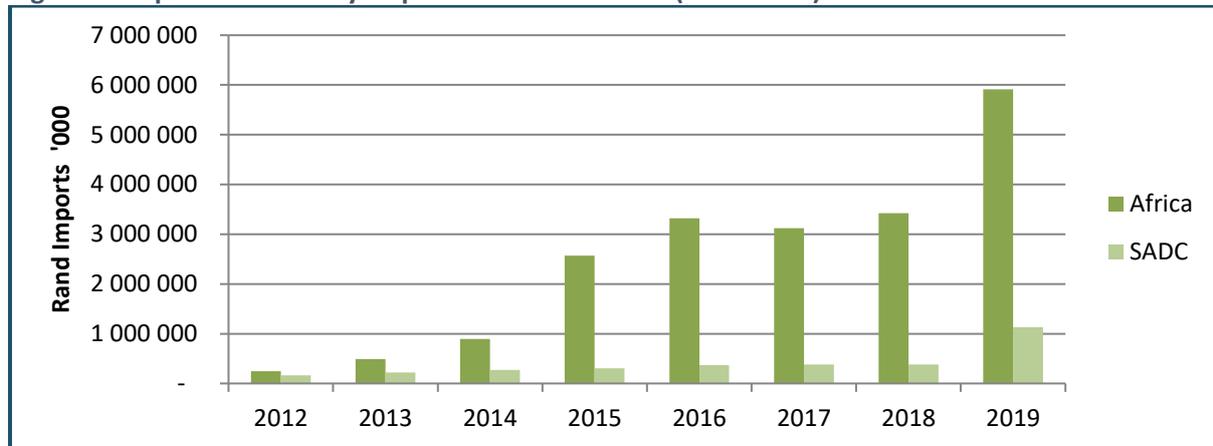


Source: Trade Map, <https://www.trademap.org>. (Accessed August 2020)

Compared to the value of the motorcycle market, the market for spare parts is significantly smaller. In 2019 the spares market in Africa was R59 million and in SADC just R13million. Both trends are, however, on an upward trajectory and have shown consistent growth over time. Industry experts suggest that these low absolute levels characterise user behaviour of not regularly servicing their motorcycles; homemade and backyard fixes and the approach of running bikes “into the ground” and eventually replacing them. Access to spares is also a contributing problem (particularly for

Chinese made bikes⁵). Some interviewees have suggested that if access to spare parts were more readily available in Africa demand would probably be higher.

Figure 4: Imports of motorcycle parts Africa and SADC (2012-2019)

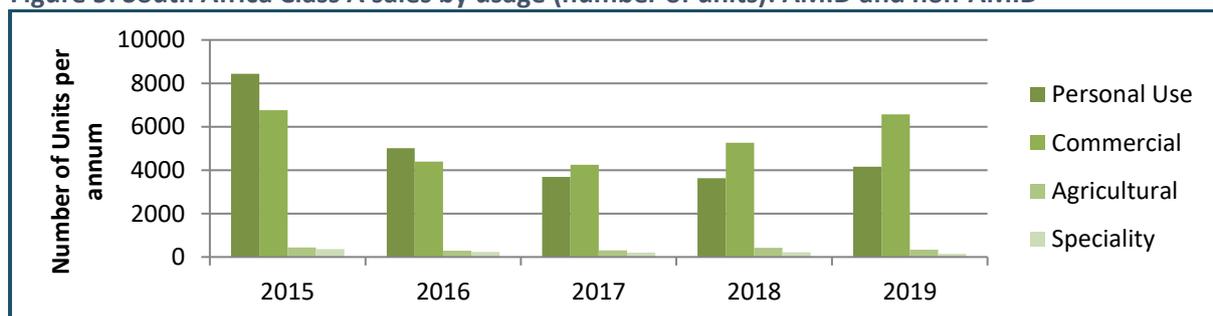


Source: Trade Map, <https://www.trademap.org>. (Accessed August 2020)

South African market

As mentioned, the SADC market for Class A motorcycles and scooters is small compared to the rest of Africa. There is no detailed data for the SADC motorcycle market. South African data is collected by the Association of Motorcycle Importers and Distributors (AMID). AMID's members are well-known global OEM distributors of well-known brands such as Honda, Suzuki, BMW and Yamaha. AMID's member sales accounted for approximately 90% of all motorcycle sales in South Africa 2010. In 2020 AMID's sales accounted for just 65% of domestic market sales.⁶ The difference is explained by the growth of the importation of motorcycles by companies which are not members of AMID. These companies on the whole only import and operate in the Class A segment of the market and almost all import from four factories in China. This trend shows the absolute and relative increase in the Class A non AMID market over the past decade (this is the low price, mass market for commercial use).

