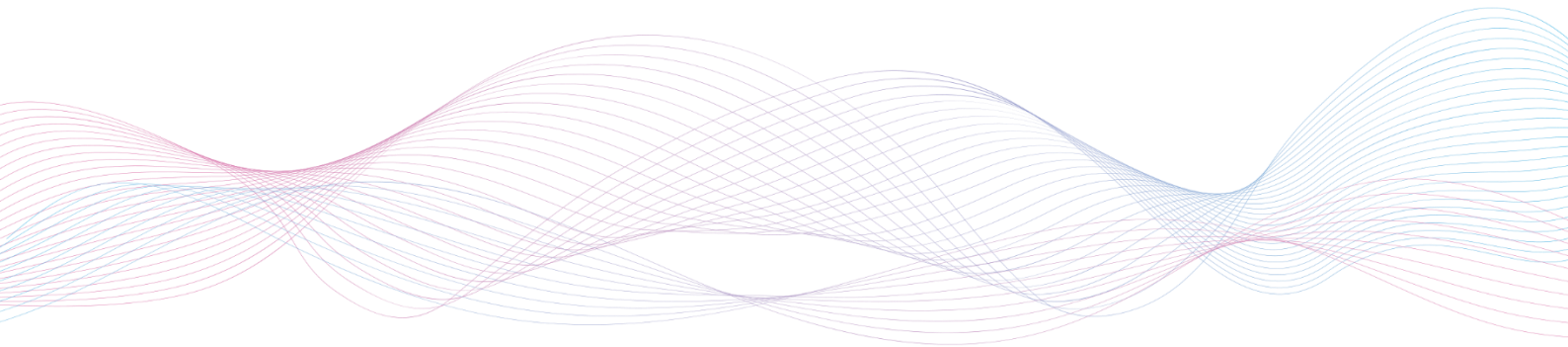


# ASEAN Motorcycle Markets and their impact on Car Markets

AUTOMOTIVE | September 2021

WHITE PAPER



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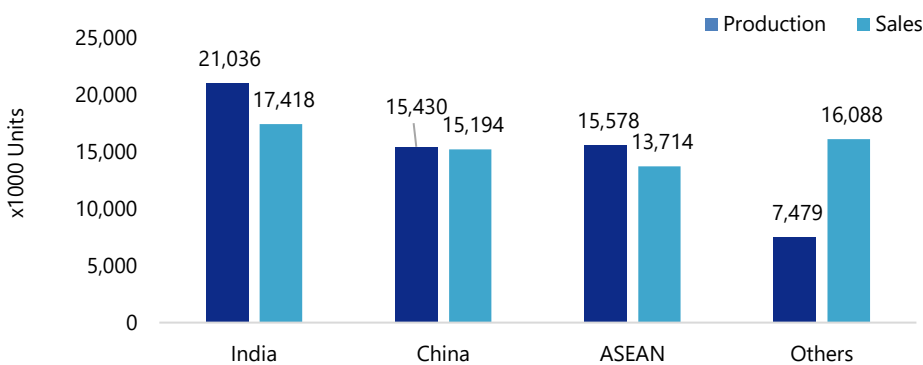
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## Summary

Globally, the ASEAN region plays a key role in the global motorcycle market. For decades now, it is considered the third in terms of production and sales units after India and China. The ASEAN market is led by Indonesia, Thailand, and Vietnam, representing total motorcycle sales of more than 11 million units in 2019 out of the total sales of 13.7 million in the region. As of 2019, before the COVID-19 pandemic, the total number of motorcycles registered was 106 million in Indonesia, 62 million in Vietnam and 21 million in Thailand.

**Figure 1: Global motorcycle sales and production volume, 2019**



Source: Marklines

Myanmar is another interesting market to compare as it has by far the highest growth rate of registered motorcycles in the region with a 14% CAGR over the last decade, resulting in a high jump from 1.8 million to 6.1 million between 2010 and 2019, while Malaysia and the Philippines have larger numbers of motorcycles in use in 2019 with 14 and 8 million units respectively.

The impact to the car and motorcycle market is mainly linked to the national income or GDP per capita which shows the relative wealth of people in each country. In emerging countries like Vietnam and Myanmar, motorcycles are usually a key mode of transportation, not only, in urban areas but also in rural areas, due to their flexibility, and lower prices compared to cars. A recent study from Malaysia's Road Safety Engineering and Environment Research Centre in 2020 indicates that in the early stage of a developing economy, due to lower income levels, a strong growth in motorcycle sales can be observed, going hand in hand with the increase in personal income. The tipping point is when income levels for the average population are high enough to afford a car, resulting in a decrease in motorcycle sales. The relationship between GDP per capita and the ratio between motorcycle and passenger car ownership shows a reversed U-shape.

