

A green and white graphic of a globe showing latitude and longitude lines, positioned in the top left corner of the slide.

**3rd New Delhi Automotive Summit:
Making the Indian Auto Component Industry Future Ready
7th February 2018 / Hotel Lalit, New Delhi**

Global Motor Vehicle Industry & Market from Future Perspectives

Toru Nakata

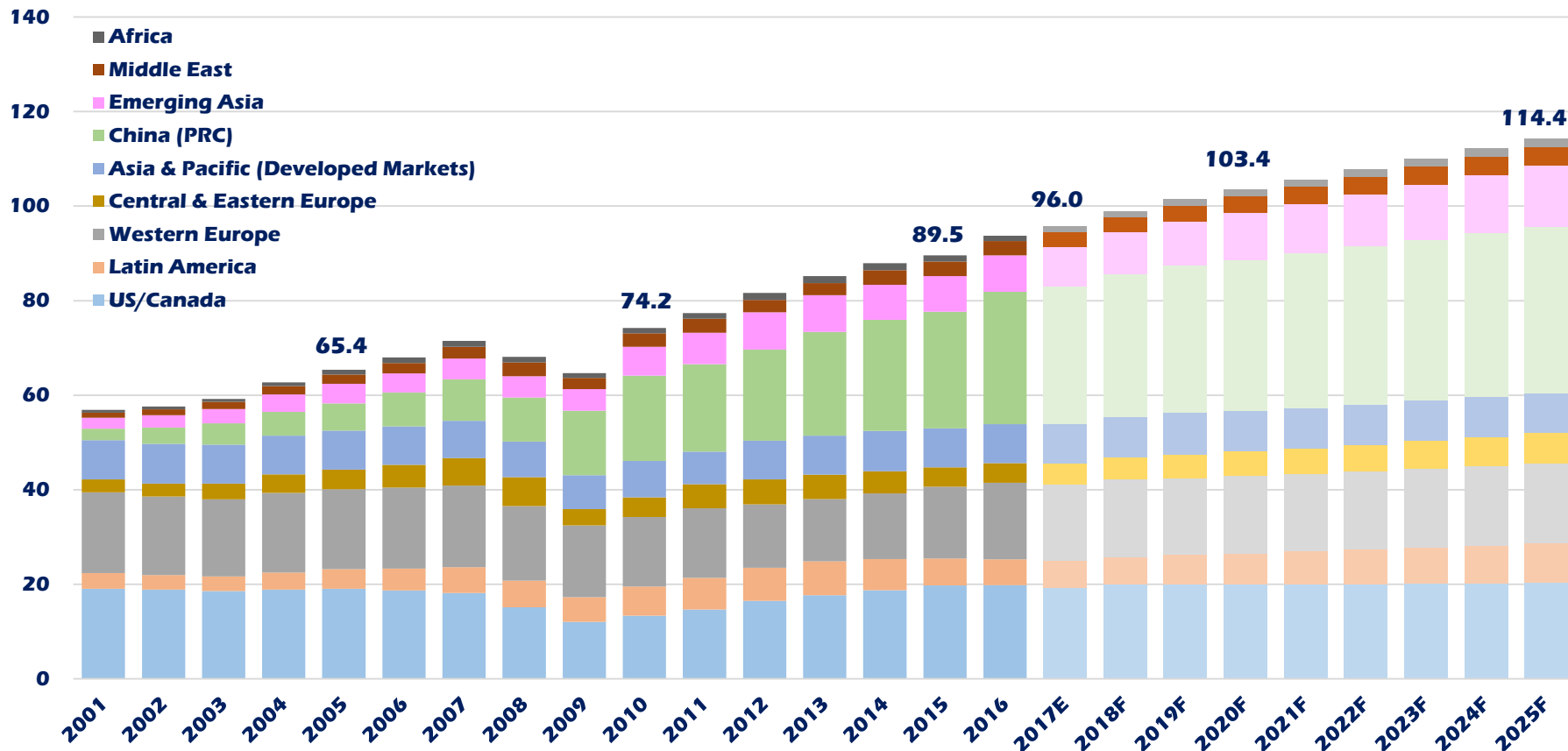
Asia Research Dept., FOURIN, Inc.

■ Future Perspective on Global & Indian Automotive Market

- Overview of Global Two-Wheeler Industry & Market
- Two-Wheeler Market in Major Countries
- Future Prospects on Global Two-wheeler Industry & Market



Overview of Global Automobile Market



In Million Units, Figures including PC, LCV and MHCV.

Estimated/forecasted by FOURIN using figures from automotive manufacturer's associations and other sources.

→ Global automotive market is estimated to expand to 96M units in 2017.

→ Led by emerging markets, global auto market may surpass 110M units

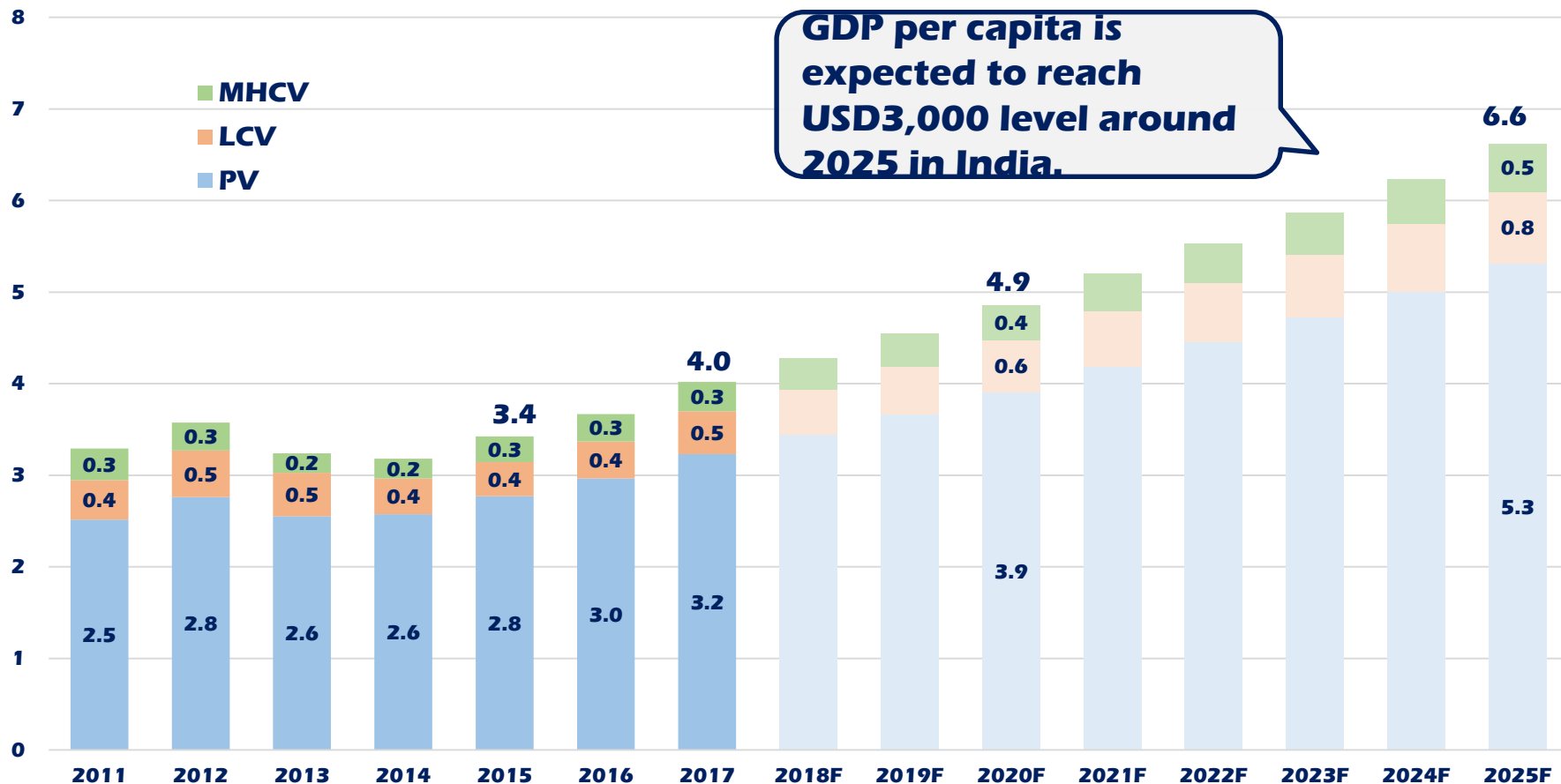
■ Overview of Global Automobile Market (Top 10 Countries)

	2016CY		2017E		2018F	
1	China (PRC)	28,028,175	China (PRC)	29,289,000	China (PRC)	28,996,000
2	US	17,865,376	US	17,200,000	US	16,800,000
3	Japan	4,970,258	Japan	5,200,000	Japan	5,200,000
4	Germany	3,708,867	India	4,050,000	India	4,350,000
5	India	3,669,277	Germany	3,858,000	Germany	3,800,000
6	UK	3,131,168	UK	2,980,000	UK	2,835,000
7	France	2,478,472	France	2,600,000	Brazil	2,800,000
8	Brazil	2,050,317	Brazil	2,200,000	France	2,730,000
9	Italy	2,050,277	Italy	2,155,000	Italy	2,190,000
10	Canada	1,982,809	Canada	2,150,000	Canada	2,000,000

In Units, Figures including PC, LCV and SUV. Data source: automotive manufacturers, Fourin Research and FOURIN estimation/forecast.