Figure 5: South Africa Class A sales by usage (number of units): AMID and non-AMID



Source: AMID, 2020

After a decrease in 2015-2016, the sales of Class A cycles and scooters has been recovering. Figure 5 draws attention to the usage of Class A motorcycles and scooters and shows clearly that purchases for personal use have fallen while sales for commercial use have increased strongly and substantially

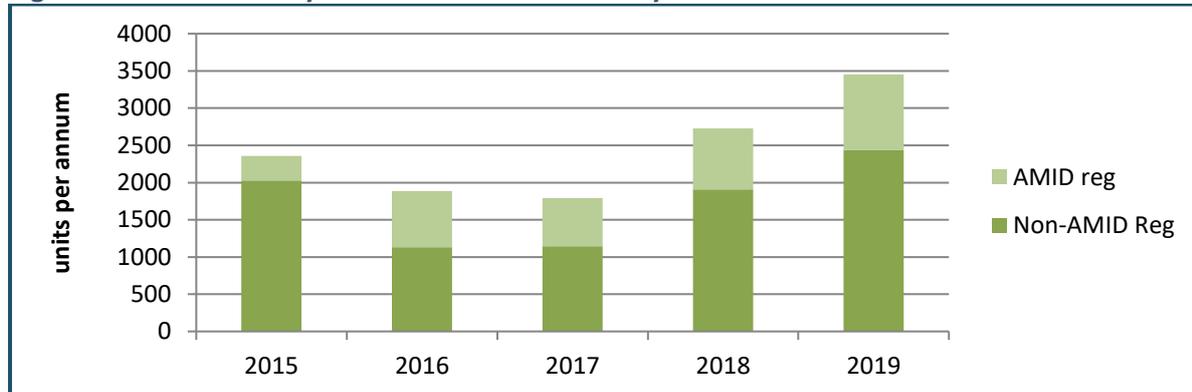
⁵ Chinese OEMs will only provide spare parts to distributors in bulk, e.g. 200 clutch cables in a box. As most distributors are SMMEs, have a small client base and cash flow limitations holding such large amounts of stock are not feasible. As such there is a shortage of spare parts of Chinese made bikes in most African markets.

⁶ Non-association members sales figures are deduced based on eNatis registrations.

over the past four years. Based on these short-term trends it appears that commercial use of Class A motorcycles and scooters is picking up in South Africa albeit off very low levels.

Figure 6 shows that much of the growth in these A Class cycles for commercial use has been satisfied by non-AMID members and not by well-established global brands. In 2019 non-AMID sales accounted for 71% of all sales of motorcycles and scooters for commercial purposes. Almost all of these non-AMID importers buy from China.

Figure 6: Class A motorcycles for commercial use only: AMID and non-AMID sales



Source: AMID, 2020

The South African Class A market is dominated by two players. South African Motorcycles (SAM) has a 50% market share and is not an AMID member. Sanyang Motor Corporation (SYM) from Taiwan enjoys a 30% market share and is an AMID member. Honda has 10% share with the remaining 10% of the market serviced by other AMID members. SAM is the dominant player in the market because the Class A commercial market is driven by price and SAM offer the cheapest cycles and scooters in the domestic market.

SAM was created in 1998 and provides a wide range of Class A motorcycles and scooters for private, commercial and agricultural use. SAM’s bikes are fully imported from Chinese OEMs and arrive as CBUs. They offer 35 different models including on and off road bikes, petrol and battery operated bikes as well as three-wheeler options including tuk-tuks, box loaders and bikes with built-in trailers. Chinese OEMs provide house-branded products for SAM under the name (badge) Big Boy⁷ which is the leading brand for commercial cycles and scooters in South Africa. Big Boy entry-level commercial motorcycles are R15 999, and an entry-level commercial scooter is R18 999. Both offer ecofriendly four stroke engines which offer amazing fuel efficiency of 37 kilometers per one litre of petrol. Interviewees suggest that accessing parts for Chinese OEM cycles and scooters is a problem, but SAM dispute this. SYM’s entry-level products are in the same price range (slightly higher) and offer similar fuel economy as SAM’s. SYM parts are more readily and easily available.

The demand for spares and parts for SAM’s and SYM’s Class A motorcycles and scooters are low in South Africa as with the rest of Africa. There is typically no appetite for regular servicing and maintenance and bikes are typically “ridden into the ground” and then replaced. Component parts are model specific and unique to each design so cannot be mass produced as substitutability is a problem. The only highly substitutable parts⁸ which could be fitted to all cycles and scooters interchangeably would be sprockets and chains (cycles) and air and oil filters (cycles and scooters). The latter are classified as consumables and not components.

⁷ SAM also sells GoMoto, Jonway and Bajaj Class A cycles and scooters.

⁸ This is based on interviews with industry members but has not been proven. It is a crucial area of research which would be required if the proposed project is further developed.

With the Coronavirus pandemic increasing the demand for delivery services for goods bought online (e-commerce), and the demand for private transport options instead of riskier public transport options, the upward trend of Class A motorcycles and scooters in South Africa (and SADC) is expected to show strong growth moving forward. This trend is likely to take hold in the rest of Africa as well.

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