

International Comparison of Automotive Assembly Policies

For Inviting Global Players to Ethiopia and Supporting their Expansion



Nairobi, Kenya



Near Addis Ababa, Ethiopia



Johannesburg, South Africa



Bangkok, Thailand

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Addis Ababa, February 2019

Topics

1. Review of global automotive industry
2. Features of Japanese automotive industry
3. Issues raised by Japanese automotive assemblers concerning Ethiopia
4. Comparing Ethiopia and Kenya
5. Import duty and tax structure: selected Asian cases
6. Policy suggestions

Introduction

- Japanese cars and trucks are highly visible in Ethiopia (as well as in Africa). However, their producers are slow to come to Ethiopia for assembly. To understand the reason why and how they can be encouraged and supported, the GRIPS Development Forum (GDF) conducted a series of studies and surveys.
- Japanese automotive makers were interviewed in Tokyo (producers of passenger cars, commercial vehicles & construction equipment).
- Sales agents of Japanese vehicles in Ethiopia were also visited.
- Japanese automotive firms often compare Kenya and Ethiopia. GDF visited Nairobi in August 2018 to interview Kenya's industry ministry and agencies, business NPOs and Japanese and local firms.
- Tax & tariff structure on Japanese cars imported to the rest of Asia were examined for selected countries, models and components.
- Automotive industry studies were conducted in several countries in Asia and Africa.

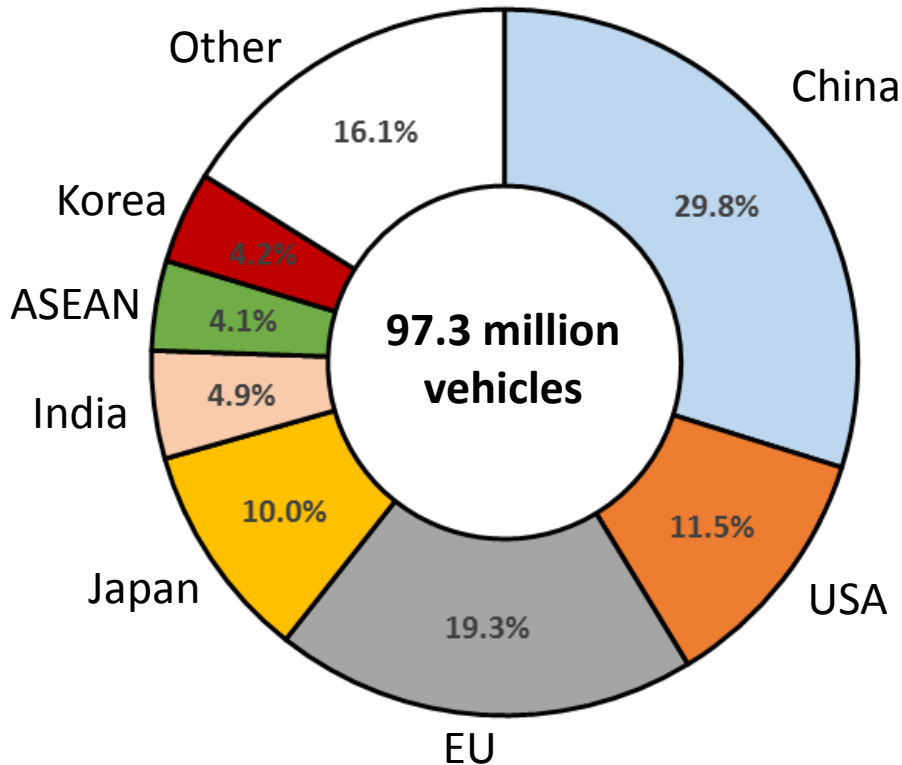
Global Automotive Industry

- Global new auto sales is about 100 million per year, growing 1% to 5% annually (depending on year). China contributed most to this growth, but its market slowed down recently.
- Global firms with full technical capability to lead and innovate are less than 20. They are from Japan, Germany, France, US and Korea. They compete fiercely for global market and new technology.
- Technology is changing significantly with e-cars, auto-drive, AI, car sharing, etc. Global giants are seeking mutual alliance to share huge R&D costs. New players (Tesla, Google, etc.) are emerging. How effectively China can join this race remains to be seen.
- Other auto producing nations (India, Mexico, Brazil, Indonesia, Thailand, Vietnam, South Africa, etc.) are outside the global frontline race. They mainly rely on technology of global giants.
- Their attempts to link with giants, supply components domestically, train engineers, and even create national cars met with moderate success in some countries but dismal failure in others.

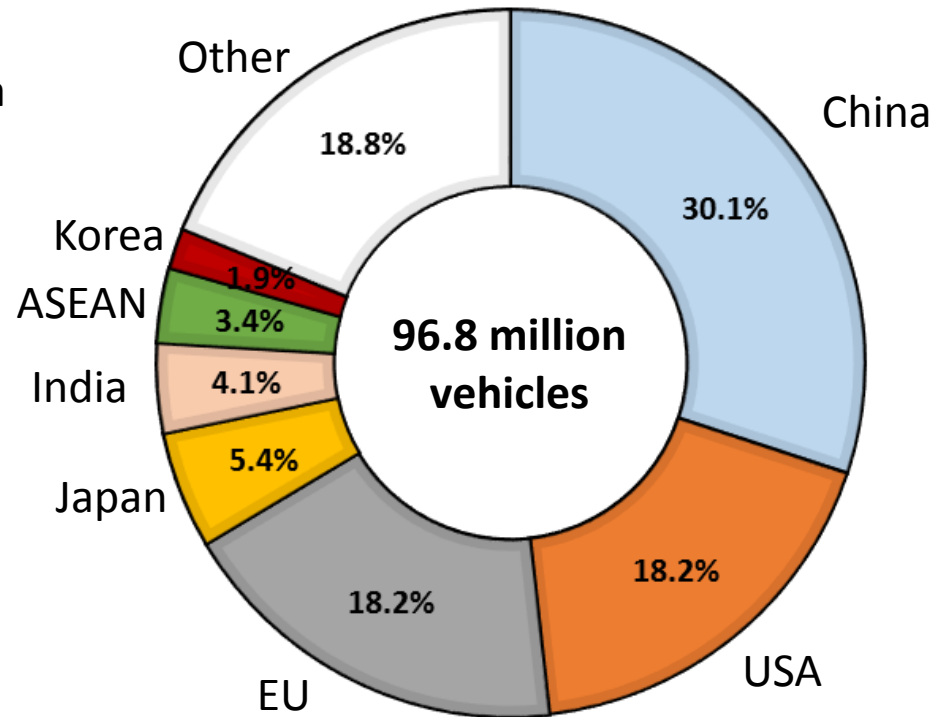
Global Automotive Market, 2017

About 100 million new vehicles are produced and sold each year

Production



Sales



Source: JETRO, Trends in Automotive Production and Sales in Major Countries, Nov. 2018.

