Automotive Industry Promotion in Ethiopia

Key Issues and Policy Recommendations

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Since 2018, the National Graduate Institute for Policy Studies (GRIPS) and the Japan International Cooperation Agency (JICA) have discussed automotive policy with Ethiopia's responsible ministries and institutes. For this discussion, we interviewed automotive manufacturers and dealers in Japan and Ethiopia, invited Metals Industry Development Institute (MIDI) officials to Japan in June 2018, conducted three automotive seminars at the Ministry of Trade and Industry (MOTI) in February 2019, August 2019 and February 2020, and dispatched policy missions to Kenya (August 2018) and Myanmar (November 2019). This paper summarizes our findings and policy recommendations for Ethiopia from the Japanese and Southeast Asian perspective. Separately, GRIPS also drafted a note on the challenges faced by Japanese automotive assemblers in Ethiopia[1] and the Myanmar mission report[2], which should also be referenced along with this paper.

1. The importance of policy timeline

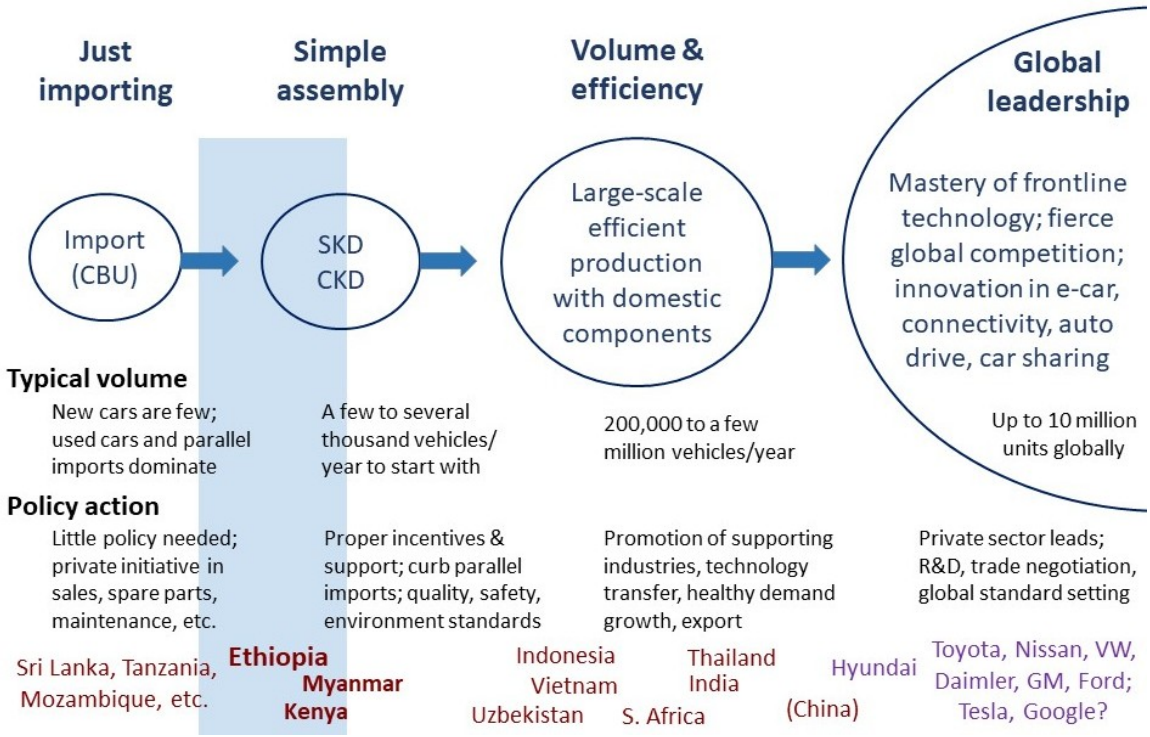
In each country, automotive industry development follows a certain timeline. Different countries are positioned at different places along this timeline, from simple assembly to fierce competition in frontline technology. For each development stage, required technology and policy measures are distinctively different. To promote the automotive sector of any latecomer country, it is essential to clearly recognize where the nation lies on this timeline, and correctly identify policy measures needed for the current development stage. Jumping from bottom to top is hardly possible.

The timeline is illustrated in Figure 1. To climb this ladder, production volume is the most critical factor because the automotive industry is subject to strong scale economy. Large assembly volume allows cost reduction, technology learning, invitation of foreign assemblers and component suppliers, and emergence of domestic component suppliers (and sometimes even domestic assemblers). Other key factors for automotive development include the quality of engineers and workers, logistic efficiency, an appropriate set of taxes, import duties and other incentives, availability of trade privileges, overall policy coherence and general business climate. But without large production volume, these factors do not contribute much to the growth of the automotive sector. Few FDI

[1] Kenichi Ohno, "Note on the Assembly of Japanese Automobiles and Construction Equipment in Ethiopia" (confidential), November 2018, drafted for Ethiopian officials in charge of automotive policy.
[2] GRIPS Development Forum, "GDF Myanmar Mission Report," revised January 24, 2020 (translated from Japanese original).

component makers would come if the order size is only several hundred to a few thousand sets per year. No serious engineer training would occur if a small number of cars are assembled. No one would invest in precision machining, mold-and-die making or computerized welding for small and erratic order flows.

Figure 1. Timeline of Automotive Industry Development



Global new auto sales is about 100 million vehicles per year. Global automotive firms with full technical capability to lead and innovate is less than 20 in number, led by Volkswagen, Renault-Nissan-Mitsubishi, Toyota and General Motors. Automotive technology is changing significantly with the introduction of connectedness, automation, shared use and electric cars (CASE). Global giants are seeking alliance to share huge R&D costs. New players such as Tesla and Google are also emerging.

The second echelon of automotive producers consists of such nations as India, Mexico, Brazil, Indonesia, Thailand, Vietnam, South Africa and Morocco. They have relatively large production volume but remain outside the global frontline technology race. They mainly rely on established technology or the technology of global giants. Their attempts to cooperate with giants, supply domestic components, train local engineers and even create national car brands have met with moderate success in some countries but dismal failure in others[3].