On the other hand, people in more developed ASEAN countries like Thailand are slowing down their replacement of older motorcycles and moving towards the purchase of entry-level passenger cars with key reasons such as rising incomes, policy initiatives, and the expansion of infrastructure. It represents that the country is relying more on the car market and at the same time gently shifting to a more premium motorcycle markets with larger engines (sports vehicles) and electric vehicles.

## Overview

The ASEAN region is one of the markets with the highest two-wheeler (motorcycle) penetration rates in the world. **By 2017, the number of registered motorcycles in the region surpassed the 200 million units** mark and is expected to keep growing based on the assumed annual growth rate.

ABeam's objective for this paper is to describe **the situation of motorcycle markets** of major countries in ASEAN and estimate their turning point and **impact towards car markets**.

The popularity of motorcycles has increased significantly and become the key transportation method for many countries in ASEAN, as they allow riding through small alleys and traffic-congested roads, as well as sporting cheaper prices and better fuel economy than cars. **Emerging countries like Myanmar and Vietnam are still dependent on the motorcycle market.**

**With the rising incomes of ASEAN nations, policy initiatives, and expansion of infrastructure**, people in developing ASEAN countries like Thailand are slowing down their replacement of their old motorcycles and moving to purchase entry-level passenger cars instead, which will **lead to a contraction of the motorcycle market eventually and an enlargement of the car market in the region.**



Motorcycle sales in ASEAN grew with a CAGR of

# 2.9%

from 12.2 million units in 2015 to  
**13.7 million units in 2019**



Indonesia has the largest motorcycle market with

# 48%

share of the total of **220 million registered motorcycles in ASEAN in 2019**

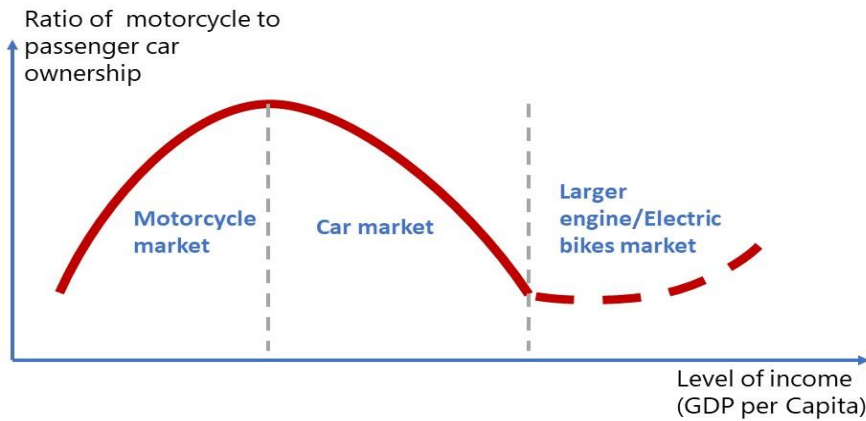


Myanmar is the fastest growing market in ASEAN for motorcycles during the last decade with a CAGR of

# 13.9%

## How does the motorcycle market impact the car market?

**Figure 2: Reverse U-Shape relationship between ownership and income**



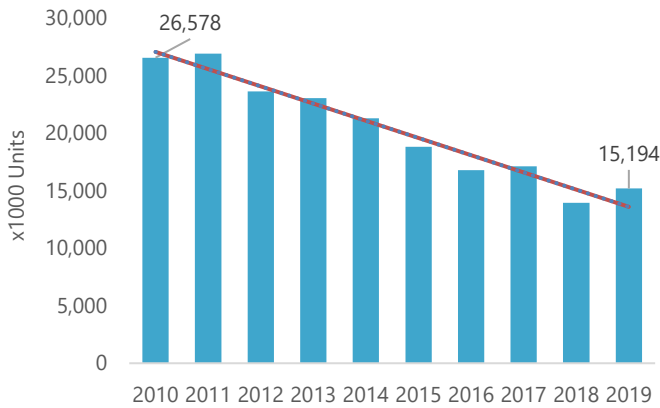
Source: Transportation Research, Volume 90, 2021