In Ethiopia, total sales in 2016 was 7,500 new vehicles (0.008% of global market), plus 28,020 used vehicles. (Cf. Myanmar 20,000 new vehicles/year)

Global Leaders: Sales Ranking 2017

	Company	Headquartered in	Sales (million)	Share
1	VW	Germany	10.7	11.1%
2	Renault-Nissan-Mitsubishi	France	10.6	11.0%
3	Toyota	Japan	10.4	10.7%
4	GM	USA	9.6	9.9%
5	Hyundai	Korea	7.3	7.5%
6	Ford	USA	6.6	6.8%
7	Fiat-Chrysler (FCA)	France	4.8	5.0%
8	Honda	Japan	3.7	3.8%
9	PSA (Peugeot, Citroën, etc.)	France	3.6	3.7%
10	Daimler	Germany	3.3	3.4%
11	Suzuki	Japan	3.2	3.3%
12	Changan	China	2.9	3.0%
13	BMW	Germany	2.5	2.6%
14	Mazda	Japan	1.6	1.7%
15	Tata	India	1.3	1.3%
16	Subaru	Japan	1.0	1.0%
	SUBTOTAL		83.1	85.8%
	Other		13.7	14.2%
	TOTAL		96.8	100.0%

Source: Automotive Jobs, <https://automotive.ten-navi.com/article/29623> (accessed January 31, 2019).

Producing Nations without Frontline Technology

UK, Italy

They are (were) leaders in high-end models but are without volume or competitive edge for popular models.

Thailand, Mexico, Canada, Indonesia, Poland, Hungary, South Africa, Turkey, Czech Republic, etc.

These countries offer workers and plant sites for global giants which are attracted to low wage, incentives, tariff or FTA privilege, etc.

Malaysia

Tried to create a national car (Proton) with heavy support and protection, but as tariffs come down, Proton suffers from the lack of competitiveness. Now receiving Chinese assistance.

Global ranking	Country	Production (million units)	Share
7	Mexico	4.07	4.2%
8	Spain	2.85	2.9%
9	Brazil	2.70	2.8%
11	Canada	2.20	2.3%
12	Thailand	1.99	2.1%
13	UK	1.75	1.8%
14	Turkey	1.66	1.7%
15	Russia	1.55	1.6%
16	Iran	1.52	1.6%
17	Czech Republic	1.42	1.5%
18	Indonesia	1.22	1.3%
19	Italy	1.14	1.2%
20	Slovakia	1.00	1.0%
21	Poland	0.69	0.7%
22	South Africa	0.59	0.6%
23	Hungary	0.47	0.5%
24	Argentina	0.47	0.5%
25	Malaysia	0.46	0.5%
	SUBTOTAL	27.75	28.7%
	TOTAL	96.80	100.0%

Source: JETRO, Trends in Automotive Production and Sales in Major Countries, Nov. 2018 (data for 2017).

About CBU, SKD, CKD & Supporting Industry

- **Complete Build Up** (CBU) means import of finished vehicles.
- **Semi Knock Down** (SKD) and **Complete Knock Down** (CKD) mean import of component sets and semi-assembled parts (assy's) to produce finished vehicles.
- SKD is simpler and uses more ready components than CKD. Official definitions vary across countries. CKD normally involves welding and painting while SKD is just putting parts together by screwing and bolting.
- There are other Knock Down types but they are not used for policy purposes in Ethiopia or Kenya.
- **Supporting Industry** (*susono sangyo*) is a Japanese term for domestic producers of mechanical components (not imported parts) that are supplied to assemblers operating domestically. It is also called ancillary industry (India), industrial verticals (Singapore), subsidiary firms, etc.
- SKD/CKD is the very first step (entry stage) in automotive production. Most Asian nations have graduated from this stage and now strive to create strong supporting industry for technology learning, domestic value creation and joining global value chains. But this requires sufficient industry volume, serious HR training and proper policy support.

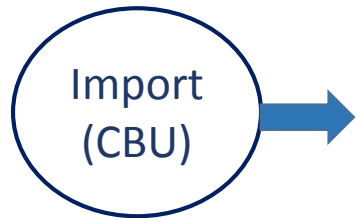
Timeline of Automotive Production Development

CBU → SKD/CKD → Inviting foreign SI & developing local SI
→ Large volume & low cost → Frontline technology

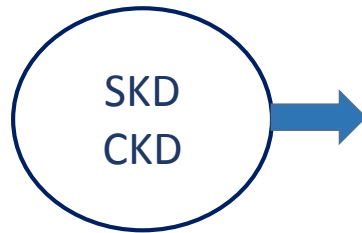
- Many governments encourage domestic value creation and transfer of manufacturing technology.
- This must be done by climbing the ladder steadily in proper steps. Each step requires appropriate but different policy support. As the process deepens, higher technology and greater sale volume become critical. Jumping from bottom to top is hardly possible.
- Ethiopia is now moving from CBU to SKD/CKD (the first step)
- For countries with annual production of 200,000 new vehicles or more, development of supporting industries becomes critical for competitiveness (cost reduction, quick delivery and response, increasing production scale).

Timeline Visualized

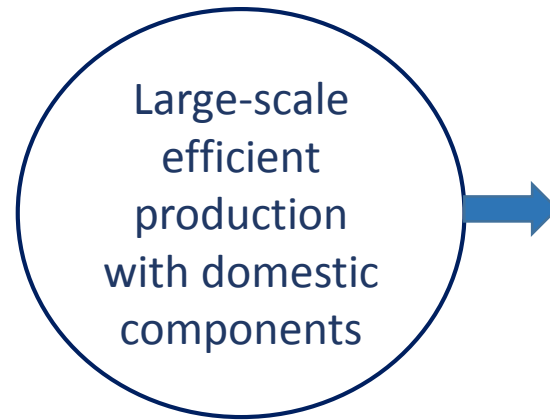
Just Buying



Simple assembly



Volume & efficiency



Global leadership



Typical volume

New cars are few; used cars and parallel imports dominate

A few to several thousand vehicles/year to start with

200,000 to a few million vehicles/year

Up to 10 million units globally

Policy action

Little policy needed; private initiative in sales, spare parts, maintenance, etc.

Proper incentives & support; curb parallel imports; quality, safety, environment standards

Promotion of supporting industries, technology transfer, healthy demand growth, export

Private sector leads; R&D, trade negotiation, global standard setting

Sri Lanka, Tanzania, Mozambique, etc.

Ethiopia Myanmar
Kenya

Indonesia Vietnam
Uzbekistan S. Africa

Thailand India

Hyundai (China)

Toyota, Nissan, VW, Daimler, GM, Ford; Tesla, Google?

Features of Japanese Firms

(General, Across Sectors)





- Japanese firms generally have the following features which are visible at home and abroad, in any country and in most sectors.
 - Manufacturing orientation (more than commerce, tourism, construction, finance, professional services, etc.)
 - Pursuit of quality and customer satisfaction
 - Specialization and division of labor in network production (not vertically integrated production in a huge plant)
 - Pursuit of long-term partnership based on trust
 - Slow and small entry; long stay once entry is made
 - Support and training for chosen partners for value creation and future expansion
 - High compliance with local laws and regulations as well as business contracts
- Japanese firms are often accused of being too slow and thus losing opportunities. But slowness is part of their deep corporate culture.