[3] China is difficult to locate on this timeline. In volume, it has the largest automotive market in the world. Due to its size, it has many assemblers and component suppliers with varied technology levels. Some are trying to break into

Outside these two groups, there are many countries that desire to host domestic automotive assembly, starting with relatively small volume and elementary technology. For them, needed policies are relatively simple ones of curbing used cars, policing illegal imports, offering reasonable incentives for assembly, and so on. Production at this stage consists of putting together already manufactured and inspected component sets into vehicle shape with bolts, nuts and screw drivers (for SKD), with additional painting and welding works (for CKD). Though this is simple, without passing this stage a nation is unable to proceed to join the second echelon. Moreover, even in this early stage, the experience of domestic automotive assembly will have positive effects on net foreign currency balance, engineer training and learning global ways of production management, marketing and customer service.

Ethiopia is now moving from total car import to domestic assembly of simple type, which is the first step in the timeline of automotive development as illustrated in Figure 1. The rest of this paper will explore various policies required for this transition—from the CBU stage to the SKD and CKD stage—based on the experiences of Japanese automotive makers especially in Southeast Asia and Africa. As Figure 1 also shows, Kenya and Myanmar are the two countries that are a little ahead of Ethiopia in this movement. They will be examined carefully in this paper, together with the cases of other automotive nations.

2. Reducing used car import

As a nation tries to initiate domestic car assembly, the first thing to be done is to curb the inflow of used cars as well as parallel imports, which are sometimes illegally brought into the country. This is because domestic assemblers cannot sell new cars or make any profit when the domestic market is flooded with cheap, unsafe, uninspected and/or poorly maintained vehicles that often evade taxes and levies. Domestic assemblers must pay all taxes and duties, conform to global standards in quality, safety and environment, build and operate factories, train engineers and workers, offer high-quality customer service, and must ensure smooth import of components. All this adds to the vehicle cost, but such additional expenses are normally not incurred by car importers and traders. Therefore, in terms of cost, cars assembled at home can hardly compete with imports.

Not just in Ethiopia but in many other developing countries, used or imported Toyota vehicles dominate the streets. Toyota is already very popular and highly evaluated among the citizens. However, this does not make Toyota happy, because the situation prevents Toyota from assembling cars in that country. Poorly maintained vehicles may even damage Toyota's quality reputation. Moreover, because most imports do not pass through Toyota's official dealers, they do not contribute to Toyota's revenue and profit. When President Thein Sein of Myanmar visited Japan in 2013 and asked Toyota to come and invest, Toyota first declined because of this problem. The Myanmar government took this seriously and eliminated used car imports in steps from 2014 to 2017. In 2019, Toyota reconsidered and decided to build a new plant in Thilawa SEZ near Yangon. The plant is

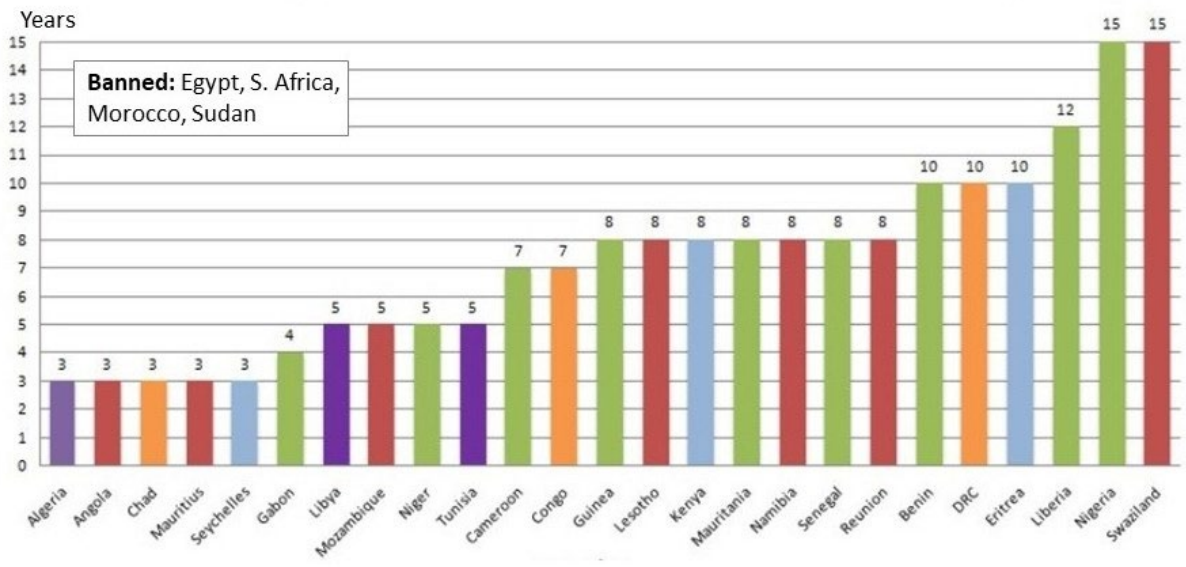
the new frontier, but their prospects are uncertain.

under construction and is expected to start operation in 2021.

The problem is not only with Toyota, but it is the same for all global car makers. When a country reduces used car imports and parallel imports successfully, the domestic car market is significantly transformed, which activates investments of SKD type. For example, when Nigeria raised CBU tariffs to 70% (passenger cars) and 35% (commercial vehicles) while maintaining SKD tariff at 10%, CBU imports were greatly diminished. This immediately prompted Toyota, Nissan, Renault, Peugeot, Ford, Hyundai, Kia and Tata to engage in SKD in Nigeria.

There are more than one way to curb used car imports, and they should be used in good combination. The most popular method is to set an age limit for vehicle imports. As shown in Figure 2, there are African countries that totally ban used car imports (Egypt, South Africa, Morocco and Sudan), those that have age limits ranging 3 to 15 years, and those without any restriction. Ethiopia belonged to the last group in this 2018 UNEP data, but it is about to introduce age limits.