- China is the world's biggest automotive market, followed by US.
- Surpassing Germany, India is now the 4th largest market.

India: Forecast for Automobile Market



In Million Units, Data source: SIAM and FOURIN.

→ 4W market is forecast around 6M units, surpassing Japanese market, by 2025.

■ India: Automotive Market Future Trend

<PV>

- GDP per capita increases to USD3000 while vehicle penetration is still very low in India. Under this circumstance, PV market is forecasted to expand to 6-7M units in 2025.
 - Around 2020-2023, due to introduction of BS6 and CO2 emission regulation, vehicle price will be increased and growth of PV market is likely to slow down.
 - Promoted by technology companies including Ola and Uber to name a few, “connected” and “shared” will be big trend like other countries.
- Penetration of EV is considered to start from here.

<CV>

- Impact of BS6 and CO2 regulation to PV market will be huge.
- Shared & connected will be a major trend.

■ India: Impact of EV Policy for 2030

<What is going on?>

- India Government aims for 100% EV by 2030.
- NITI Aayog has suggested to promote “Shared” “Electric” and “Connected”
in the report issued in May 2017.
- SIAM has suggested 100% EV by 2047 through White Paper on EV.
- Mahindra is focusing on EV development under new Roadmap “EV2.0”.
- Japanese OEMs are preparing EV for the market, while focusing on HEV and 48V mild hybrid with eyeing CO2 regulation.

<What are issues?>

- Development of EV charging station network is ongoing.
- Production capacity of materials for EV core components will be very limited.

- HEV and 48V system will be major solution for 2020's (and 2030's).
- Shared & connected EV will possibly be accepted by consumers.

■ Future Perspective on Global & Indian Automotive Market

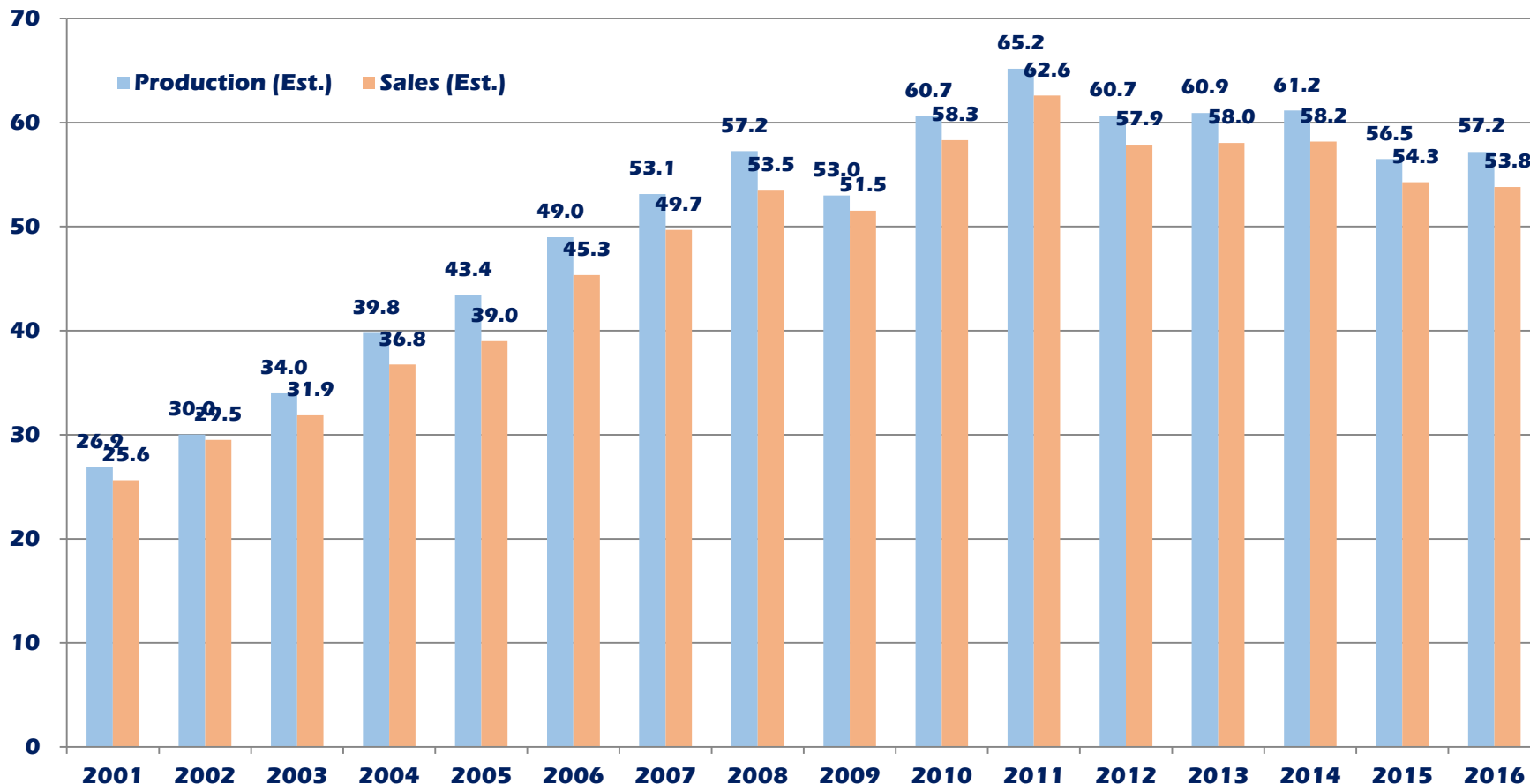
■ Overview of Global Two-Wheeler Industry & Market