Japanese Automotive Industry

- Japan is globally unique in having ten or more high-standard vehicle makers, each with long history, competing with each other and globally, and all surviving.
- Test production of cars began more than a century ago, but Toyota and Nissan emerged as leading manufacturers in the late 1930s. The two had very different strategies for learning technology.
 - **Toyota** – going it alone, learning by reverse-engineering American cars
 - **Nissan** – purchasing a whole plant, technology and support from US
- Japanese auto makers behave differently from US, European, Korean, Chinese or Indian rivals (as Japanese firms in other sectors).
- Japan transferred car production to many other countries, but only a few (Korea) learned it well enough to become Japan's competitor. Others (Thailand, Malaysia, Vietnam, Indonesia, etc.) didn't achieve global competitiveness in HR, design, technology, etc. They continue to receive Japanese support and cooperation after many decades.

Japanese Automotive Manufacturers

 Control relation
 Dissolution

Toyota



1937



Corolla 1966

Daihatsu 1907

Model AA 1936



Midget 1957



Mira 1980

Hino

1910



TGE-A 1917

1941



Skelton Bus 1977

Nissan

1933



Fairlady Z 1969



March 1982

Mitsubishi

1917



Mitsubishi Type A 1917



Pajero 1982

Honda

1948



Supercub C100 1958



Civic 1972

Suzuki

1920



Corenda 1955



Alto 1979

Mazda

1920



Matsuda Go 1931



R360 Coupe 1960

Isuzu

1916



TX40 Truck 1932

1937



Elf 1959

Subaru

1917



Subaru 360 1958



Sambar 1961

Renault

1999

2016

GM

1998

2000

GM

2006

2008

GM

1971

1979

Ford

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2006

2015

in steps

F

1999

GM

2005

GM

Issues Raised by Japanese Automotive Assemblers Concerning Ethiopia

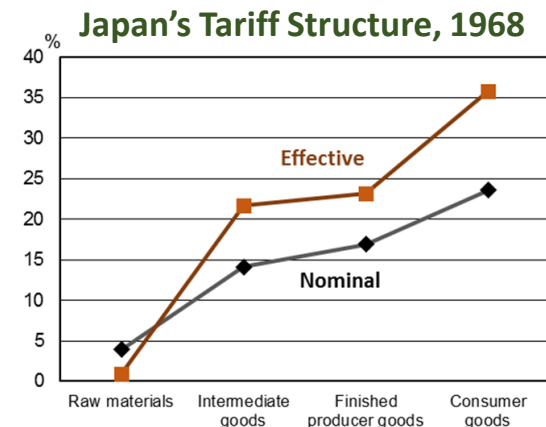
- Ethiopia in particular and Africa in general are recognized as a new frontier and growing market. Ethiopia is a potentially large automotive market within Africa.
- However, a number of entry barriers exist.
 1. Severe foreign currency shortage (unique to Ethiopia)
 2. Problems with incentive structure
 3. Used vehicles and parallel imports
 4. Market size (present and future)
- Japanese automotive firms currently conduct business mostly by exporting to Ethiopia. Conditions for local vehicle assembly are not yet present. But one Japanese firm is planning to assemble vehicles through its local partner.

1. Foreign Currency Shortage

- All of the interviewed Japanese assemblers cited this as the **biggest problem and challenge** for assembly in Ethiopia.
 - Domestic demand for cars and trucks may be potentially large, but it is suppressed as customers cannot obtain F/C.
 - Uncertainty and delay in importing machinery and components means assemblers cannot produce or service customers promptly without delay.
- Government is making effort to increase F/C supply, but Japanese firms still report little improvement or even more problems.
- Some wonder if F/C shortage will be alleviated when the Grand Renaissance Dam is completed and starts to export electricity.
- Some hope that government should allocate limited F/C on priority basis to assemblers who contribute to technology transfer and/or building a new industrial base in Ethiopia.
- Some argue that **export** and **import substitution** should be treated equally in incentives and policy support as long as they contribute to technology transfer and/or net gain in the trade balance.

2. Tax and Tariff Structure

- Ethiopia has **very high tax and tariff levies** on automobiles. This reduces domestic demand and suppresses development of auto market and industry.
- **Cascading tariff structure**—to encourage domestic production, taxes must be high on finished products, lower on intermediate inputs, and lowest (even zero) on components and raw materials.
- A tariff on any component pleases its domestic suppliers but makes buyers unhappy. Cascading tariffs must be set carefully to **balance interests of different producers** from upstream to downstream, with clear policy purpose.
- Compared with imported cars (CBU), domestic assembly (SKD/CKD) incurs additional cost in importation of parts, tools and machinery; factory construction and operation; and HR training. The current tax gap (5%) is too small to cover this cost. Japanese producers need at least **20-30% advantage** in favor of SKD/CKD over CBU.



3. Used Vehicles & Parallel Imports

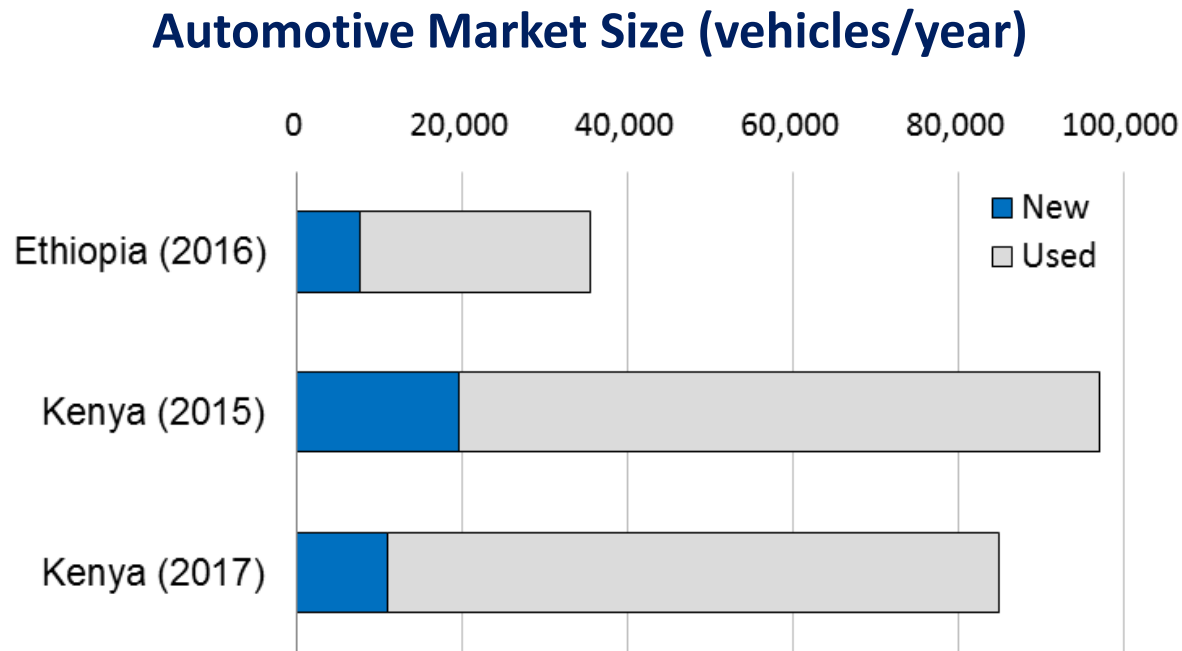
- Japanese vehicles are very popular on Ethiopian roads and streets, but most of them are used cars or parallel imports. Producers are not happy because these discourage new car imports and domestic assembly.
- Limitation on used car imports should be introduced step by step, to balance the interests of car buyers, importers and producers. Policy direction must be clearly set, and different interests must be coordinated according to policy priority.
- Safety and environmental regulations must also be set and enforced on all vehicles to protect citizens.
- Users may prefer cheap cars over new ones, but reduction of car taxes to a reasonable level may partially solve this problem. Automotive taxes are easy to collect, but revenue authority should not overly rely on car levies.
- Through these measures, Thailand, Indonesia and Vietnam succeeded in promoting domestic car and motorcycle assembly. Their streets are full of new vehicles assembled at home. Old beaten-up ones are rarely seen.
- Kenya has a policy of limiting used car imports to eight years old or younger (see below).