Figure 2. Africa: Age Limit on Used Car Import



No import restriction: Burkina Faso, Burundi, CAR, Cote d'Ivoire, Djibouti, EQ Guinea, **Ethiopia**, Gambia, Ghana, Guinea-Bissau, Madagascar, Malawi, Mali, Somalia, S. Sudan, Sierra Leone, Tanzania, Togo, Zambia.
No punitive import tariffs: Benin, Burkina Faso, Burundi, Cameroon, CAR, Chad, Congo, Comoros, Djibouti, DRC, Egypt, E Guinea, Gabon, Guinea, Libya, Madagascar, Malawi, Mauritania, Mozambique, Niger, Namibia, Reunion, Senegal, Seychelles, Somalia, S. Sudan, Swaziland, Togo, Zambia
No data: Comoros, S. Sudan, Sao Tome & Principe

Source: United Nations Environment Programme, *Africa Used Vehicle Report*, 2018.

Another way is to levy punitive taxes, import duties and/or other levies, as done in Nigeria. This will financially discourage the import, sales and use of used cars—provided that tax evasion and under-invoicing are effectively policed and punished. Still another way is to mobilize various non-tax rules and regulations, such as no registration of used cars in the largest city and import ban on right-

hand drive vehicles, as practiced in Myanmar[4].

One important issue that must be borne in mind and handled very carefully is the resistance of used car importers, dealers and users to used car restriction. This natural reaction is widely observed in countries where such policy is announced or executed, including Kenya, Myanmar, Egypt and Nigeria. In Kenya, the opposition group successfully blocked the approval of the New Automotive Policy announced in January 2019. To cope with this political sensitivity, it is important to go soft and slow, and announce policy measures in advance and introduce them in steps. This gives sufficient lead-time for preparation and adjustment to all stakeholders, and lessens political pressure. Even if the policy is to be implemented over several years, investors and traders will immediately start adapting to future policy change, and intended results will soon be realized (including attraction of FDI assemblers) as seen in Myanmar or Nigeria.

Ethiopia recently began to adopt measures to curb used car imports, which is very desirable, but implementation details can be improved in view of the two points above. First, restriction should not rely only on financial measures (prohibitive tariffs and excise taxes) but combine other measures as well (car age limit, SKD and CKD incentives, non-financial regulations, etc.) in a synchronized and mutually consistent way. Second, the policy should be discussed with key stakeholders and announced well in advance, and executed in gradual steps, in order to ensure transparency, predictability and sufficient preparation time (Section 8).

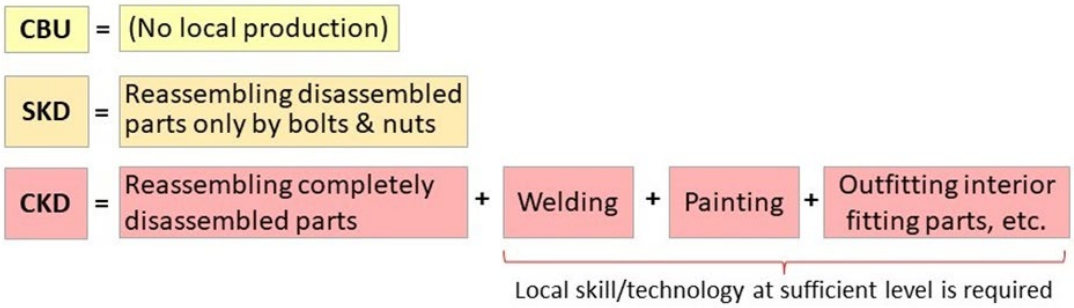
3. Definitions of SKD and CKD

To promote initial domestic assembly, the first thing to do is to attract a few to several reputable global automotive manufacturers (not too many—see Section 5) to assemble selected models. This can be done by construction of a new greenfield assembly plant 100% owned and operated by a foreign manufacturer, a similar plant managed by a FDI-local firm joint venture, or a local manufacturer commissioned to assemble vehicles under the supervision and assistance of a foreign car maker. To offer incentive to any of these investment forms, the definitions of Complete Build-up (CBU), Semi Knock Down (SKD) and Complete Knock Down (CKD) must be clarified. SKD and CKD are terms widely used in the automotive industry, for which there is a broad and common understanding of what they are. But each government must define it precisely to determine the eligibility of offered incentives.

The general definitions are shown in Figure 3, which are based on the information provided by the Japan Automobile Manufacturing Association (JAMA).

[4] Cars drive on the left side in Japan while they drive on the right side in Myanmar. Prohibition of right-hand drive cars was introduced in Myanmar to stop the inflow of used Japanese cars. Meanwhile, in Vietnam in the 1990s, local auto engineers were able to move the steering system of Japanese cars and buses from right to left before selling them in the Vietnamese market.

Figure 3. Definitions of CBU, SKD and CKD by JAMA



Source: Japan Automobile Manufacturing Association, *JAMAGAZINE*, February 2008; processed by Toru Homma.

CBU is importing a finished vehicle, ready to run. There is no production activity in the importing country—just sales, maintenance and the supply of spare parts. SKD is assembly of a set of components, some of which are completely apart but others may be already assembled to certain functional units ("assy"). SKD components are imported as a full package, ready for assembly without any metalworking or other substantive processes, requiring only physical putting together of components using nuts, bolts and screw drivers. The assembly line is typically not very long, about 20-40 meters, which is divided into several to a dozen separate manned stations. By contrast, CKD is more complete assembly of packaged components. It differs from SKD in two aspects: (i) all components for CKD are completely loose, not pre-assembled units (assy's); and (ii) CKD must include a few production processes requiring certain skills and additional investment in equipment. These additions are typically welding and painting workshops. It may also include certain interior outfitting works.

An instruction for SKD must describe which components should be imported in completely separate forms and which components are allowed to be pre-assembled in advance. Meanwhile, an instruction for CKD must specify separateness of all components as well as additional processes needed for eligibility. Precise official definitions of SKD and CKD differ from one country to another. Some countries do not distinguish SKD and CKD (Kenya up to 2019), while others split SKD into SKD1 and SKD2 (Nigeria). Still others create country-unique definitions such as Direct KD and KD Level 1, 2 and 3 (Kenya's new policy). It is advisable to make these definitions (i) basically in line with the globally common understanding of these terms, and (ii) simple and easy to understand and implement for investors, policy makers, tax collectors and customs officers (many of whom have no technical knowledge in automotive production).