According to Malaysia's Road Safety Engineering and Environment Research Centre in 2020, the motorcycle ownership will grow with the development of a country's economy but will decrease once the level of income has reached a specific threshold. The turning-point from a motorcycle market (where low but increasing income leads to increasing motorcycle sales) to a car market (where further increase in income beyond the tipping

point leads to increasing passenger car sales over motorcycle sales) may differ from country to country, and depends on different factors, such as road infrastructure and inequality levels. In addition to that, after further maturing of the economy and income reaching even higher levels, the relationship between GDP per capita and motorcycles becomes positive again, as consumers ask for larger engine motorcycles (large bikes with more than 250cc engines) or electric motorcycles, as motorcycles are viewed more as luxury & hobby goods for long-distance transportation rather than necessary goods.

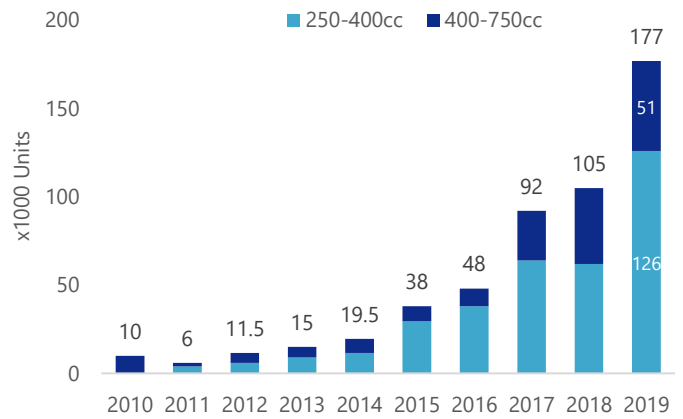
One good example for this is China, where the number of motorcycles per 100 urban households showed significant growth from 6.3 units in 1995 to around 25 units in 2007, and then declined to around 19 units in 2019 whereas the country's GDP had increased significantly over the last two decades. Similarly, the total number of sales decreased from 26.6 million units in 2010 to 15.2 million units in 2019 (an annual drop of 6.02%). Even though most of the Chinese motorcycle market dealt with small engine size motorcycles, the larger engine motorcycle market segment grew during the same time. Sales of motorcycles under 250cc in China accounted for 98.7% of total sales in 2019 (or about 13 million units) while motorcycles with engines of 250 cc and above recorded 177,000 sold units in 2019, which is a big increase from just about 10,000 units in 2010. While China exports most of its produced motorcycles overseas, the production units of motorcycles with an engine larger than 150cc from 2015 to 2018 (most recent available data) also showed an increase from 787,000 units to 1,050,000 units (CAGR of 10.12% during the period).

**Figure 3: Sales volume history of motorcycle in China**



Source: Chinese Automotive Industry Yearbooks

**Figure 4: Large engine motorcycles sales volume in China**



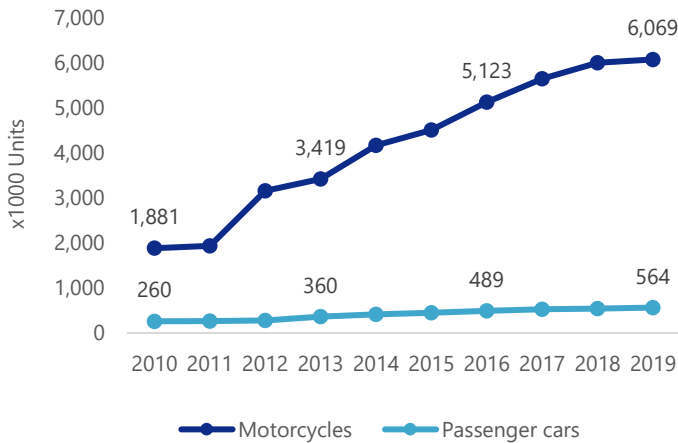
Source: Chinese Automotive Industry Yearbooks

ABeam’s study reveals the position of each studied country within the ASEAN region on the mentioned relationship pattern between the two markets in order to project potential future trends. The outlook of those countries’ markets is analyzed based on various factors.