4. Volume is Essential

- For automotive industry, volume is critical. For attaining efficiency and cost reduction as well as developing supporting industries, sufficient market size is required. When global giants decide production sites, customer volume is the prime concern.
- Biggest markets are China (30 million vehicles/year), EU and US (18 million vehicles each). Domestic market of 1 million new vehicles or more can be considered large (Japan, India, Brazil, Canada, Korea, Iran, Russia, Mexico, Australia, Indonesia, Turkey).
- Below this level, achieving efficiency and cost reduction becomes difficult, especially when too many producers enter the market.
- Ethiopia's new car market is less than 8,000/year, compared with 550,000 in South Africa and 300,000 in Vietnam. Ethiopia must begin with simple assembly, then climb up as demand gradually rises.
- Even if the current market is small, government can at least announce long-term forecasts for new car production and sales, and introduce policies that are consistent with (do not frustrate) such forecasts. This will give long-term confidence to car assemblers and make their investment decision easier.

Comparing Kenya and Ethiopia

- Two Japanese automotive firms and two Japanese motorcycle firms have assembly operation in Kenya. They use Kenya as a benchmark for assessing Ethiopia.
- GDF conducted a study of the two countries in 2018.



Source: Interviews with industrial sources in Ethiopia and Kenya. See K. Ohno, “Note on the Assembly of Japanese Automobiles and Construction Equipment in Ethiopia,” a confidential policy memo, revised November 2018.

Kenya: Overview

- Kenya has a relatively solid industrial base due to its long history of industrialization and business activities of overseas Indians.
- In the past, Kenya's automotive industry had reached a certain development stage. However, it declined in the early 1990s due to the liberalization policy imposed by the IMF and the World Bank. Permission of CBU import led to a large inflow of used cars which destroyed the local automotive industry.
- Supporting industries (domestic component suppliers) are slowly re-emerging after the collapse, though still not many in number. Government now promotes "CKD" and domestic supplier development.
- Incentive structure for vehicle assembly is appropriate.
- Kenya faces no foreign currency problem.
- Duty-free export to the member countries of the East African Community (EAC) is beginning via the customs union agreement.

Kenya: Industrial Policy

- **Automotive policy** is drafted under a strong private initiative. Kenya Association of Manufacturers (KAM) coordinates and presents industry voice. Government receives and adjusts private proposals.
- In **kaizen**, the Ethiopian Kaizen Institute (EKI) is far more advanced than Kenya's National Productivity and Competitiveness Center (NPCC) in staff size, organization and top political commitment.
- For **SME support**, Kenya has a broader policy menu. The Kenya Institute of Business Training (KIBT), assisted by JICA, covers (i) productivity and quality (5S and kaizen); (ii) management and marketing; and (iii) finance. This can be a model for Ethiopia's handholding assistance to SMEs.
- The Kenya Industrial Research and Development Institute (KIRDI), established in 1914, provides **broad technical support to SMEs** just like Japan's *kosetsushi* (prefectural technical support centers). It offers testing, analysis, certification, consultation, equipment rental and product development support.

Kenya: Automotive Market

- Sales peaked in 2015 but fell subsequently. This was partly due to the political uncertainty surrounding the 2017 presidential election and partly due to the lowering of commercial bank lending rate ceiling from 17% to 14% and the credit crunch it caused (banks no longer lend to car buyers because profit margin is too small).
- Used car sales are recovering since 2017 but sales of new vehicles remain weak.
- Among new sales, Japanese dominate in both passenger cars and commercial vehicles with Isuzu (34%), Toyota (20%), Hino (3%) as major brands.

Recent Automobile Sales in Kenya

	Total	Of which		
		Used cars	New passenger cars	New commercial vehicles
2014	84,335	67,059	8,187	9,109
2015	96,996	77,473	8,540	10,983
2016	70,965	57,130	6,340	7,495
2017	84,788	73,921	5,400	5,467

Source: Interviews with industrial sources in Kenya, August 2018.

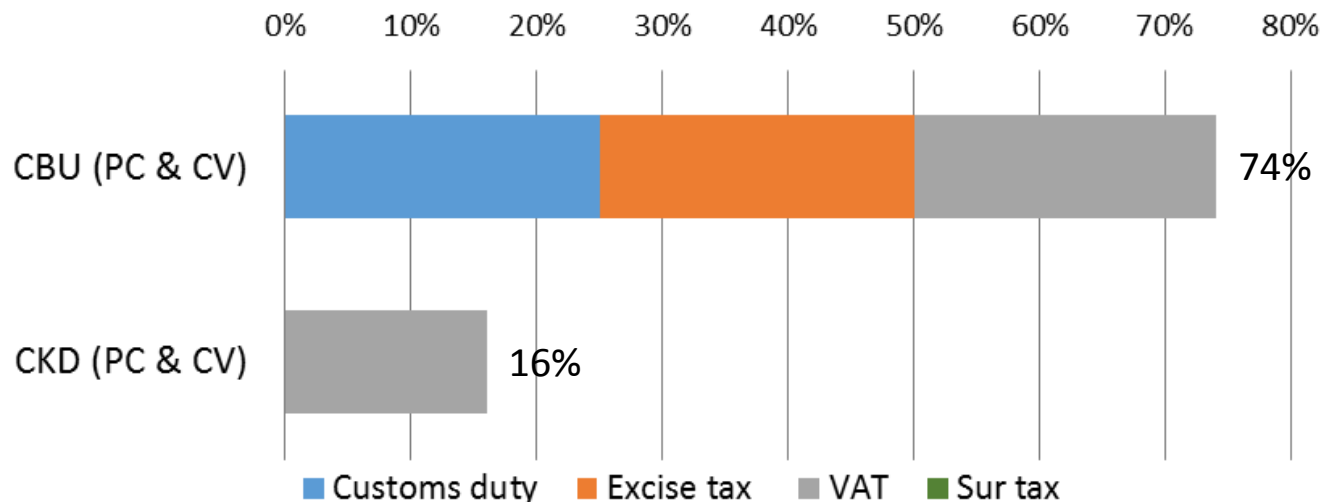
Kenya: Automotive Tax Structure

	Description	Customs duty	Excise tax	VAT	Sur tax
1	Passenger car CBU	25% (i)	20%	16%	--
2	Passenger car CKD	0% (ii)	0%	16%	--
3	Commercial vehicle CBU	25% (iii)	20%	16%	--
4	Commercial vehicle CKD	0%	0%	16%	--
5	Motorcycle CBU	25%	Ksh10,000 per unit	16%	--
6	Motorcycle CKD	10%	0%	16%	--

Notes: (i) 0% for ambulance; (ii) positive rates apply for designated 17 part items; (iii) 0% for agricultural use vehicles.