Although Myanmar renovated automotive policy from 2014 and greatly succeeded in reducing used car imports and attracting foreign car assemblers, it does not yet have official definitions of SKD and CKD. There is a tentative definition of SKD of the Ministry of Commerce which everyone uses. As to CKD, there is not even a tentative definition. As a result, incentives for SKD and CKD, and their eligibility, remain officially undecided in Myanmar. This is mainly due to the conflict of interests between car assemblers and car importers, and the government must therefore tread

carefully in creating these definitions so as not to make it a politically hot issue. Even so, Japanese and Korean firms have already begun to invest in new car assembly in Myanmar. This is probably because they trust the Myanmar government to do the right things in the future[5]. Delay in definitions is lamentable, but from the angle of full stakeholder consultation and minding political sensitivity, it is good that Myanmar is taking great care and much time to decide the definitions of SKD and CKD and incentives that go with them.

4. Incentive structure

Once the definitions of SKD and CKD are determined, the government must offer adequate incentives (not too meager, not too generous) to manufacturers that fulfill these definitions. A small number of high-quality assemblers should be allowed to grow and prosper, to form an automotive industry base with sufficient volume in the not-too-distant future, achieving collective production of 100,000-300,000 vehicles per year.

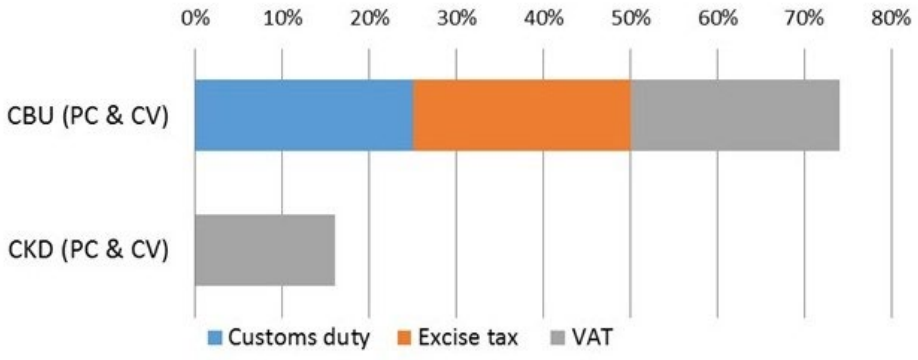
The standard menu of incentives includes conditional and time-bound reduction or exemption of corporate income tax ("tax holiday"), and more permanent exemption of import duties on equipment and components used in vehicle assembly. Many countries (including Ethiopia) levy additional taxes on automobiles with various names such as excise tax, luxury tax, special consumption tax, sur tax, etc. It is customary that SKD and CKD are taxed at lower rates or totally exempted from these taxes, compared with CBU imports. Meanwhile, universal indirect taxes such as VAT should be levied on all products including all types of automobile.

How much incentive is adequate? This can be studied by comparing international cases as well as listening to the voices of serious automotive investors at home. Note that investors sometimes ask for more than enough, so their requests may be granted either fully or partially based on the opinions of industrial experts and the judgment of policymakers.

The incentive structure should be simple rather than complex or piecemeal. Kenya's tax structure up to 2019, as illustrated in Figure 4, is a good example (Kenya's automotive policy is currently under revision). CBU is taxed 50% higher than CKD, which gives sufficient incentive for domestic assembly. Kenya does not distinguish passenger cars and commercial vehicles.

[5] A Japanese car assembler with the largest market share in Myanmar, as well as a JICA senior expert who created and manages Thilawa SEZ near Yangon, both said that, by common sense, CKD should mean addition of welding and painting processes to SKD even though the Myanmar government has not issued an official definition.

Figure 4. Kenya: Automotive Tax Structure (until 2019)



Source: interviews by GRIPS Development Forum mission in Nairobi, August 2018.
Notes: CBU is taxed at 25% (customs duty), 20% (excise tax) and 16% (VAT) with a total of 74%. CKD is taxed at 16% (VAT) only. Rates are applied multiplicatively, not additively, so there is 50% difference between CBU (x 1.74) and CKD (x 1.16). There is no distinction between passenger cars and commercial vehicles. Customs duties are exempted for ambulance and agricultural vehicles, while positive rates apply for designated 17 automotive components. Kenya did not have an SKD definition as of 2019.

Compared with Kenya, Ethiopia's tax structure (up to 2019, it is also being revised) is much higher and far more complex. It applies excise tax at increasingly high rates on passenger cars with large cylinder capacity, which results in prohibitive prices for high-end vehicles such as Toyota Land Cruiser VX, whose taxes reach 256% of CIF value. Another problem is a tax gap of only 5% between CBU and SKD for commercial vehicles, which is too small (in contrast to Kenya's 50% gap) and does not stimulate domestic truck assembly in Ethiopia. The recent revision of customs duties and excise tax has not corrected these problems (Section 8). Incentive structure should clearly indicate the national policy objective regarding what vehicle types are promoted in the country. It should not be a patchwork of cumulative revisions with different purposes such as maximum tax collection, penalizing luxury car owners, and raising fund for an external emergency.

The incentive structure should be "cascading," which means that upstream products (car components and their materials) should be taxed at zero or lower rates than midstream products (such as SKD and CKD cars), which in turn should be taxed less than downstream products (finished cars). This structure will incentivize value creation and stimulate at all production processes at home, including assembly and component supply. If the structure is reversed, CBUs become cheaper, more competitive and lucrative than SKD and CKD, so no production activity will take place in the country.

Automotive taxes are easy to collect, and it often becomes the target of revenue-seeking Ministry of Finance and tax authorities. Passenger cars are considered as "luxury item" in many developing countries. However, prohibitive taxes on motor vehicles suppress demand, restrict users, delay industry development, and encourage tax evasion and illegal imports. In many countries, the Ministry of Finance and the Ministry of Industry fight over this issue. A nation must balance the need to raise fiscal revenue and the need to promote the automotive sector. The final decision lies in the

hands of top national leaders.