■ Two-Wheeler Market in Major Countries

■ Future Prospects on Global Two-wheeler Industry & Market



■ Global 2W Production & Sales

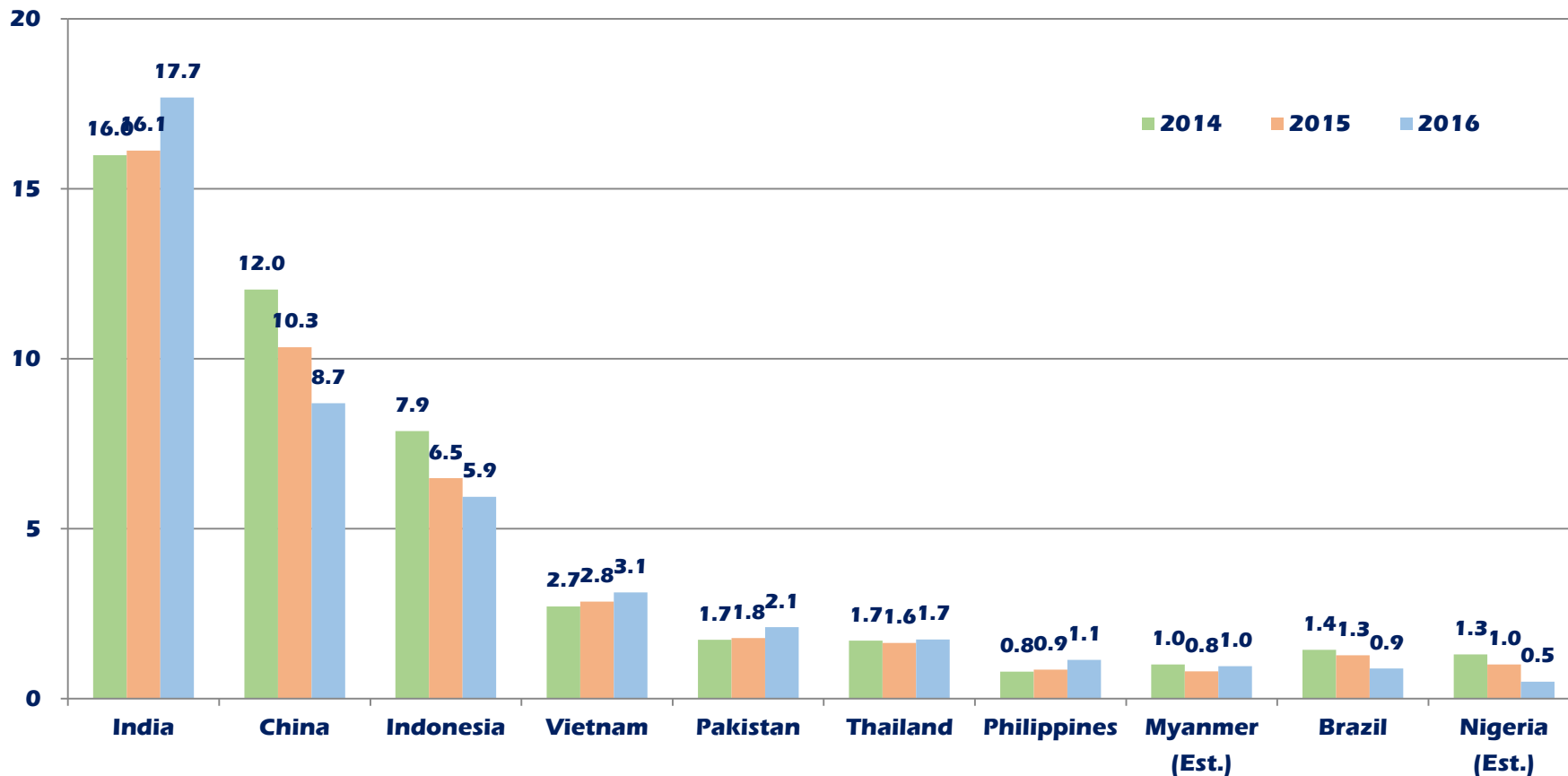


In Million Units, Estimated by FOURIN using figures from motorcycle industry associations and other sources

→ Global 2W market increased 2.4 times between 2001 and 2011.

→ Global 2W market volume is around 55-60M unit level after 2010.

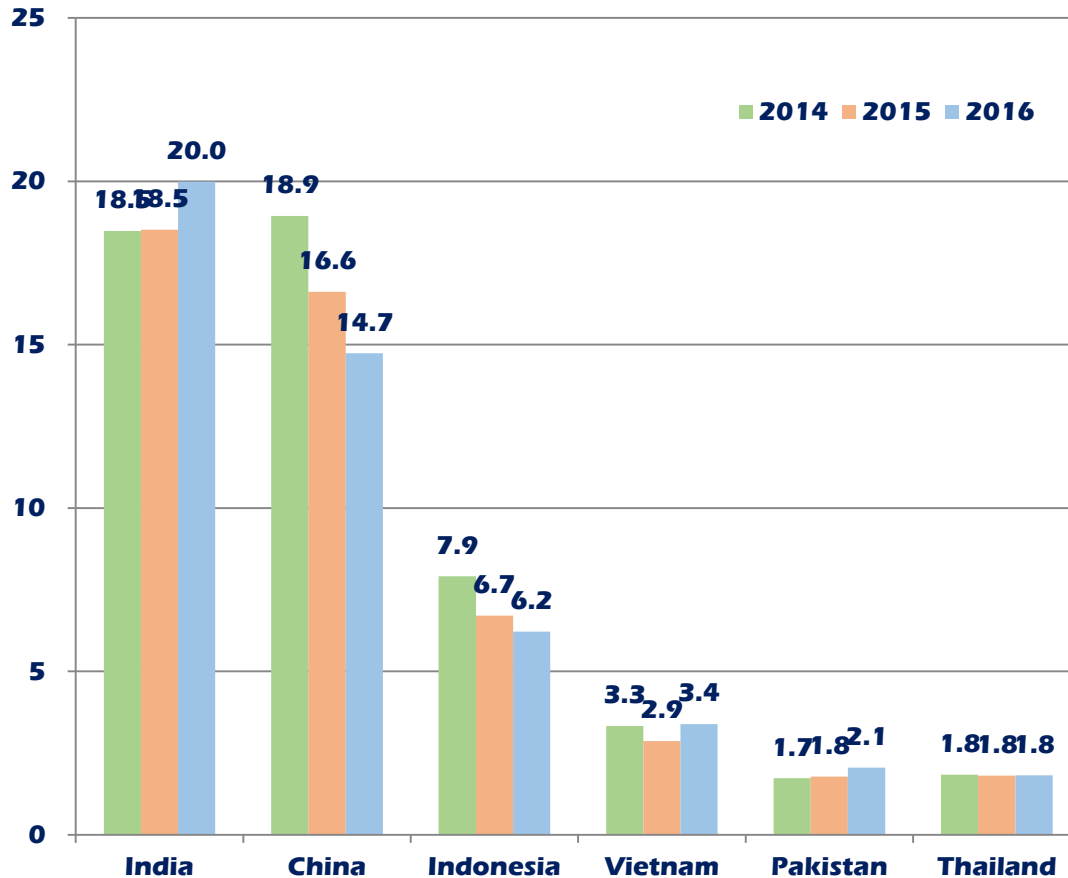
Major 2W Markets in the World



In Million Units, Data sources: motorcycle industry associations, FOURIN and other sources

→ Major 2W markets are located in Asia, which accounts 80% of global sales.

■ 2W Production in Major Countries

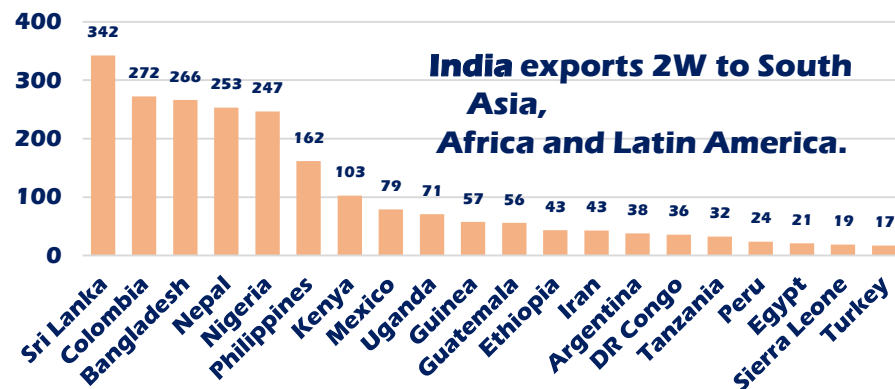
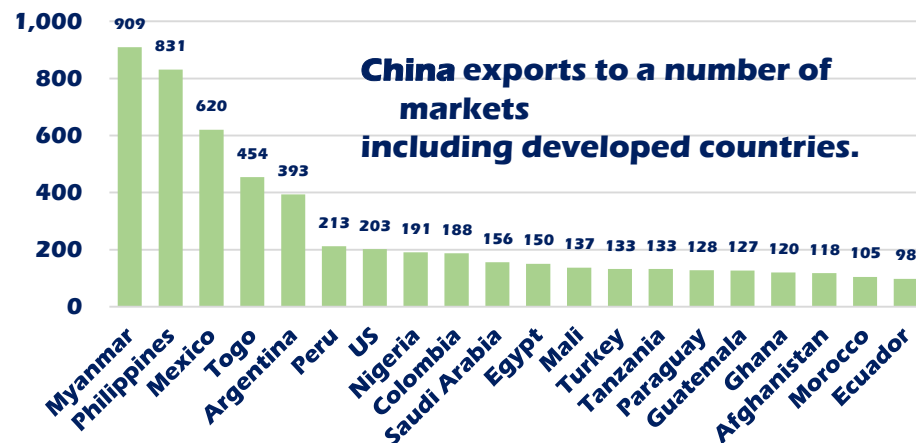
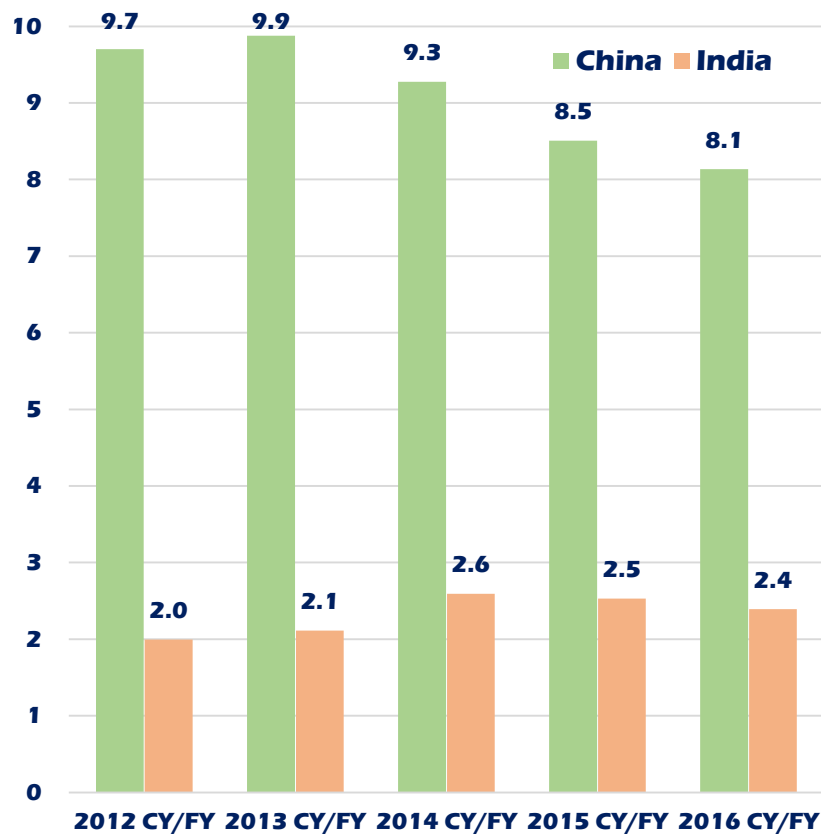