- In addition to above, there are import declaration fee (2%), railway development levy (1.5%) and MSS Trade levy (\$1.75/ton/20 feet). Automotive firms say these are manageable and not too cumbersome.
- From July 2018, the excise tax on passenger car (gasoline) of 3000cc or greater and passenger car (diesel) of 2500cc and greater has been raised from 20% to 30%.
- Pickup trucks (single cabin) are classified as commercial vehicles and pickup trucks (double cabin) are classified as passenger cars.

Kenya: Automotive Tax Structure



Note: multiplicative calculation. The price ratio for buyers over CIF price is $(1.74/1.16) = 1.50$, which means CBU is 50% more expensive than CKD for the same vehicle. There is no surtax. There are some exceptions and additional small charges – see previous table.

Remaining issues:

1. Parallel import of relatively young used cars dominates, discouraging CKD.
2. The commercial bank lending rate ceiling suppresses demand.
3. Excise tax was raised on large passenger cars in 2018 (policy intention?)
4. Need to coordinate policy with EAC member countries, which may be slow and complicated.

Kenya: Summary of Auto Tax Structure

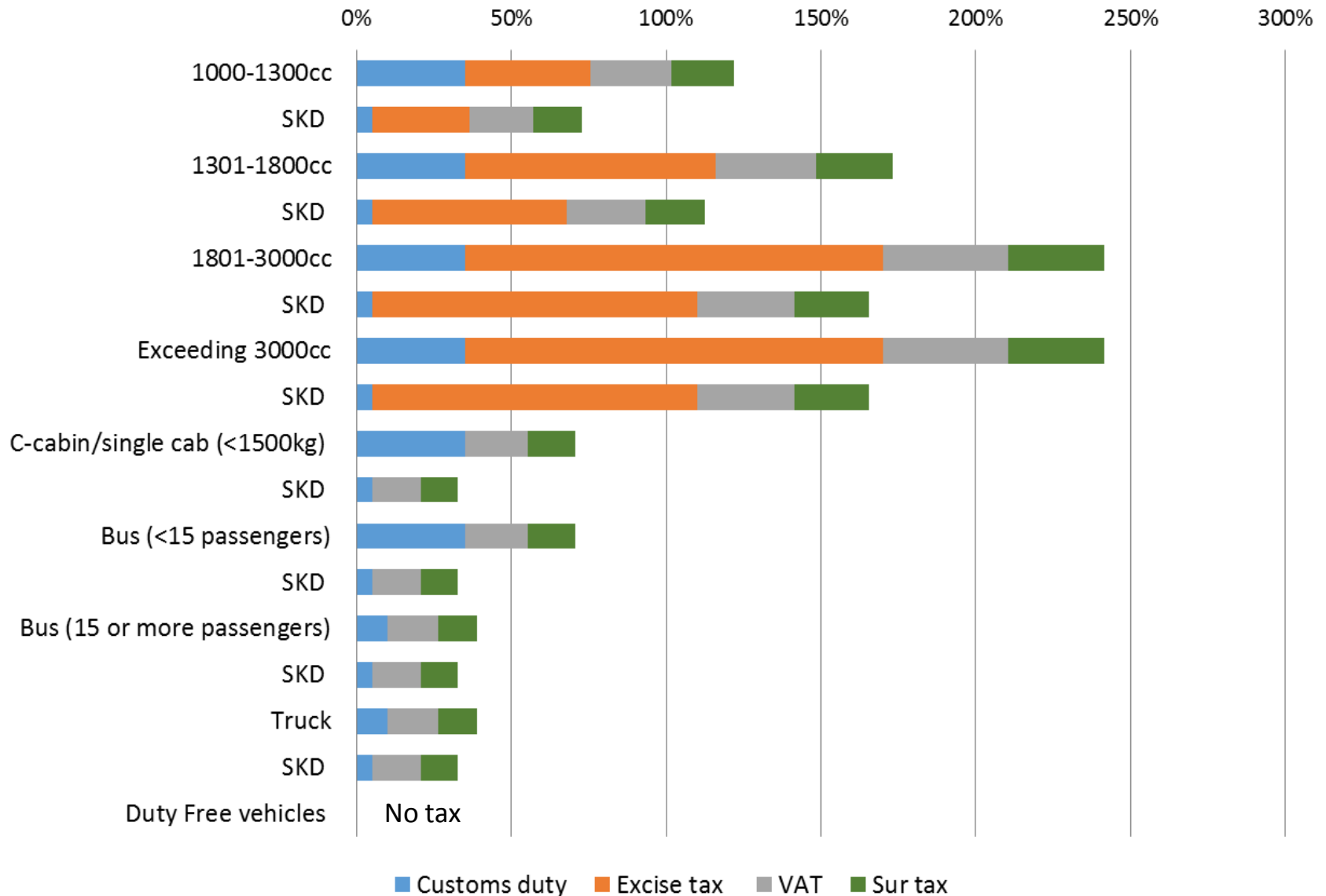
- The automotive tax structure in Kenya is relatively simple and does not differentiate passenger cars and commercial vehicles.
- CBUs are levied with an import duty of 25% and an excise tax of 20%, while CKD components are exempted from both. This creates a price difference of **50%** (taxes are multiplicable so CBU/CKD after-tax ratio is $1.25 \times 1.20 = 1.50$).
- There are additional charges such as VAT (16%), import declaration fee (2%), railway development levy (1.5%) and MSS Trade levy (\$1.75/ton/20 feet). These are common to all imports and do not affect the price difference between CBU and CKD.
- However, there are different treatments for special vehicles and designated components of CKD (see table).
- According to Japanese automotive firms, tax & customs procedure in Kenya is not bureaucratic or complex, and all officers basically say the same thing. This situation is quite different from Ethiopia.

Ethiopia: Automotive Tax Structure

	Description	Customs duty	Excise tax	VAT	Sur tax
1	Cylinder capacity 1000-1300cc	35%	30%	15%	10%
2	Cylinder capacity 1301-1800cc	35%	60%	15%	10%
3	Cylinder capacity 1801-3000cc	35%	100%	15%	10%
4	Cylinder capacity exceeding 3000cc	35%	100%	15%	10%
5	C-cabin and single cab – carrying capacity not exceeding 1500 kg	35%	0	15%	0
6	Public transport- seating capacity less than to 15 passengers	35%	0	15%	0
7	Public transport- seating capacity greater than or equal 15 passengers	10%	0	15%	0
8	Truck	10%	0	15%	0
9	SKD	5%	Same as above depending on cylinder and seat capacity		
10	Duty Free vehicles	Free of tax			

- Ethiopia is a country with high automotive tax rates.
- On high-end vehicles like Land Cruiser VX, taxes when summed up reach **256% of CIF value** of the vehicle, and on small passenger vehicles they reach **132% of the CIF value**.
- For used cars, tax rates are the same as the above table depending on their cylinder capacity. But a maximum of 30% depreciation (10% for every year since manufacture) is deducted from the CIF price to calculate to the duty paying value.