In Ethiopia, additional privilege must be given to automotive assembly if it is to be regarded as high national priority. The most serious impediment is the perennial shortage of foreign currency, which pesters all businesses including automotive ones[6]. If the automotive sector is very important, special allocation of foreign currency should be considered. No high-quality automotive makers can engage in production and sales if the timing of next arrival of component kits is uncertain. This is particularly true for Japanese firms which must guarantee 100% on-time delivery to customers with absolutely no delay. Ethiopia's other problems such as inefficient logistics and unreliable power supply are also well known, and they must also be solved for all investors including automotive producers.

5. Selected entry and priority models

Not all FDI firms are the same. Some pursue quick profit while others come for long-term stay, rain or shine. Some teach workers and local suppliers well for future business development, while others offer only minimum training for daily operation. The government should establish a good working relationship with a few selected investors who bring value and contribute to national development. Automotive policy should be drafted and revised in close contact with such trusted manufacturers.

Production volume is essential in automotive development, but the domestic market is initially small. The domestic market should not be crowded with too many entries, which leads to small volume for each producer without achieving scale merit, cost reduction or model diversification. Most developing countries in the SKD and CKD stage can accommodate one to a few brand leaders for passenger cars, and similarly for commercial vehicles.

The number of FDI automotive manufacturers should not be regulated by outright bans or license control. It should be done indirectly by, for example, choice of priority models, strict standards for quality, safety and environment, incentive only for true value creators, and market selection by car buyers. It is equally important that these measures be introduced without violating (future) WTO rules, regional free trade agreements (including AfCFTA), and other trade and investment regulations.

Vietnam permitted free entry of car makers when the country was opened up to the West in the 1990s, resulting in 14 foreign car manufacturers competing in a small market. None achieved sufficient scale, and prices remain high. Technology transfer and supporting industry development (Section 7) remain slow even today, after receiving automotive FDI for a quarter-century. The Vietnamese government continues to complain about slow progress in these areas, but FDI firms reply that these cannot be attained when the market is fragmented into too many brands. Even Toyota, the largest passenger car assembler in Vietnam, operates a relatively small plant, and

[6] Japanese automotive firms list it as the most serious problem that prevents them from coming to Ethiopia. The other problems cited by them are inappropriate incentive structure, prevalence of used cars, and small demand. See Section 8 as well as my confidential "Note on the Assembly of Japanese Automobiles and Construction Equipment in Ethiopia" (2018).

cannot invite Japanese component suppliers to Vietnam or sufficiently diversify car models because production size is too small. Toyota Vietnam cannot compete with Toyota Thailand in terms of price, even when transport cost is included.

Uzbekistan is a country in Central Asia that became independent from the former Soviet Union in 1991. It suffered serious economic turmoil including negative growth, high inflation and multiple exchange rates. It is doubly landlocked, which means one must pass at least two countries to reach the sea. Economic and logistic conditions are hardly favorable for car manufacturing. Uzbekistan chose only one foreign firm, Korean Daewoo, to assemble cars domestically. When the Daewoo Group went bankrupt in 1999, General Motors took over. At present, GM is the only passenger car maker producing a few sedan models, while Isuzu and MAN are the only truck makers. They achieve sufficient volume despite small domestic and regional markets (about 200,000 vehicles per year). GM even built a huge state-of-art engine plant in Tashkent. Isuzu's truck plant in Samarkand is also modern and efficient[7]. The reasons for Uzbekistan's success are (i) selection of only a few players, (ii) appropriate (but standard) incentive measures, and (iii) the existence of high-quality human resource—the country has top-level automotive engineers and managers since the Soviet era who can operate the GM and Isuzu plants without any foreigners.

We hope that at least one Japanese automotive firm will be included in the list of selected foreign car manufacturers. Japanese firms in general (not just automotive) exhibit certain distinct features in comparison with other nationalities, wherever they operate in the world. They have strong manufacturing orientation while others may engage more in trade, tourism, finance and property development. They seriously pursue quality, customer satisfaction and long-term trust with local partners. They train local engineers and workers well even when they engage in frequent job hopping. Japanese firms come to frontier markets slowly and timidly, and expect good business climate from the beginning. In many countries in Africa and elsewhere, they are accused of being too slow and thus losing opportunities. But cautiousness is part of Japanese deep corporate culture. Japanese cannot jump in or take risk like Chinese, Indians and Koreans[8].

Developing countries with small domestic automotive markets often choose certain car models for promotion. This is to limit the number of models to achieve scale economy, for the same reason as permitting only a few makers to enter and lead the domestic market. Targeted models enjoy more favorable incentives, policy attention and good after-sale service and spare part supply (due to large volume). Thailand selected one-ton pick-up trucks as national model and grew to become its major global supplier. It subsequently added "eco-cars" (small and fuel-efficient cars) for national promotion. Indonesia and Vietnam selected seven-seater SUVs (Toyota Innova is most popular), and their streets are full of them. GM Uzbekistan targets basic sedans for sale in the domestic market as well as in the rest of Central Asia and Southern Russia.

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[7] The author visited these two plants in September 2016 and was surprised at the efficiency and high-quality human resource at both plants. Huge and computerized engine plants such as GM's do not exist even in Southeast Asia where Japanese car makers prevail in large number.

[8] One Indian businessperson confided that he loved Ethiopia's unfriendly business climate because he was quite used to it at home (India) and it kept other competitors (including Japanese) away.

6. Demand forecast and modal shifts

Business follows where demand is. Global automakers are attracted by the size and growth potential of each market. Even if the current market is small, assurance that it will grow strongly, and that policy will be supportive of this scenario, is usually enough to invite them to start domestic assembly. Meanwhile, inconsistent or unpredictable policy can suppress demand below potential and keep FDI away. The government should draft an automotive industry development strategy (or whatever the name) to inform and guide existing and potential manufacturers as well as to commit itself to policy actions to realize the proposed national goals.