In Million Units, Data sources: motorcycle industry associations, FOURIN and other sources



- Major 2W markets are major 2W production base.
- India expanded 2W production to 20M units per year, followed by

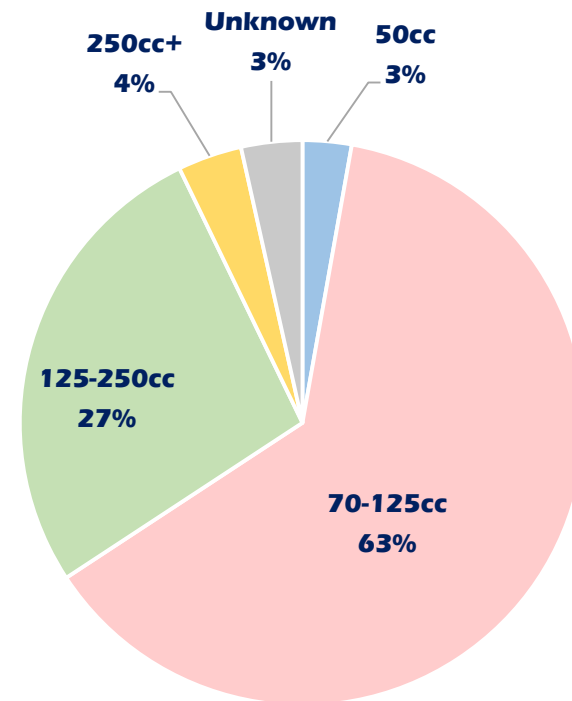
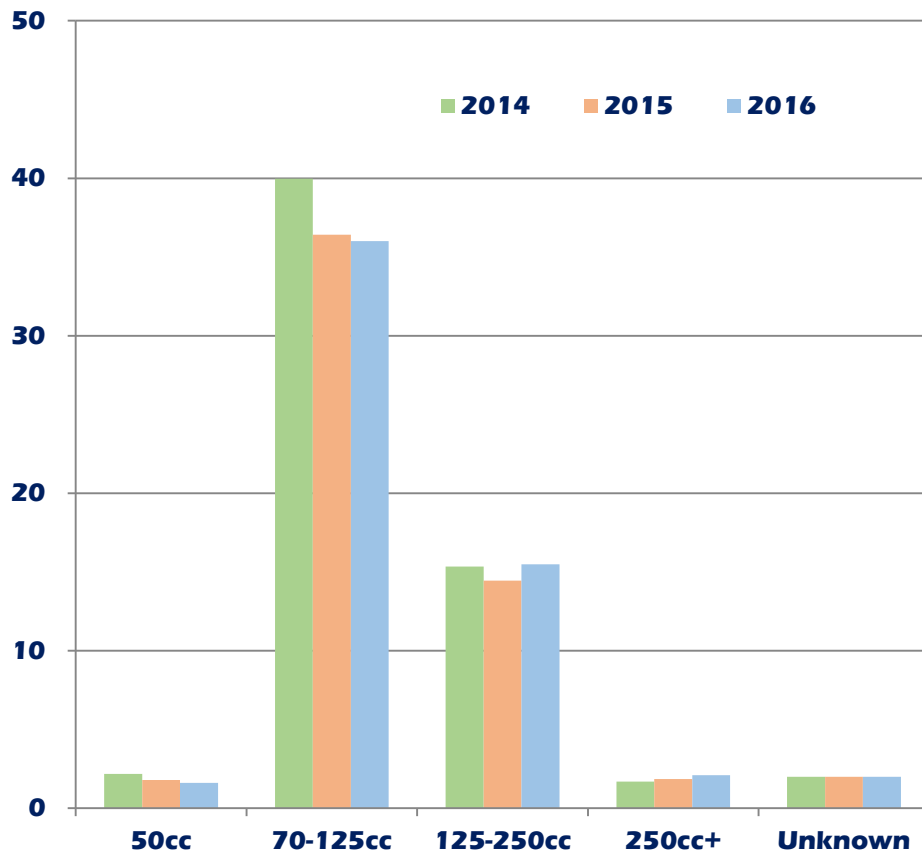
■ 2W Export from China & India



Left: Total 2W export from China (inc. 3W)/India, In Million Units, Data sources: China Customs, DOC-NIC of India and FOURIN
 Right: 2W export by destination from China (2016CY)/India (2016FY= Apr. 16-Mar. 17), In Thousand Units, Data sources: same as above

- China is the largest 2W export hub in the world, followed by India.
- China and India export 2W mainly to Asia, Africa and Latin America.