Ethiopia: Automotive Tax Structure



Note: multiplicative calculation. There may be other charges. New and used vehicles are levied basically the same rates except used vehicles can enjoy up to 30% reduction on CIF price (tax base).

Kenya: Vehicle Age Restriction

- Kenya bans import of vehicles that are eight years from production or older. This prevents circulation of defective cars in terms of safety and environment, and also encourages domestic assembly.
- Kenya is proposing common vehicle age limit to EAC. It wants to reduce it from 8 to 5 years (and even to 3 years in the future). Kenya is a leader in this respect within EAC.
- Early agreement may be difficult due to different interests of EAC member states, resistance from used car dealers and a certain problem of vehicle inspection cycles on the exporting side.
- Ethiopia has no vehicle age limit (but we hear there is some policy discussion).

Auto Tax Structure in Selected Asian Countries

- Automotive tax structures in seven Asian countries with relatively developed automotive production (SI development stage or above) are examined.
- Diagrams below show import duties and other taxes levied on selected CBUs and key components imported from Japan.

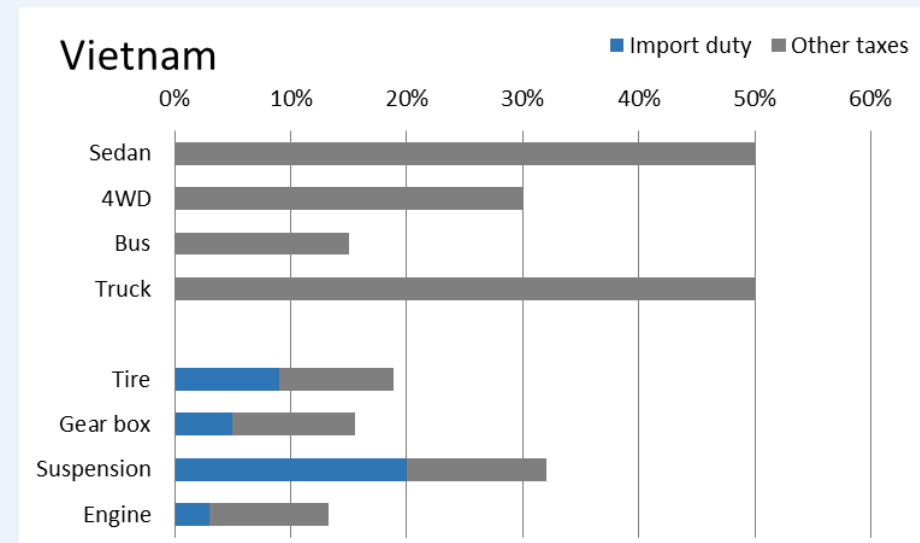
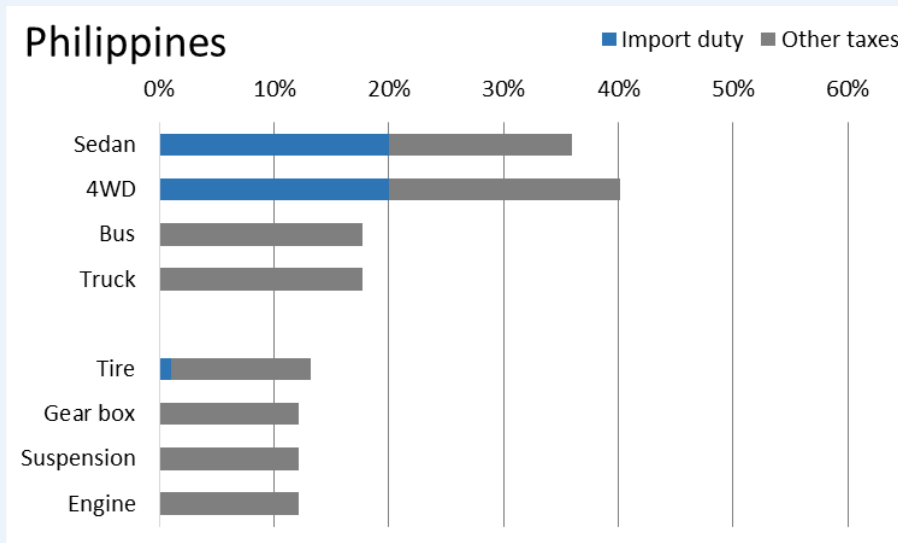
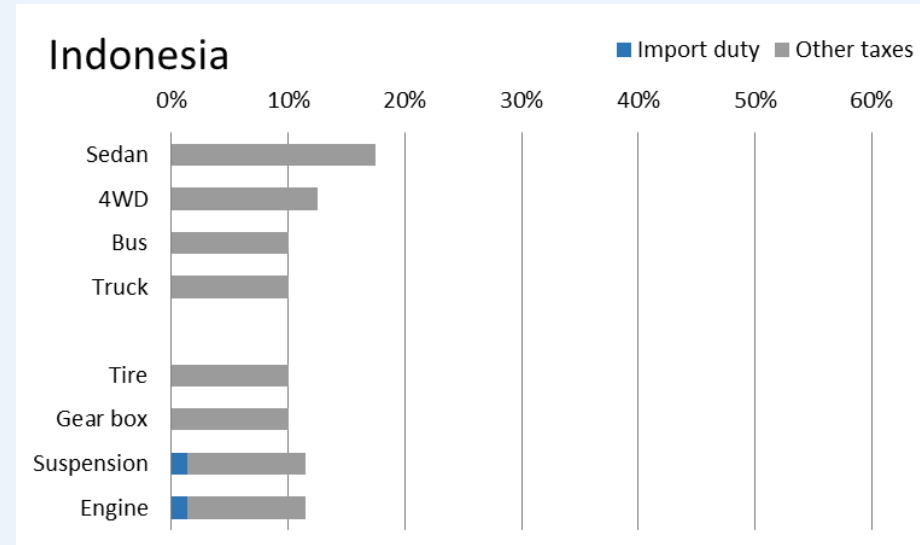
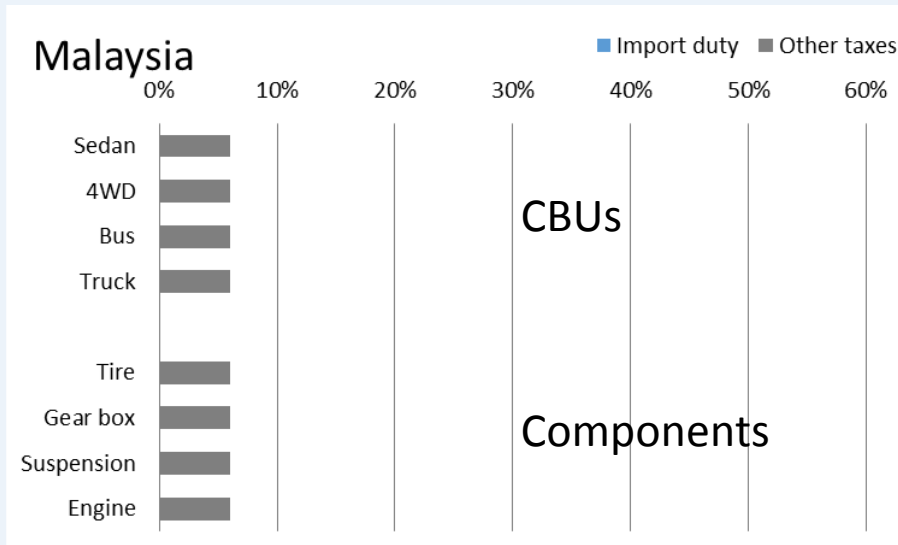
Warning