## Myanmar

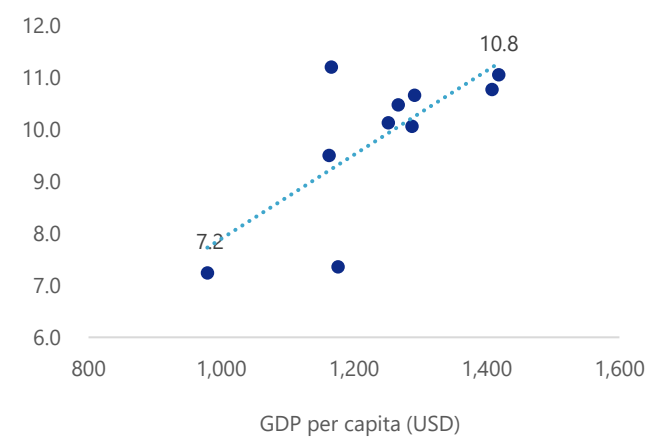
The motorcycle market in Myanmar has been spiking for over a decade due to their more affordable prices compared to cars, easier process to buy, overall flexibility and the country’s lack of public transportation. The number of motorcycles registered in Myanmar in 2019 was 6.1 million units, which was a significant increase from 2010 with only 1.9 million units (an annual average growth of 14%, the highest in ASEAN). In comparison, there were just 564,000 cars in 2019, a number which rose from 260,000 cars in 2010. (CAGR at 5.5%). The ratio between the number of motorcycles and passenger cars registered as of 2019 was around 10.8 which was an increase from 7.2 in 2010, showing that Myanmar has been and still is in the motorcycle market phase for the last decade. This upward trend is aligning with the level of income in Myanmar, which during the past 5 years has had the lowest GDP per capita when compared to other ASEAN countries in this study. This trend potentially comes from two main aspects: the growth of Myanmar’s economy, its transportation characteristics, and its policy toward unregistered motorcycles.

**Figure 5: Total number of registered motorcycles and number of registered passenger cars in Myanmar**



Source: ASEANstats DataPortal

**Figure 6: Ratio of number of motorcycles to number of passenger cars and GDP per capita in Myanmar**



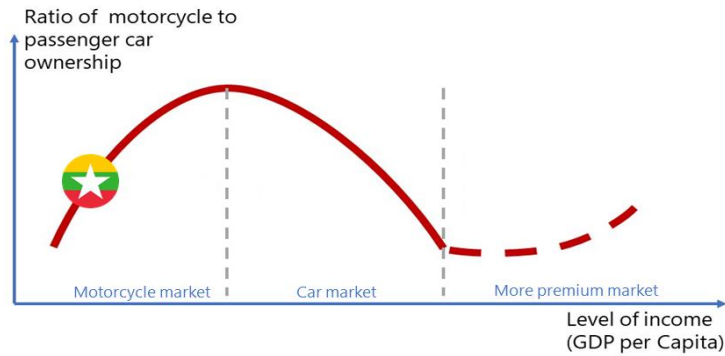
Source: World Bank, ABeam analysis

Myanmar's GDP per capita grew by 11.1% on average each year between 2000 and 2019. With its low per capita income (GDP per capita was USD 1.4 thousand as of 2019), it is likely to see further growth in motorcycle purchases, as it remains the first transportation option for most people. In addition to that, considering the transportation quality, in 2018, the Department of Highway of Myanmar revealed that 20 million people (almost 40% of its total population) still had no access to basic roads and that only 24% of all roads were paved road. Based on that, the main transportation mode in Myanmar is more likely to rely on motorcycles rather than cars for the foreseeable future. Myanmar's government also announced a policy toward unregistered motorcycles. In the past, there were many people in Myanmar using motorcycles without registration. With an updated policy in 2014, the Burmese government started granting licenses to unregistered two-wheelers, as well as legal actions with fines equal to 50% of the motorcycle price and to seize unregistered motorcycles for auction. Due to this, 450,000 illegally imported motorcycles were registered over the course of just 4 months in 2014.

Importing motorcycles from neighboring countries offer cheaper prices to owners in Myanmar and it seems to be the key reason behind that policy. Based on ABeam's research, the average price of imported motorcycles without a license from Thailand is between 2 million Kyat (USD 1,419) to 2.5 million Kyat (USD 1,774) and around 500,000 Kyat (USD 355) to 1 million Kyat (USD 710) for motorcycles imported from China. The purchase price requires roughly an additional 500,000 Kyat (USD 355) in case of a licensed motorcycle. Thailand and China also represent most of the imported motorcycle markets in Myanmar as the major export countries; with a market share of 40.5% and 34.8% respectively in 2019. Chinese brands such as Kenbo dominate the motorcycle market in Myanmar, however the two established brands, Honda and Suzuki imported from Thailand are more popular. From the data of International Trade Centre, there were

roughly 300,000 motorcycles estimated to be legally imported to Myanmar in 2019, while the number of total registered vehicles were about 563,900 units in the same year.