■ Global 2W Production by Engine Displacement

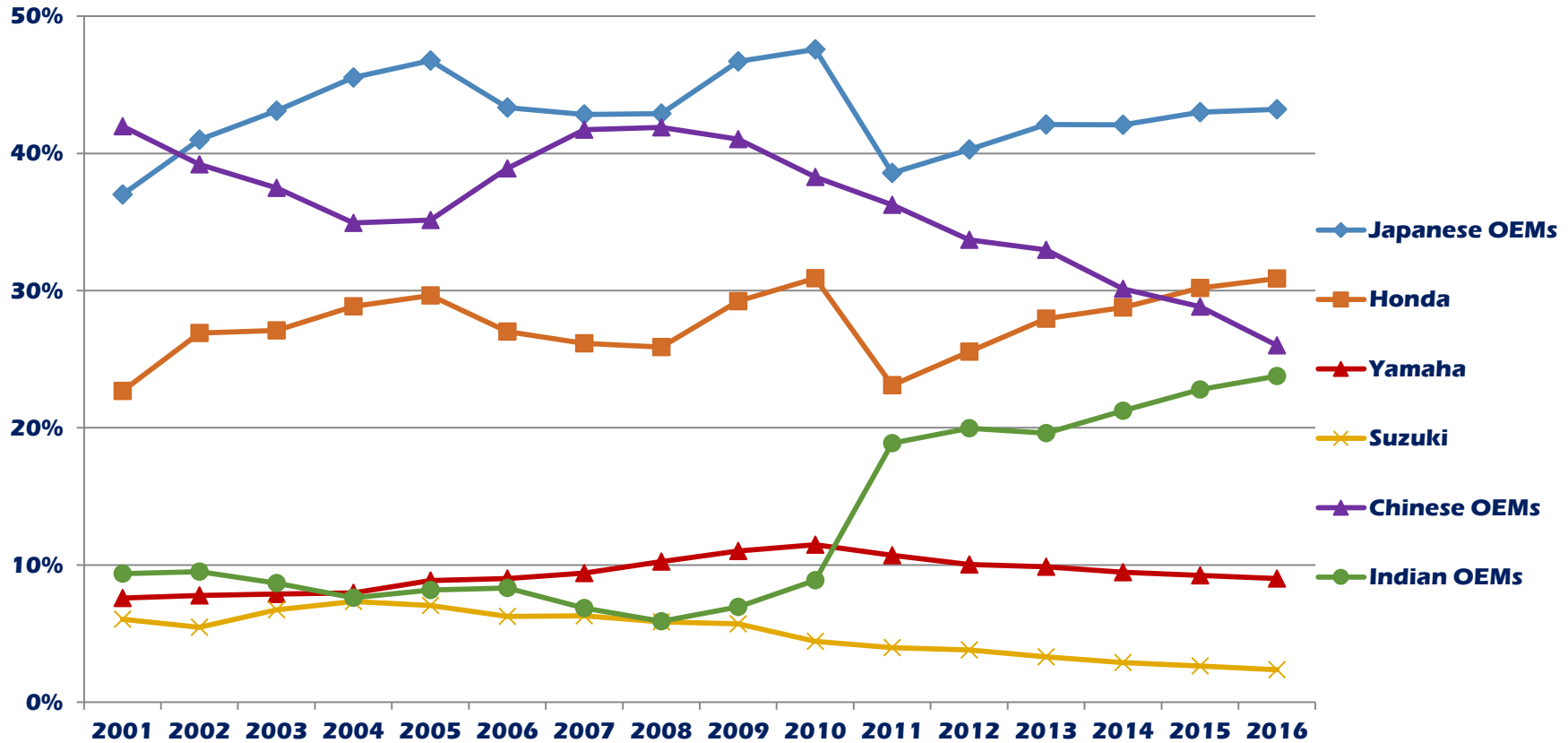


Left: In Million Units, Estimated by FOURIN using figures from motorcycle industry associations and other sources

Right: Composition of 2W Production volume by engine displacement(2016), Data sources: same as above

→ **Commuter bike with 70-125cc engine accounts about 60% of global production.**

Global 2W Market Share by Make



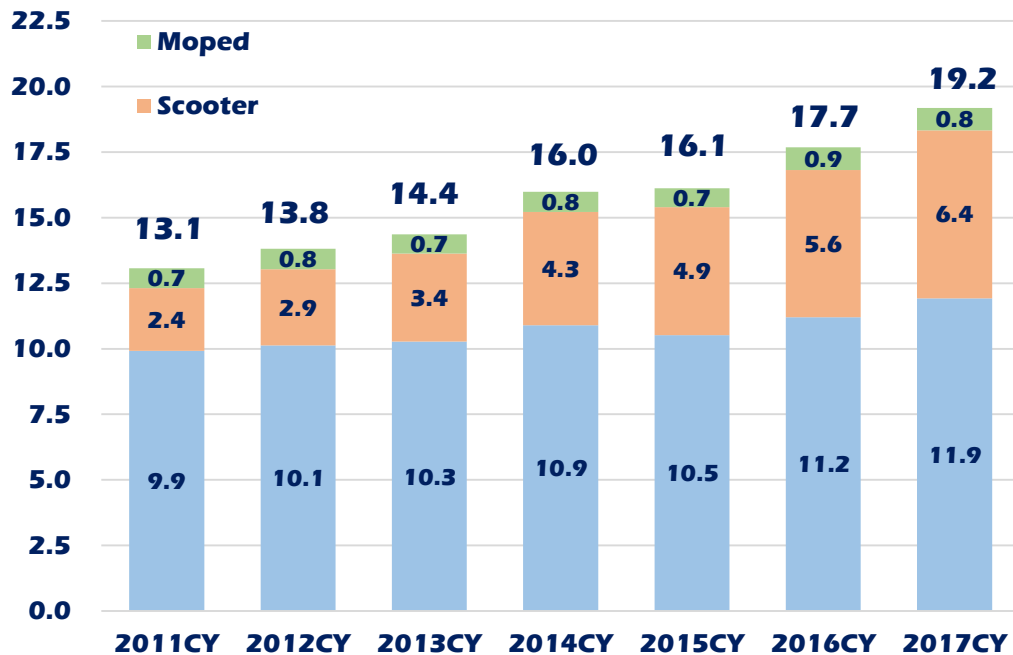
Estimated by FOURIN using figures from motorcycle industry associations and other sources.
 Sales figures of Hero Honda is included in that of Honda and Japanese OEMs while figures of Hero MotoCorp is included in that of Indian OEMs.

→ Honda has about 30% of global market share, followed by Hero.
 → Chinese OEMs have lost share due to shrinking domestic market.

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India: Overview of 2W Market



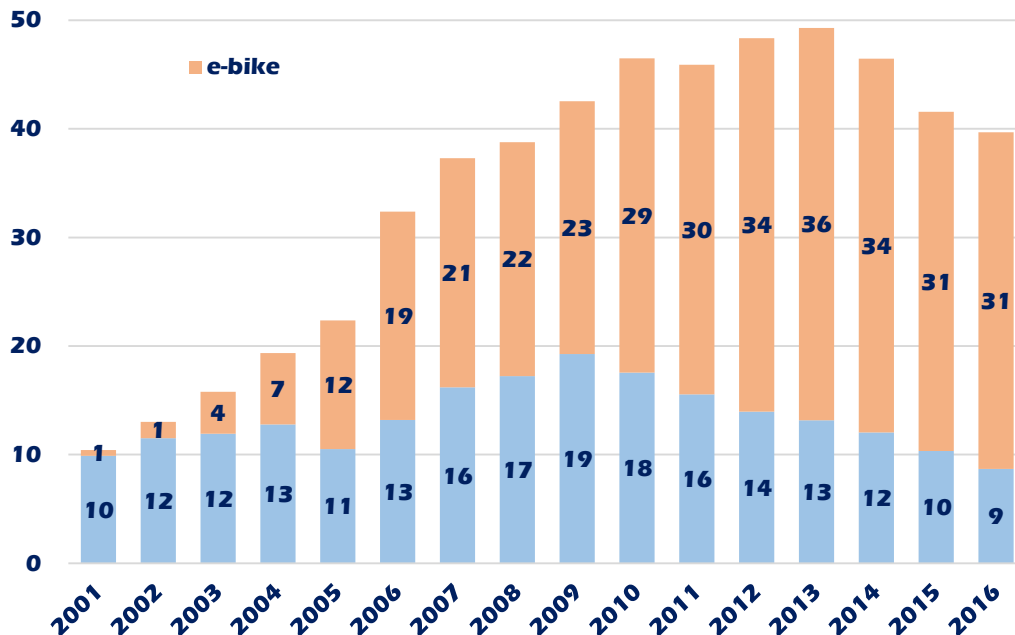
In Million Units, Data source: SIAM



Honda Activa, best selling scooter in India

- ➔ In India, 2W market expanded to 19.2M units in 2017CY.
- ➔ Sales of scooter accounted 33.4% of total 2W market in 2017CY.
- ➔ India sees solid motorcycle demand, 10M+ units per year.
- ➔ Electric-bike will get popular in India???

China: Overview of 2W Market



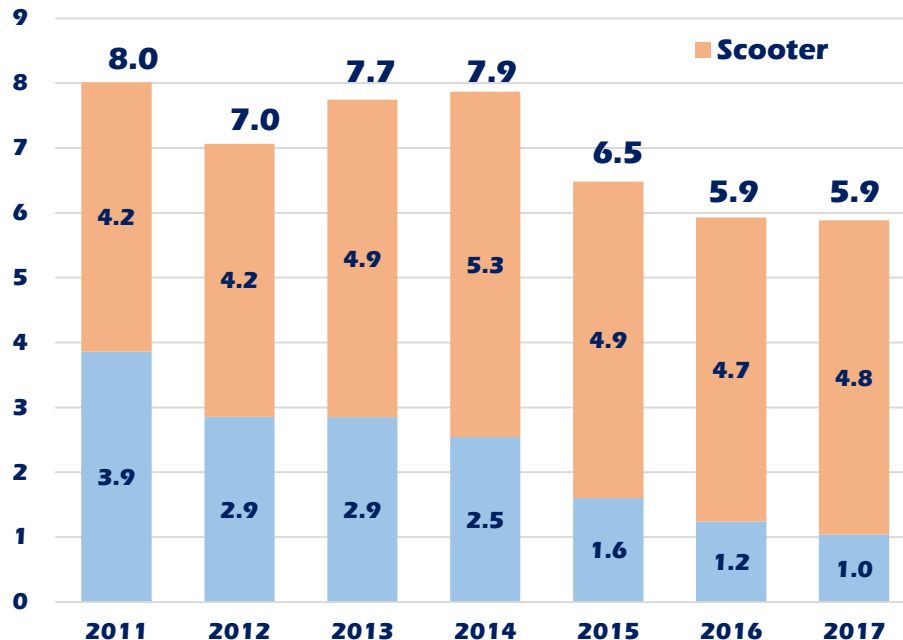
In Million Units, Data source: CAAM and FOURIN estimation



In Beijing, electric-bikes are very popular.