- Because each government has different definitions and categories for tax purposes, exact international comparison is difficult.
- Taxes and tariffs also differ according to country origin. Most Favored Nation (highest) rates, bilateral/regional FTA rates or other rates apply depending on origin.
- Popular vehicle types differ in each country partly due to market and partly due to policy. There is no representative model for all countries.
- Some nations have complex tax structure even within passenger car category, which compels us to choose one model for comparison.
- Japan has auto production base in all examined countries. Cars imported from Japan are mostly for model diversity, and usually not the most popular cars in the country.
- ASEAN has zero within-region tariffs including auto CBUs and components. Japanese car production and sales dominate in ASEAN.

ASEAN = Singapore, Indonesia, Malaysia, Thailand, Philippines, Brunei; Vietnam, Cambodia, Laos, Myanmar

Countries with Relatively Low Automotive Taxes

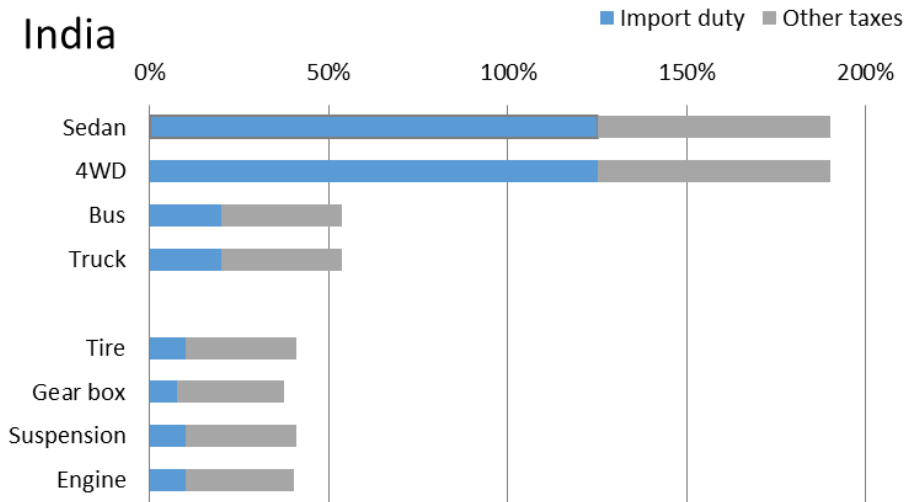
(Selected CBU models and Components imported from Japan, Nov. 2017)



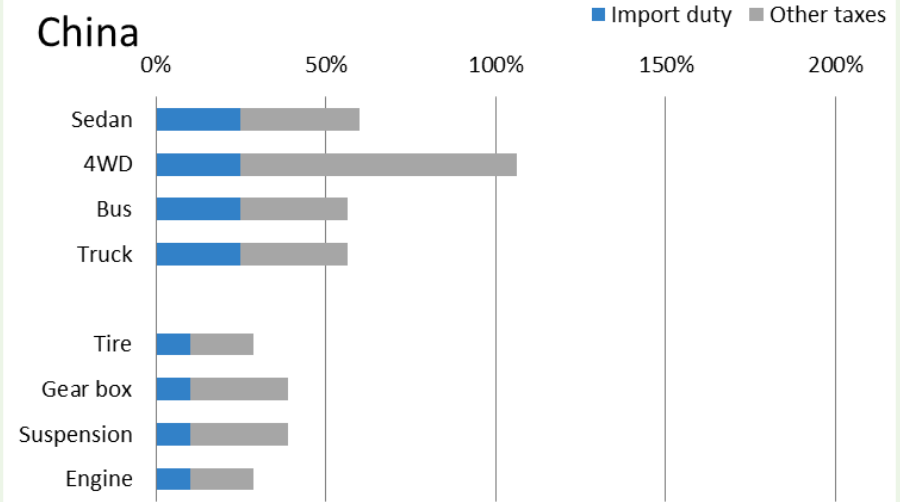
Countries with Relatively High Automotive Taxes

(Selected CBU models and Components imported from Japan, Nov. 2017)

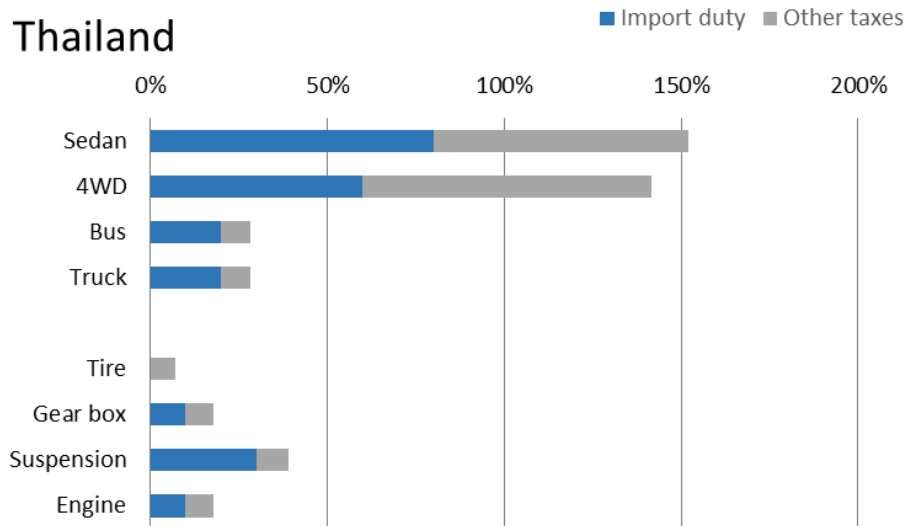
India



China



Thailand



Note for Thailand:

Although duties and taxes are high on CBU imports from Japan, Japanese auto makers have strong presence in Thailand and other ASEAN countries and can supply cars from there to Thai market.

Asian Summary

- Commercial vehicles tend to have lower tax rates than passenger cars (there are exceptions).
- Some countries (Singapore, Malaysia, Indonesia) have no or little import duties on automobiles. They levy only domestic taxes such as VAT and excise tax.
- Others (India, China, Thailand) still levy relatively high tariffs and/or taxes. However, no country in our sample has tax rates as high as 250% like Ethiopia.
- Within ASEAN, all products are traded duty-free. CBUs and auto components of Thailand, Indonesia, Vietnam, Philippines and Malaysia are traded freely and compete with each other.
- The cascading tariff structure is maintained. Component tariffs are generally lower than CBU tariffs.

Selected Country Studies

Below are some automobile producing countries which mostly rely on the technology of global giants. Each has different strategies for FDI attraction, technology learning and domestic supplier development. Their performance is also diverse from reasonable success to failure.