**Figure 7: Myanmar position in the reverse U-Shape relationship**



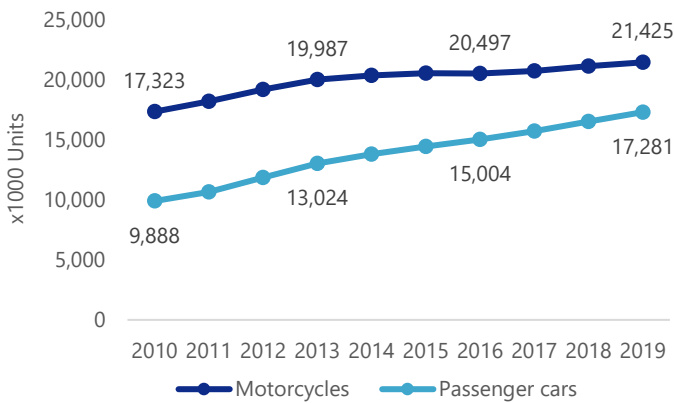
Source: ABeam Analysis

## Thailand

Thailand is one of the most important motorcycles markets in the region, with sales of 1.5 million units in 2020, the estimated sales revenue of motorcycles domestically is around THB 86 billion (USD 2.75 billion). The statistics show that the number of motorcycles in use in Thailand had increased from 17.3 million units in 2010 to 21.4 million units in 2019 considering about one-third of the total population owning motorcycles, representing an average annual growth rate of 2.4% which is the second-lowest in ASEAN, (The lowest is Singapore which has negative growth rate of 0.5% over the same period) while the number of registered passenger cars went up from 9.9 million units to 17.3 million units in 2019 at a rate of 6.4%. However, it can be said that the motorcycle sales have been fairly stable for the last 5 years in Thailand because between 2015-2019, the number of motorcycle in Thailand had an annual growth rate of just 1% compared to the growth rate between 2010-2014 which was around 4.1%.. This lower growth in the Thai motorcycle market can be interpreted in a way that shows that the country moved into the car market phase during the past decade. Official numbers of sales volume show that, while the average annual growth rate from 2010 to 2019 for motorcycles decreased at 0.79%, the rate for passenger cars increased by 5.01% over the same period. These numbers change the ratio between the number of motorcycles and passenger cars registered in Thailand from 1.8 in 2010 to 1.2 in 2019.