- ➔ In China, 2W market (ICE only) has been decreasing since 2010.
- ➔ Due to ban on 2W ICE in some cities, sales of electric-bike had surged.
- ➔ Total sales of 2W (including electric-bike) started declining in 2014.
- ➔ China introduces stricter 2W emission regulation, CHINA IV, in 2018.

Indonesia: Overview of 2W Market



In Million Units, Data source: AISI and Astra



Online motorcycle taxi in Jakarta

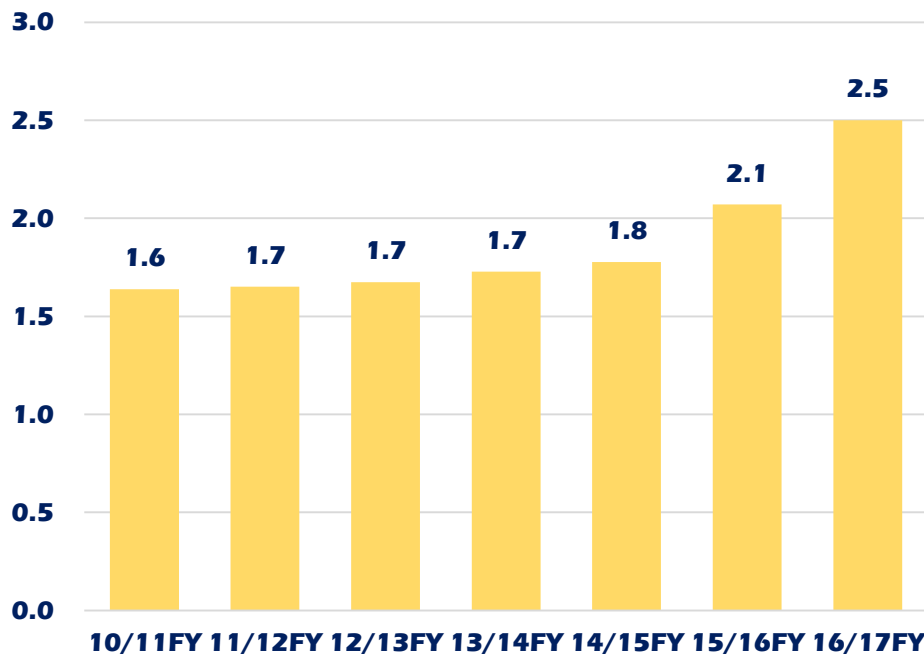
→ Indonesia is the 3rd biggest 2W market in the world and the biggest in ASEAN.

→ Indonesia's 2W market hit 8M in 2011 and have declined to 6M.

→ Market share of scooter increased to 82% in 2017 from 52% in 2011.

→ Online motorcycle taxi, such as Go-jek and GrabBike, is now very popular.

■ Pakistan: Overview of 2W Market



In Million Units, Figures are based on 2W production. Data source: EDB of Pakistan



Honda is the best selling 2W brand in Pakistan.

- ➔ Pakistan has a population of 200M and a huge potential to grow.
- ➔ 2W market in Pakistan is estimated around 2.5M units in 2017.
- ➔ Most selling motorcycle segment is supposed to be 70cc segment.
- ➔ Honda is the top brand with a market share of approx 40% as of 2017.

■ Africa: Overview of 2W Markets



In Lagos, Nigeria (Photo by Tomoaki Nakano)



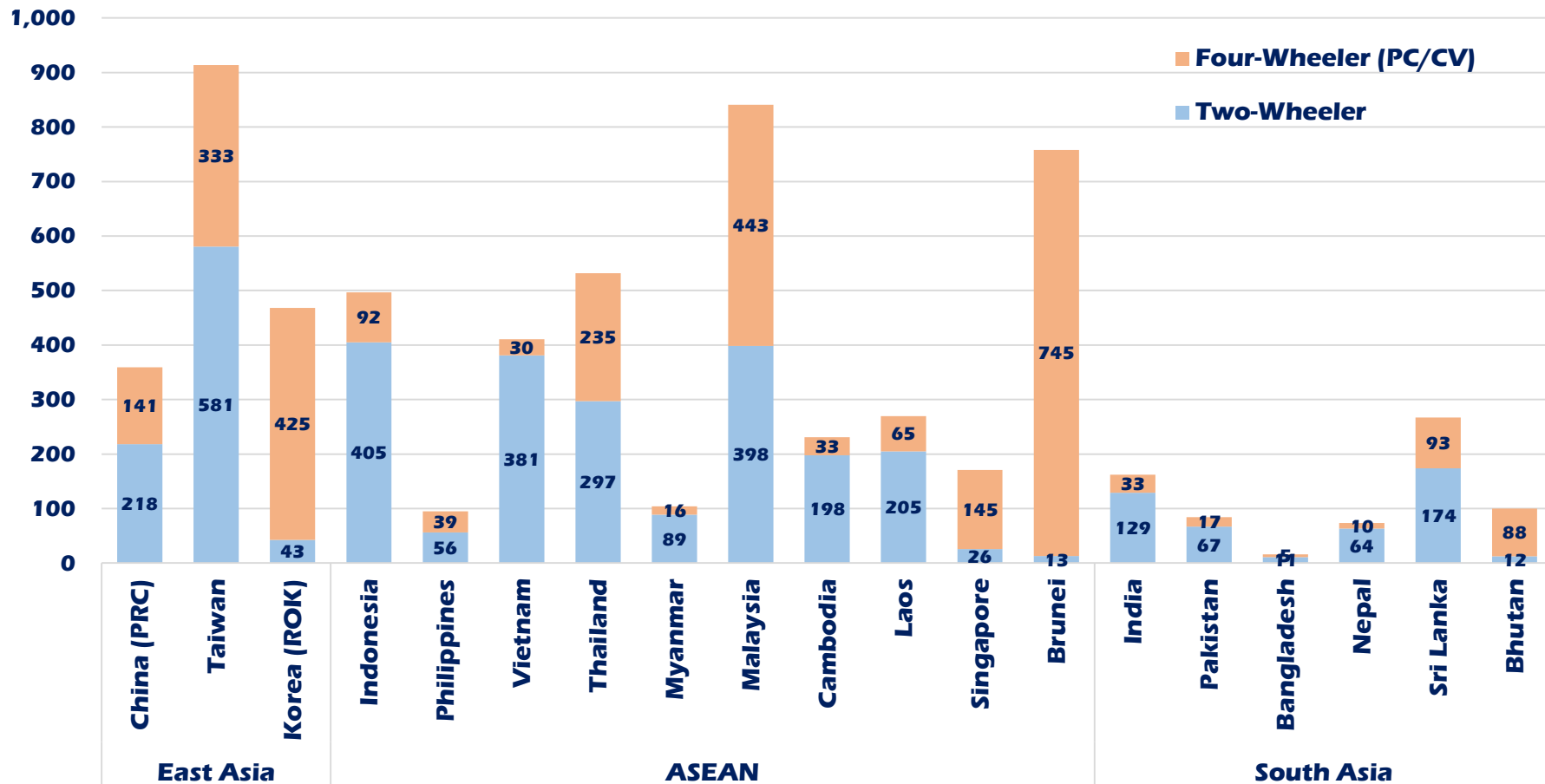
Chinese motorcycles sold in Douala, Cameroon

- Motorcycles are used as taxi. Not much private use.
- Use of motorcycles are not allowed in some cities due to safety issues.
- Chinese products dominate but products from India is getting popular.
- Bajaj seems the biggest brand in Africa as a whole by today.
- Nigeria is the biggest market of motorcycle in Africa.