The strategy document should contain relatively upbeat (but not excessive) demand forecasts, policy measures to invite high-quality FDI and upgrade and expand domestic capacity, and additional measures to alleviate car-caused problems such as traffic congestion, parking, safety and air pollution. Suggested contents include the following.

- Overview of Ethiopian automotive industry and market
- Policy objective(s) and targeted vehicle model(s)
- Benchmarking appropriate country (or countries)
- Demand forecasts and modal shift projection
- Attraction of FDI assemblers and suppliers
- Incentives for prioritized actions and models
- Development of domestic human resource, assemblers and component suppliers
- Minding social aspects including traffic safety, congestion and environment protection
- Coping with foreign currency shortage (unique in Ethiopia)

In drafting this document, what is important is not overall length but inclusion of clear direction and concrete actions. Key target numbers, timing of implementation and responsible organizations should be specified. Long policy documents are usually not welcomed or read.

Automotive demand forecast and modal shift projection are very important in indicating where the country is headed in the perception and plan of the government. Modal shift means the shares of passenger cars versus commercial vehicles over time, as well as the dynamic evolution among foot travel, motorcycles, tricycles, minibuses, large buses, railways and personal vehicles. Such evolution will depend on policy, income level, development of transport infrastructure as well as national characteristics.

Demand forecast should be based on real GDP growth (as in the national development plan) and income elasticity assumption (how quickly automotive demand grows when GDP rises 1%). To this, add any country-specific elements such as the desired product mix, predicted modal shift, promotion or restriction of certain modes and models, the speed of infrastructure construction and social measures concerning safety, congestion, pollution, etc. Motorization—rapid increase in

private car ownership—is said to begin at per capita income of around USD 3,000. Ethiopia, at USD 790 (World Bank data, 2018), is still a low-income country and currently has a small automotive market. Buyers are confined mostly to government, corporate and project customers while private demand is still limited.

Looking to the future, Ethiopia's automotive demand will surely grow—provided that there is no serious and long-lasting political, economic or social crisis. The assumptions of continued population and economic growth, which will in time generate a car-using middle class, are likely to produce a growing automotive market. For projection, official forecasts for population and GDP growth, plans for urban light rails, bus networks, street and intersection improvements, policy for motorbikes and tricycles, taxes and tariffs on various vehicles, and expected fares and demand for public transport should be taken into account. A realistic urban development master plan should be drafted for Addis Ababa, which covers not only transport but zoning, housing, public facilities, utility supply, waste treatment, parks and greenery, and so on. Table 1 gives an example of Vietnam's automotive demand forecast as of 2013.

Table 1. Vietnam: Automotive Demand Forecast (produced in 2013)

Annual sales (flow)

	High	Middle	Low
2012	102,083	102,083	102,083
2013	120,458	117,395	113,312
2014	142,140	135,005	125,776
2015	167,726	155,255	139,612
2016	202,948	183,201	157,761
2017	245,567	216,178	178,270
2018	297,136	255,090	201,446
2019	359,535	301,006	227,633
2020	435,037	355,187	257,226
2021	535,096	426,224	295,810
2022	658,168	511,469	340,181
2023	809,546	613,763	391,208
2024	995,742	736,516	449,890
2025	1,224,762	883,819	517,373
2026	1,396,229	1,007,553	584,632
2027	1,591,701	1,148,611	660,634
2028	1,814,539	1,309,416	746,516
2029	2,068,575	1,492,735	843,563
2030	2,358,175	1,701,718	953,226

Total fleet (stock)

	High	Middle	Low
2012	1,867,592	1,867,592	1,867,592
2013	1,988,050	1,984,987	1,980,904
2014	2,130,190	2,119,992	2,106,681
2015	2,297,916	2,275,248	2,246,292
2016	2,500,864	2,458,449	2,404,054
2017	2,746,431	2,674,627	2,582,324
2018	3,043,567	2,929,717	2,783,770
2019	3,403,102	3,230,723	3,011,403
2020	3,838,139	3,585,909	3,268,629
2021	4,373,235	4,012,134	3,564,439
2022	5,031,402	4,523,603	3,904,620
2023	5,840,949	5,137,366	4,295,828
2024	6,836,690	5,873,882	4,745,718
2025	8,061,453	6,757,700	5,263,091
2026	9,457,682	7,765,254	5,847,722
2027	11,049,383	8,913,865	6,508,356
2028	12,863,923	10,223,281	7,254,872
2029	14,932,498	11,716,016	8,098,435
2030	17,290,673	13,417,733	9,051,661

Note: based on the key assumptions, auto demand is expected to grow at 15%, 18%, 20%, 14% (average scenario), 11%, 13%, 15%, 13% (low scenario) and 18%, 21&, 23%, 14% (high scenario) in the periods 2013-15, 2015-20, 2021-25 and 2026-30, respectively.

Key assumptions

	Low	Average	High
GDP growth	Slow 5-6%	Normal 7%	Fast 7-7.5%
Policy	Not supportive	As committed	Supportive
Infrastructure	Not as planned	As planned	As planned

Source: presentation by the Vietnam Ministry of Industry (April 2013).

Another important aspect is balance between sales volume and social concerns. Automotive policy must balance the speed of demand increase, which is essential for the development of the

industry, with the introduction of road construction and improvement, parking, urban planning, traffic control, car inspection, environmental control, and driver licensing and education. Mindless pursuit of demand volume will worsen traffic congestion, accidents and air pollution, which will eventually backfire on the automotive industry. Addis Ababa should not become another Manila, Jakarta or Bangkok where heavy traffic congestion and air pollution seriously lowers the quality of citizens' life.

In this regard, one big problem of Myanmar's automotive policy is the pursuit of high sales volume as top priority. Given the current production of 20,000 cars in Myanmar, the targeted new car sales of 400,000 within 10 years is a very aggressive goal. Nigeria in 2013 also targeted 400,000 new cars within 10 years, but actual result is way below (currently 10,000 or much less, data uncertain). In Vietnam, new car sales reached 300,000 only after 25 years of FDI car assembly. Unrealistically high demand forecast is not only unreachable, but it may be used as an excuse for accelerated production without due consideration on the social impact of rapid motorization.