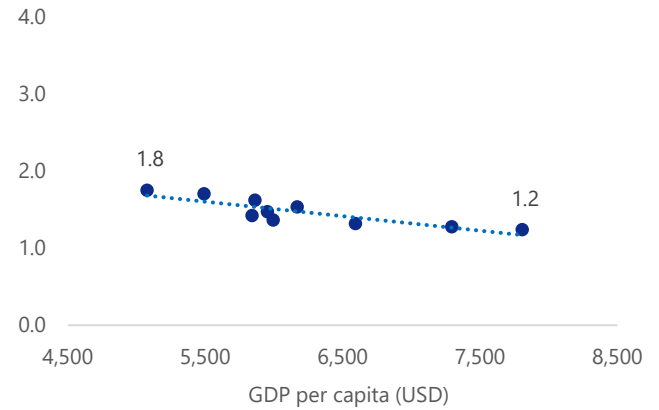


**Figure 8: Total number of registered motorcycles and number of registered passenger cars in Thailand**



Source: ASEANstats DataPortal

**Figure 9: Ratio of number of motorcycles to number of passenger cars and GDP per capita in Thailand**



Source: World Bank, ABeam analysis

Two main reasons for the lowered ratio are the increase of GDP per capita and the smaller price gap between the motorcycle and car market; Thailand has had significant economic growth in GDP per capita from 5,076 USD in 2010 to USD 7,806 in 2020 (CAGR at 4.9% over the past 10 years). This growth is not considered high compared to other emerging countries in the region like Vietnam or Cambodia, however, only in the last 5 years, Thailand's GDP per capita growth rate was the highest among the selected countries for this report with an annual growth rate of 7.5% over the past 5 years (Vietnam's growth rate during the same time was 6.8%). Another contributing fact was that when the government had more income, highway kilometers and paved roads nationwide were improved, which further pushed the trend towards long-distance transportation like cars. Also, as previously stated, when people have more income, the shift from small motorcycles to more premium items like large-size motorcycles or passenger cars becomes noticeable. Similar to China's market, the new registration of larger engine motorbike in Thailand has grown remarkably from 27,238 units in 2015 to 63,086 units in 2019 which is an estimated 4.0% of the total motorcycle registration in the same year. Even with the impact of the pandemic and economic trends, the market still increased to 70,486 in units sold in 2020 with a 12% growth from 2019. In contrast, the sales of small-engine motorcycles decreased at a negative 2.0% CAGR over the last 5 years.

With multiple promotions for low emission cars and incentives provided for investment projects in Thailand, the number for local production – especially cars – increased tremendously and made the minimum car price in Thailand drop significantly over the last decade, shifting more motorcycle buyers to become car buyers instead. Thailand produced less than 500,000 cars in 2000, but in 2019, about 2 million cars were manufactured for domestic sales and export. Trade agreements also played a significant role to lower the cost of imported parts, components, and machinery to produce cars in Thailand. To illustrate, before 2008, the minimum passenger car price (4-doors) in Thailand started at above 500,000 THB for models like the Vios or City. Since the engine downsizing technology came to the market, the 1.2l Nissan March was

introduced with a price at around 400,000 THB in 2009. Currently, customers can also find passenger car prices at 318,000 THB for models like the Suzuki Celerio. The motorcycle market also had these benefits, but the impact was less noticeable than it was for the car market. As a result, the gap between motorcycles and passenger cars has gradually become smaller.

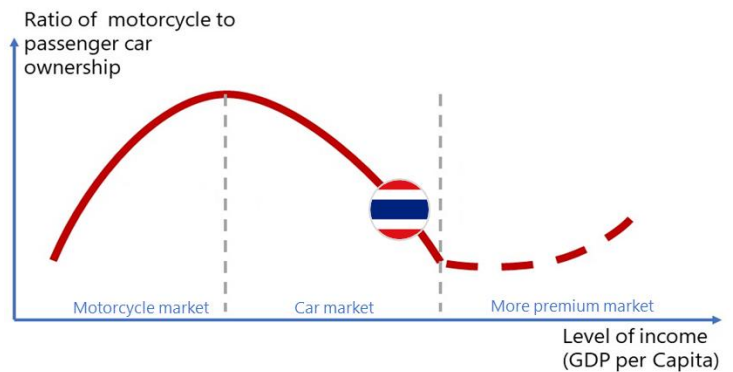
**Table 1: Passenger cars and motorcycles minimum selling price between 2008 and 2019, THB**

Price	Brand	Model	Key Spec	Y2008	Y2019
Passenger Cars	Toyota	Vios	1.5L MT	514,000	-
	Suzuki	Celerio	1.0L MT	-	318,000
Motorcycles	Honda	Wave	100 CC MT	33,500	-
	Zongshen	Ryuka	110 CC MT	-	29,900

Source: Autospinn.com, JRmotor.com, Autofun.co.th and Boltech.co.th

In a nutshell, ABeam sees that Thailand is already in the car market phase as the GDP per capita of Thailand stood at USD 7,806 in 2019 ranking as third in the region following Singapore and Malaysia. The middle-income population in the country has become more likely to buy a car rather than a motorcycle. ABeam believes that after the pandemic, the overall motorcycle market may not show any significant further growth, as it has reached its saturation, but the sales will remain stable for the next few years. Most people are more likely to choose a car as their main means of transport, including the upcountry regions, but might power at the same time further growth in the larger engine motorcycle market. The share of large engine motorcycles in Thailand will not go as high as it does in western countries like the US or Germany where the share of new registered motorcycles with 250cc and higher stood at above 70% for both in 2019. ABeam forecasts the average annual growth rate over the next 3 years for larger engine motorcycles sales units to be around 9.28%.