Thailand – FDI attraction + domestic SI promotion; quite successful

Malaysia – Proton, a national brand car company; a failure

Indonesia – large domestic demand-driven auto market, with little policy support

Vietnam – policy is ineffective, but local private firms produce CVs carrying local brands; one newcomer attempts a passenger car

South Africa – global giants are attracted, but policy does not encourage domestic value creation; obsessed with job creation

Uzbekistan – permitting just three foreign firms to cover small domestic and regional markets; good local engineers are available and policy is reasonable

Thailand

Population: 69 million
Per capita income: \$5,710
(2017, WB data)



- Thailand has largest automotive production within ASEAN. It produces about 2 million cars per year with significant fluctuations, half of which are exported.
- Thailand received large automotive FDI, especially from Japan, then promoted local engineers and component suppliers. Supporting industry development has been top priority since the late 1980s.
- Japanese government and auto firms supported Thailand with HRD, productivity, technology as well as infrastructure (Eastern Seaboard industrial region development, ports, highways, rails, etc.)
- Thailand focused on pickup trucks, then added eco-cars (small and efficient cars), both of which were successful. Thailand is happy with foreign car giants and does not plan to create a national car.
- For many decades, the Bureau of Supporting Industries Development (BSID) & Thailand Automotive Institute (TAI) under MOI; and the Technology Promotion Association (an NPO formed by Thai engineers who studied in Japan) contributed greatly to upgrading technology and drafting automotive strategies.

Malaysia

Population: 32 million
Per capita income: \$9,650
(2017, WB data)



- Malaysia is trapped in upper middle income. Industrial policy is reasonable but indigenous businesses are not dynamic enough to compete with the world.
- PM Mahathir insisted (still insists) on creating a national car company. State-owned Proton was established in 1983, enjoyed policy support and became a hub of heavy industrialization and supporting industry development. It received technology from Mitsubishi and then Lotus (British sport car). It learned design, engine, marketing and other capabilities over time.
- Heavily protected Proton once dominated the domestic car market. However, it lost competitiveness as tariffs came down. It sought partnership with a global giant but none came to rescue. Finally, in 2018, Geely (China) bought 49.9% of Proton's share and began to help the ailing state company.
- Proton learned technology by going it alone, but global automotive competition is very tough and halfway learning did not produce success.

Indonesia

Population: 264 million
Per capita income: \$3,540
(2017, WB data)

- Indonesia has a large population and its emerging middle class has a great appetite for cars, processed food and other consumer items. FDI is naturally attracted to this large market.
- Manufacturing is domestically oriented with little export. Licensing procedure is cumbersome, and there is virtually no incentive for investors.
- Indonesia received huge amounts of ODA and FDI from Japan. Nevertheless, MOI's policy capacity remains low. SME policy is limited and ineffective. HR training is conducted by private firms and foreign (Japanese) NPOs.
- Excessive decentralization implemented in 2001-2003 hampers policy implementation of TVET, SME promotion, etc. at national level.
- Delays in infrastructure construction causes huge congestion at Jakarta's roads and ports. There is no modern urban transit system.



Vietnam

Population: 96 million
Per capita income: \$2,342
(2017, WB data)

PM Nguyen Xuan Phuc and
Industry Minister Tran Tuan Anh



- Economic liberalization since 1986 and global integration since 1993 brought high growth (6-9% range) for a few decades, propelling the country from the poorest to lower middle-income status by 2008.
- Toyota, Honda, Nissan & GM have plants. Mazda & Hyundai/Kia assemble cars via a local partner (Thaco). Locals (Thaco, Samco, etc.) can produce buses and trucks competitively. Vinfast, a newcomer to auto industry, is trying to produce passenger cars with American & European support (results remain uncertain).
- In the last quarter century, productivity and skills have not improved greatly. Car production grew slowly, now reaching 300,000/year.
- Policy is ineffective and frustrates FDI assemblers. Government does not listen to Japanese auto firms, officials or researchers.
- PM Phuc wants to develop supporting industries. SI policy has been in place for a long time but remains awkward and ineffective, and must be revised (Japan is willing to help if Vietnam is also willing).

South Africa

Population: 57 million

Per capita income: \$5,430

(2017, WB data)

- South Africa successfully created an auto cluster of seven car makers by attracting FDI with generous subsidies. But policy encourages simple assembly over domestic value creation or technology transfer. Car production has stagnated at 600,000 vehicles per year.
- Some technocrats at the Department of Trade and Industry (DTI), Japanese officials and Japanese auto makers wanted a policy shift. But some foreign car makers opposed it. SA politicians are highly sensitive to job loss risk or lobbying from FDI.
- GDF (Ohno) made the following policy recommendations in 2016.
 - Prepare data analysis on global benchmarking (Thailand), future scenarios, impact assessment on jobs, trade balance, etc.
 - Secure top leader's support [[will Pres. Ramaphosa change the game?](#)]
 - Japanese auto makers and officials should work hard to assist SA's auto policy formulation (Africa is far and Japanese firms are not many).





Uzbekistan

Population: 32 million
Per capita income: \$2,000
(2017, WB data)

- Uzbekistan was part of USSR until 1991. It is doubly landlocked. But it had good automotive university and engineers. After independence, it adopted state control and gradualism to minimize shocks.
- Daewoo (Korea) initially assembled cars. After Daewoo bankrupted, GM (US) took over. It produces a few basic sedans for domestic, regional and Russian markets. GM built a huge state-of-art engine plant in Tashkent where locals manage without American bosses.
- Isuzu & MAN (Germany) assemble commercial vehicles. Isuzu plant in Samarkand is kaizen-driven and well-organized.
- Despite many difficulties, Uzbekistan was successful thanks to:
 1. Existence of excellent auto engineers and managers
 2. Allowing only GM, Isuzu & MAN to enter with limited models to achieve volume and cost reduction even in a small market
 3. Appropriate policy prioritization and incentives
- Capacity is >200,000 but Russian recession damps sales at present.

Suggested Policy Direction for Ethiopia

1. **Long-term vision** should guide automotive policy and incentives to achieve pre-set goals. Government should consciously address and balance multiple concerns regarding industrial promotion, traffic safety, road congestion, environment and fiscal revenue.
2. Current Ethiopian automotive taxes and tariffs are very high and complex. **Lower and simplify them.** For fiscal revenue, do not over-rely on auto taxes but diversify the tax base and strengthen tax collection.
3. Preserve **cascading tariff structure.** Coordinate interests of assemblers, part suppliers and distributors under clear policy vision.
4. **Vehicle age limit** should be introduced in proper steps.
5. **An automotive strategy with market forecast scenarios** should be drafted. Ethiopian auto demand will surely increase, especially if taxes are lowered. Policy should support this increase and at the same time cope with expected problems (congestion, air pollution, accidents, IPR violation, substandard vehicles, recycling, etc.)

Policy (cont.)

6. **Safety and environmental standards** should be set and upgraded in realistic steps. Appropriate HR, equipment, laws and institutions should be developed for vehicle certification and inspection.
7. A realistic **urban development and transport master plan** should be drafted for Addis Ababa.
8. To formulate these policies, **voices of stakeholders**, both domestic and foreign, should be heard. Government should also talk directly to interested Japanese vehicle producers.
9. Announce all automotive policies and incentives in official gazette or other official document for **clarity and transparency**.