To formulate an automotive strategy, voices of stakeholders, both domestic and foreign, should be heard throughout the drafting process. The automotive industry is broad and global, with many contributing players and sub-sectors whose interests often conflict. Government must be an effective coordinator of different interests with fairness and under a long-term national vision. It should also talk directly to selected foreign producers who are willing to contribute to domestic value creation and skill formation. Their advice, backed by real business action, is highly valuable in setting the policy direction. Transparency, predictability and sufficient lead-time are critical in policy change. All policies and incentives must be clearly announced in official gazettes or other documents.

If effective industry associations exist that represent the various views of domestic and foreign firms as well as assemblers and component suppliers, the government should use them for policy propagation and feedback in addition to talking to individual firms. In Kenya, automotive policy has been drafted with a strong initiative of the Kenya Association of Manufacturers (KAM). In Myanmar, FDI firms constantly assist the formulation of automotive policy. In Ethiopia, some associations do exist and others were just recently formed, but substantive business-government cooperation is yet to be realized. Private initiative remains relatively weak. An automotive strategy should include the fostering of automobile-related industry associations in its future plans.

7. Increasing domestic value: the next stage

Ethiopia's policy objective in the SKD-CKD stage is to attract high-quality foreign automotive assemblers to form the initial automotive industry base, and let them succeed, expand and be profitable. Their collective assembly volume, starting from a few thousand vehicles per year, should gradually rise. The next policy stage will be reached when the volume rises above 10,000 and heads strongly toward 100,000 or more[9]. With this, the policy objective must shift from initial establishment

[9] These numbers are given for illustrative purpose only, and should not be taken too literally or mechanically. Such volume targets are often suggested by automotive manufacturers operating in various countries, but exact numbers differ from one company to another, and from one factory manager to another.

of the industry to more localization and value creation (see Figure 1). Large domestic value creation is hardly possible when production consists of simple assembly of fully packaged knock-down kits with screw drivers. But it becomes a real target as total production volume rises and many upstream works, especially component production and processing, begin to be incorporated. At that time, hitherto domestic market-oriented car production and sales may also turn to export markets.

For Ethiopia, localization should not be the main policy objective now, but the automotive strategy document may anticipate it as the next inevitable step. The current policy must concentrate on creating comfortable business environment for SKD and CKD assemblers. But when the time is ripe, policy measures should turn to enhance localization and domestic value creation which are quite different—and more difficult—than those for promoting SKD and CKD. They aim to level up local engineers and managers, invite foreign component suppliers, strengthen local component suppliers, and forge close production linkage between foreign and domestic firms. These are called "supporting industry promotion" in Japanese terminology. Southeast Asia, where localization is now the key issue, has many lessons to offer in this regard. Thailand has been working on it since the late 1980s. We will be happy to discuss them in detail when that stage is reached.

Localization is a very sensitive policy. It must be promoted with actions that assemblers and component suppliers truly welcome, not by top-down orders to force localization with unreachable goals or without effective policy support. If this happens, assemblers are unlikely to cooperate—as seen in the experiences of Malaysia and Nigeria. There are also technical issues in measuring localization ratios, which must be solved by consulting industry experts and best international practices.

Some foreign carmakers engage in SKD or CKD just in order to pay less tax than CBU. But others are seriously interested in raising local capacity and local component procurement in the long run. Government should select the latter as policy partners in promoting domestic value creation.

8. Assessment of Ethiopia's recent policy initiatives

Isuzu is cooperating with Kaki, a private automotive distribution and engineering firm, to assemble medium-size trucks in Ethiopia. Its progress has so far been slow due mainly to foreign currency shortage, but it finally began test production in February 2020. Other Japanese automotive makers interviewed by GRIPS were also interested in the Ethiopian market, but they also cited multiple barriers to entry which prevent them to make a decision. They are (i) foreign currency shortage, which is the most serious impediment, (ii) tax and tariff structure which is unfriendly to local assembly, (iii) prevalence of used vehicles and parallel imports, and (iv) currently small domestic demand[10]. The Ethiopian government has already begun to solve some of these problems, which is very encouraging. However, there are some implementation details that need to be discussed.

One general problem we witness in Ethiopia is the lack of policy coordination. Automotive industry promotion has been high on the government agenda. In 2019, Ethiopia decided to draft an

[10] For more, please see my earlier Note cited in footnote 1.

automotive strategy and started preparatory works. The central hub function was given to EIC—a team supervised by Commissioner Abebe Abebayehu and currently headed by Advisor Bruck Teshome—which should work closely with MOF, MOTI (MIDI), PMO, MOT and other relevant ministries and institutes. As we observe, EIC, in addition to the hub function, deals with FDI including Germans (Volkswagen supported by GIZ). MOF is responsible for revision of import duty and excise tax structure. MOTI is in charge of technical aspects including the definitions of SKD and CKD. These tasks must proceed in a closely integrated manner with proper timing for each. But reality seems that MOTI and MIDI do not know the details of what EIC and Germans are doing, MOF's tax revisions are not fully discussed with other ministries in advance, and so on. In most countries—including Kenya, South Africa, Vietnam, Thailand and Myanmar—one ministry, typically the Ministry of Industry, is solely responsible for automotive policy formulation. It is rare that an investment authority drafts sector-specific development strategies, which is usually too busy with investment attraction, facilitation and follow-up. Ethiopia should either greatly improve policy coordination under the current arrangement led by EIC, or revise policy making organization for automotive industry development[11].

We have been told that the newly announced tariff structure, excise taxes, and definitions of SKD and CKD are tentative ones, which will be revised for consistency when the automotive strategy document is completed and approved. That is reassuring, and we hope that will surely happen. Nevertheless, investors for now do not know exactly how these incentives and definitions will be adjusted in the future. The proper order is first to draft and publicize the automotive strategy which specifies key policy components (goals, timeline, definitions, priority models, incentives, eligibility, etc.), then actually concretize and implement these measures in a mutually consistent way.