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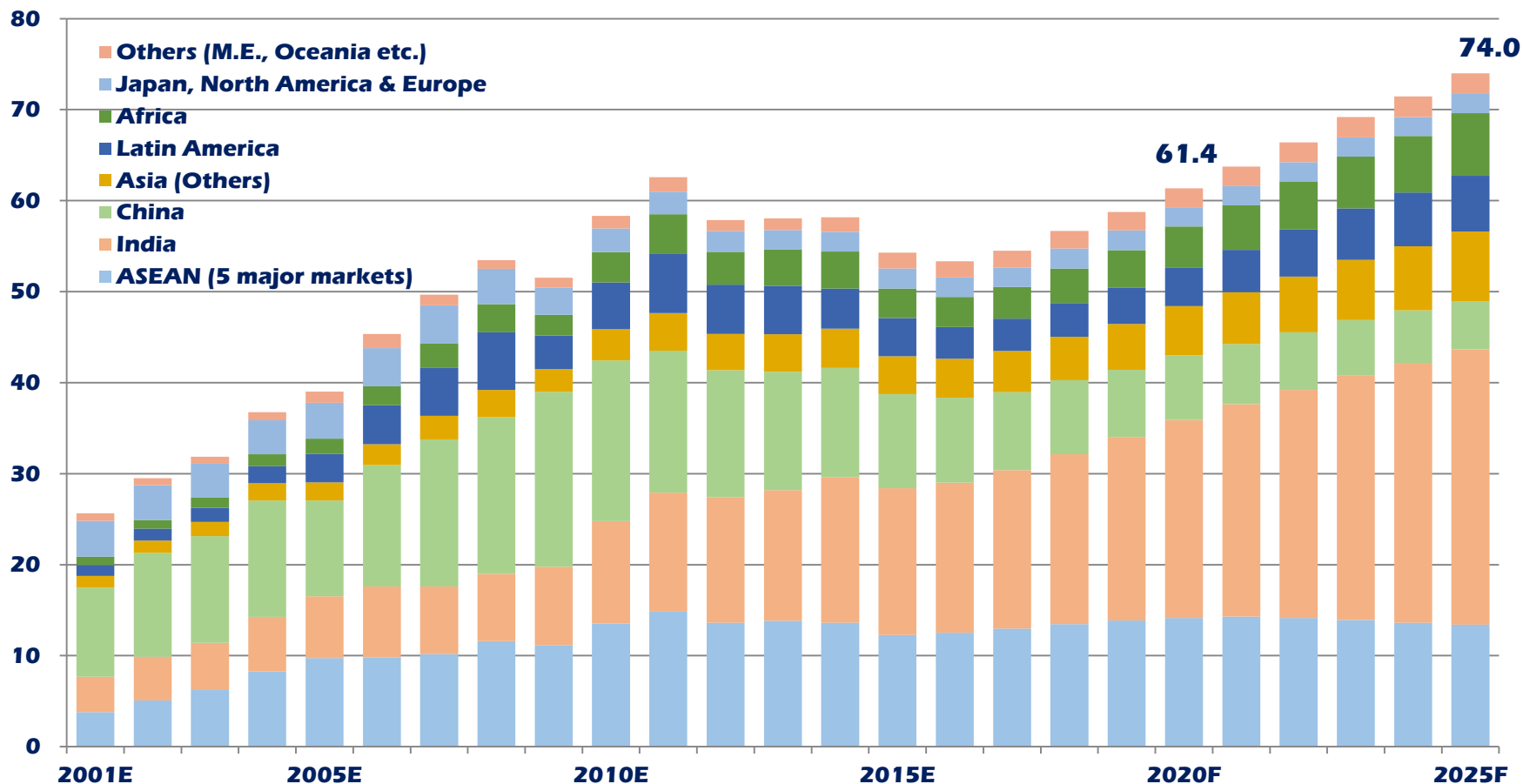
Motor Vehicle Penetration in Asia



Vehicle population (units) per 1,000 people, based on 2016 data. Data source: Land transport office of each countries, FOURIN etc. Figures for China (PRC) including electric-bike.

➔ India, Pakistan, Bangladesh and Philippines have huge potential for 2W market.

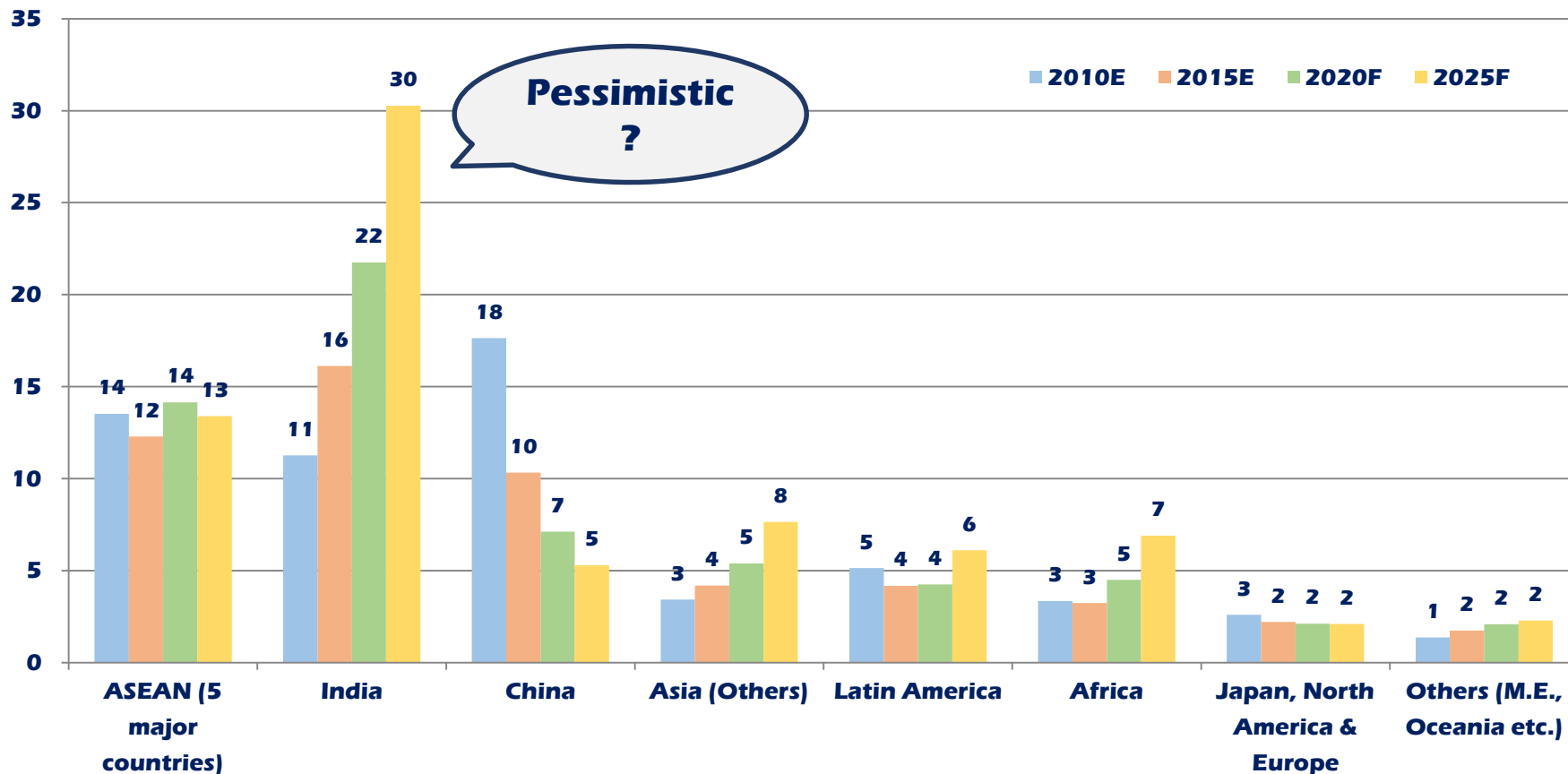
Global 2W Market Forecast



In Million Units, Estimated/forecasted by FOURIN using figures from motorcycle industry associations and other sources.

→ Global 2W market is expected to surpass 70M units by 2025.
 → Indian market will account 40% of the global market in the near future.