Another general issue is the need to deepen and broaden stakeholder involvement, especially with domestic and foreign automotive firms. They should cover not just existing local assemblers (METEC/Bishoftu, Mesfin, Marathon Motors, etc.) and foreign brands (Peugeot, Lifan, Jili, Hyundai, etc.) but more importantly, globally leading firms which may be seriously interested in Ethiopia but have not yet come (for example, Toyota and VW). Isuzu, which recently began test production of trucks in cooperation with Kaki, should also be heard directly. The depth and breadth of government's dialogue with key stakeholders determines the quality of automotive policy. This does not mean that government must accept every request made by foreigners. Rather, after hearing their demands, it should balance industry's needs with policy objectives under strong national ownership. Good policy making starts with hearing the industry's voices closely, selecting the most value-creating foreign partners, and building trust with them.

Ethiopia recently began to restrict used car imports, which is a highly commendable first step. This will surely and greatly transform the Ethiopian automotive market as in Myanmar and Nigeria. However, implementation details may be subject to discussion. As explained in Section 2, used car imports should be reduced in a combined set of vehicle age limit, taxes and import duties, and other regulations (such as restriction of vehicle registration in the capital city). Ethiopia has introduced high

[11] The Japanese policy dialogue team try to talk to EIC, MOF, MOTI, PMO, PDC and GIZ to grasp the whole picture. But this requires much time and energy.

import duties and prohibitive excise taxes without other measures. In particular, vehicle age limit should go along with punitive taxes, but its announcement is delayed. Another problem is that the revision of excise taxes was sudden and very steep, giving little lead-time for preparation or adjustment to affected businesses. As argued above, used car restriction is a politically sensitive issue which may ignite resistance and blockade by lobbyist groups. To ameliorate this problem, measures should be implemented in steps with prior notice, rather than abruptly. This approach will soften political resistance while ultimate market impact will be the same. It is not clear to us how much resistance to used car restriction will arise in Ethiopia in comparison with Kenya, Egypt, Nigeria or Myanmar.

More generally, Ethiopia's automotive tax structure remains complicated and very long (37 pages) even after the recent revisions in import duties and excise taxes. We recommend incentive structure to be much simpler. It is good that the new revision gives cascading structure to CBU, SKD and CKD tariffs for the first time. But Ethiopia still has too many tax categories for passenger cars, which escalate as engine capacity increases. We do not know why large cars must be penalized so heavily—is it because they are deemed extreme luxury, or because they are easy targets for tax collectors (or both)? It is hard to find a good logic for taxing Land Cruiser way above Yaris, unless the government strongly encourages small cars in Ethiopia (is that the policy intention?) Priority models for Ethiopia should be determined carefully in the drafting process of the automotive strategy. When decided, they should be given a moderate tax privilege, not a prohibitive difference as seen today. We recommend a basic distinction between passenger cars and commercial vehicles without specifying engine size. Kenya does not even make this distinction and applies the same taxes to all vehicles, passenger or commercial (Figure 4 above). We also advise to abolish sur tax, which we hear was introduced for a national emergency in the past but now has no role because Ethiopia and Eritrea have already re-established diplomatic relations. In addition, incentives associated with corporate income tax may be adjusted if necessary[12].

Definitions of SKD and CKD must go together with the new tariff structure which incentivizes these activities. In mid-2019, MOF asked MOTI/MIDI to come up with these definitions quickly, and they were prepared and approved by early 2020. We understand that MIDI searched the websites of a few countries, including India and South Africa, to compile the lists. They specify the number of loose components (say, 154) for each vehicle type, and the number is greater for CKD than SKD. The definition of CKD does not include welding or painting processes unlike the more popular definition shown in Figure 3 above. MIDI calls these processes "manufacturing," which will receive separate privilege in the future. We believe the definitions of SKD and CKD should follow standard practices (Section 3) based on the functional separation of components and assy's rather than

[12] Automotive incentives normally combine ordered taxes on different vehicle types, no (or low) taxes on equipment and components imported for vehicle production, and time-bound exemption and/or reduction of corporate income tax (CIT, which EIC calls Business Income Tax). For the last, Ethiopia currently offers CIT exemption up to six years for vehicle manufacturers (which is reduced by up to two years if investment is in Addis Ababa or the Special Zone of Oromia Surrounding Addis Ababa). The Ethiopian government should decide whether to keep this clause or revise it for automotive industry development.

absolute number of loose components which differs from one vehicle type to another[13]. CKD should include investment in welding and painting in addition to more complete separation of components. Definitions should be finalized after intensive discussion with key stakeholders, as Myanmar is doing, rather than hastily.

Finally, Ethiopia must cope with the problem of foreign currency shortage. The ultimate solution is to increase its supply, but this will take time. In the short to medium run, available foreign currency must be allocated strategically to protect citizens' living and accelerate national development. Manufacturing is already relatively high in the priority list for foreign currency allocation, but it does not specify which manufacturing sub-sectors are especially targeted. We do recognize that foreign currency difficulty is widespread in Ethiopia, not just in the automotive sector. The only thing we can say is that, if the government truly and seriously targets the automotive sector as top priority, it should allocate foreign currency to its key players sufficiently and smoothly. Although the sector is currently import-substituting rather than export-oriented, SKD and CKD will save foreign currency relative to CBU, to the extent that assembly and some production processes take place domestically (but do not expect much saving initially). It will also bring engineering skills as well as global standard customer marketing and service to Ethiopia—if value-creating foreign firms are correctly chosen as partners. Prioritized allocation of foreign currency is a decision top national leaders must make to advance national development.

[END]

[13] Kenya adopts a functional definition of SKD rather than absolute component numbers. For example, item 7.(1) of Procedures Act (No. 29 of 2015) defines SKD for front suspension as follows: "The independent type of front suspension shall have the following parts or sub-assemblies adrift - (a) suspension frames; (b) stub axles complete with wishbones, constant velocity joints, steering arms and braking equipment; (c) radius rods, anti-roll bars and other suspension linkages; (d) brake pipes and hoses; (e) shock absorbers; and (f) springs excluding leaf springs."