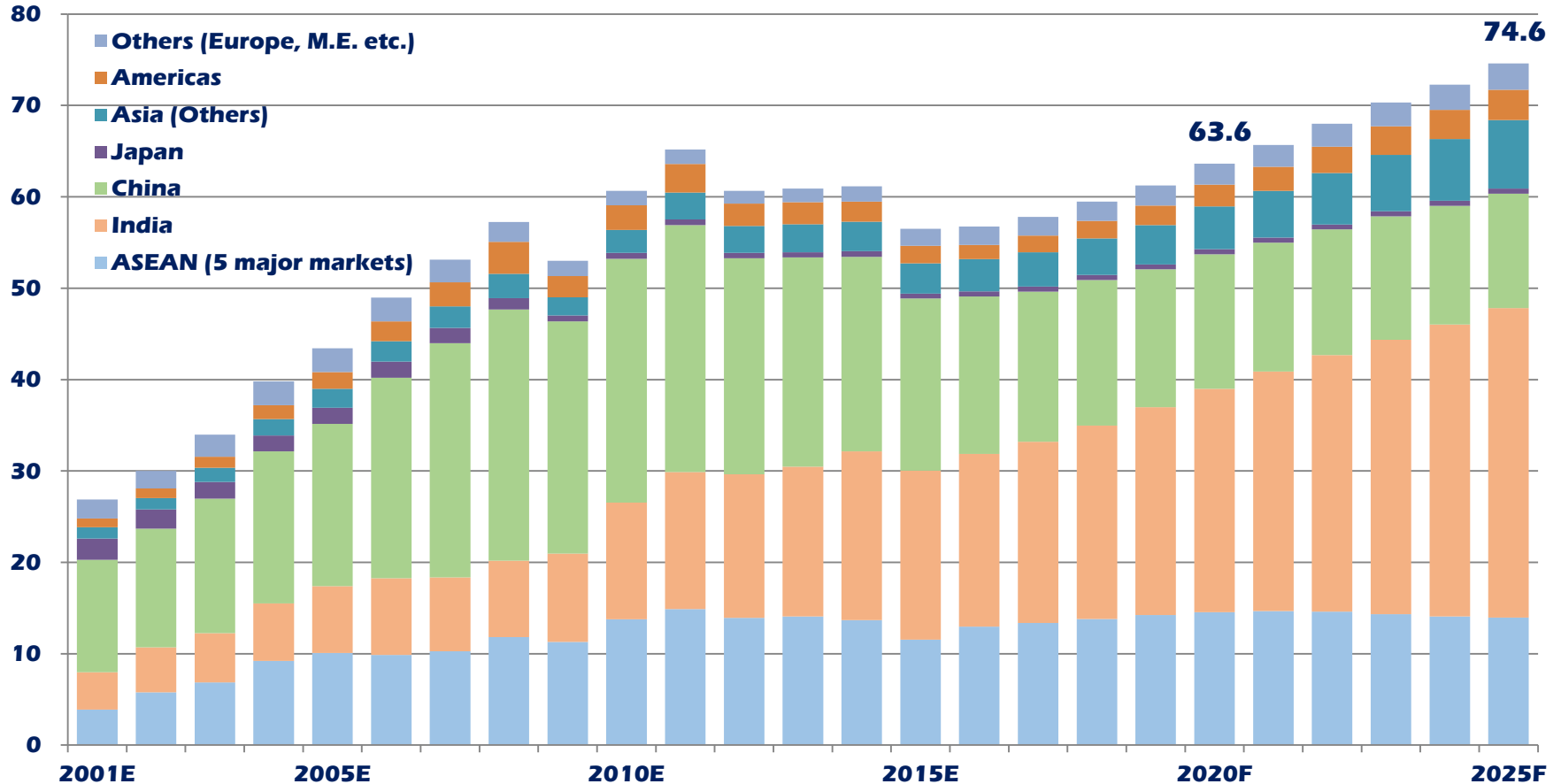
■ 2W Sales Forecast by Area/Country



In Million Units, Estimated/forecasted by FOURIN using figures from motorcycle industry associations and other sources.

- Demand in India, Pakistan and African countries is expected to grow.
- ASEAN market is likely to remain solid, while Chinese market will

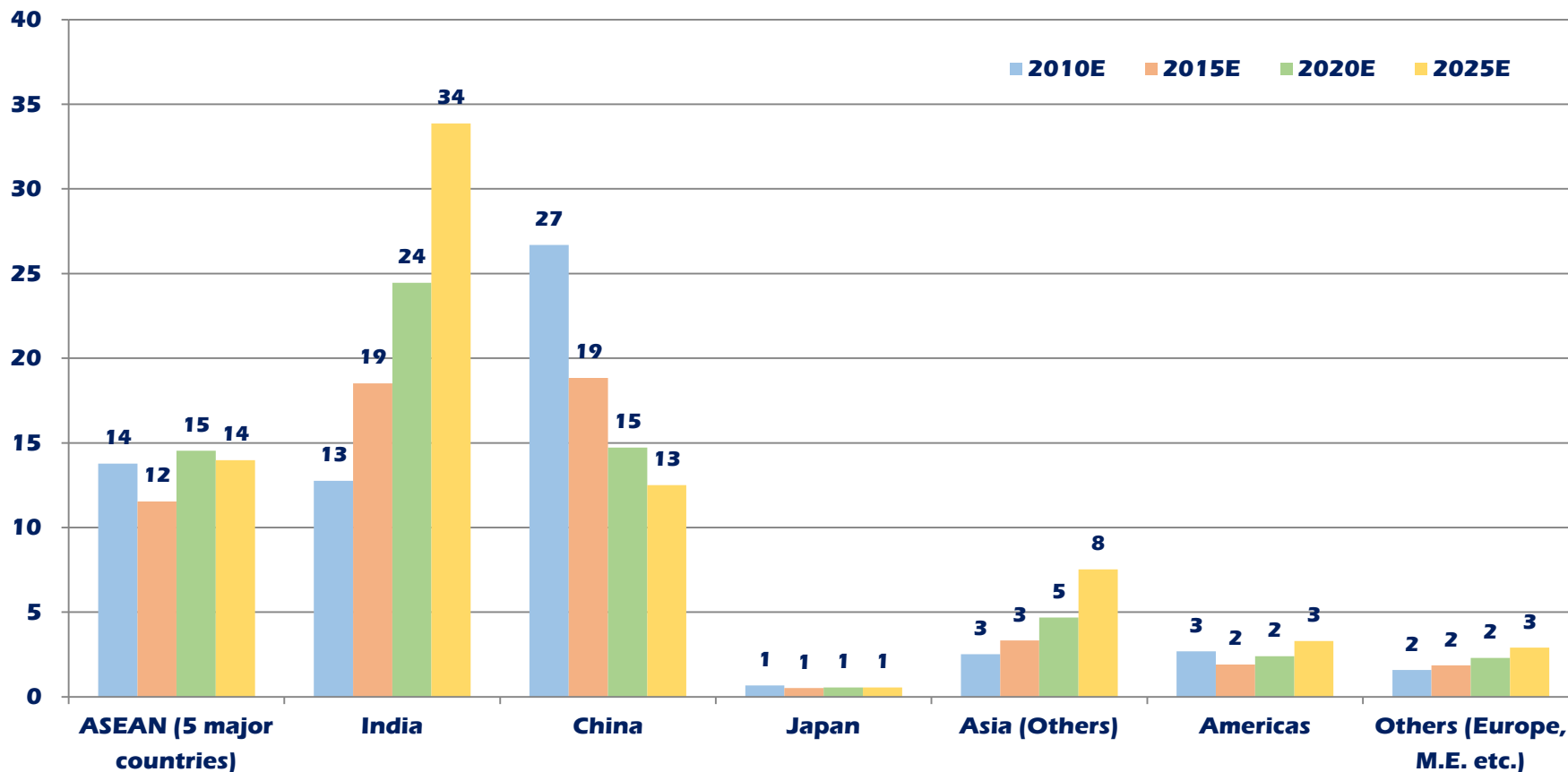
■ Global 2W Production Forecast



In Million Units, Estimated/forecasted by FOURIN using figures from motorcycle industry associations and other sources.

→ Global 2W production is expected to grow around 75M units in 2025.
 → India will see production growth, while China will decrease.

■ 2W Production Forecast by Area/Country



In Million Units, Estimated/forecasted by FOURIN using figures from motorcycle industry associations and other sources.

- India will possibly expand 2W production to 34M units in 2025.
- China, the biggest exporter, will decrease production to less than 15M

■ Electric, Shared, Connected & 2W

Gogoro smartscooter sharing service has started in Berlin and Paris.



China is the biggest electric-bike market in the world.

Vietnam is the largest importer of China-made electric-bikes.

In Taiwan, 100,000 units of electric-bike/scooter are on the road as of Dec. 2017. Gogoro smartscooter is the best selling.

In some part of Africa, motorcycle taxi is one of major personal mobility.

Motorcycle taxi is very popular in Indonesia, Thailand, Vietnam and other ASEAN countries. Online service, operated by Grab, Go-jek and Uber, is emerging.



- What will be impact of “Electric, Shared & Connected” on 2W market?
- How will personal mobility be developed (in India)?

**Thank you very much
for your attention!**

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