**Figure 10: Thailand position in the reverse U-Shape relationship**



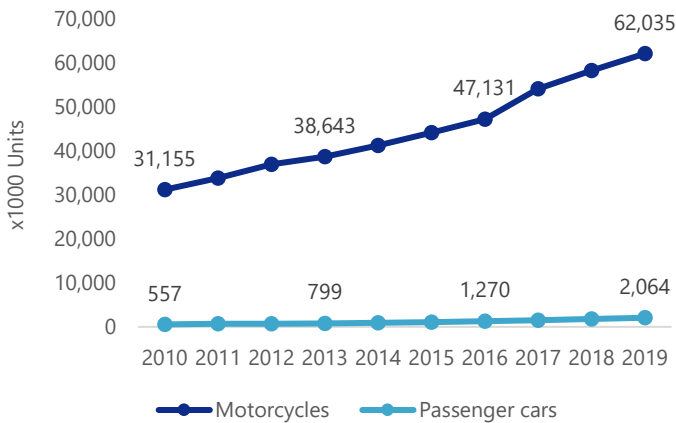
Source: ABeam Analysis

## Vietnam

Motorcycles are the main transportation mode in Vietnam, with some people saying that Vietnam is a motorbike nation. There were over 62 million registered motorcycles which for a total population of 96 million means that 2 in 3 people owned a bike in 2019 (CAGR at 8.0%) whereas the total number of registered vehicles was recorded at merely 2 million

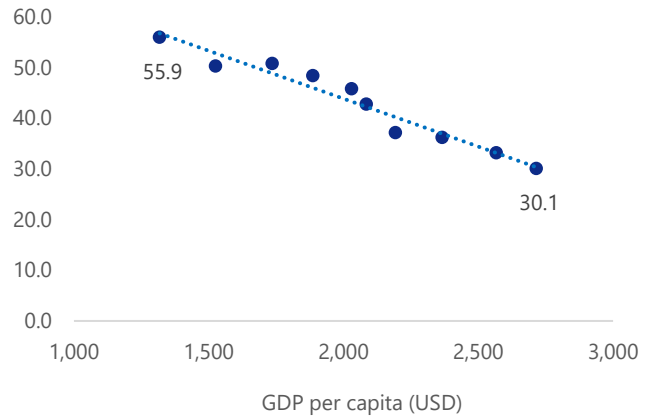
units in 2019, quadrupling from 557,000 units in 2010 (CAGR at 15.7%). Public transportation is still under-developed, and passenger cars are still considered to be expensive in comparison to the country's income levels.

**Figure 11: Total number of registered motorcycles and number of registered passenger cars in Vietnam**



Source: ASEANstats DataPortal

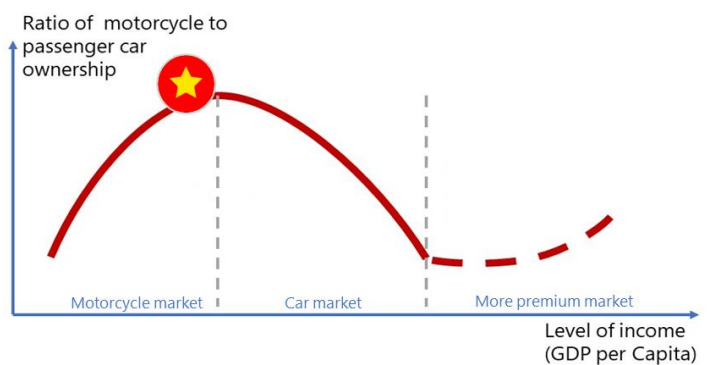
**Figure 12: Ratio of number of motorcycles to number of passenger cars and GDP per capita in Vietnam**



Source: World Bank, ABeam analysis

In 2020, due to the pandemic, there was a drop in motorcycles sales to 2.84 million units from 3.25 million in 2019 or a decrease by 12.7%, but outside of the pandemic, Vietnam has seen strong stable sales during the past decade with around 3 million units sold annually, the lowest annual sales being 2.7 million in 2014 and the highest being 3.39 million units in 2018. The ratio between the number of motorcycles and passenger cars registered in Vietnam is very high and may have reached 55.9 motorcycles per car in 2010, and continually decreased to a ratio of 30.1 in 2019.. At the same time, GDP per capita also increased consistently: over the last decade, the GDP per capita reached USD 2,715 in 2019, rising significantly from USD 1,317 in 2010 (CAGR at 8.4% which is the highest rate among the studied nations). Not only the wealthier condition of the Vietnamese that can purchase more expensive items like passenger cars instead of motorcycles, but the infrastructure in Vietnam is improving at a fast pace as well. The percentage of paved roads increased from 64.4% in 2010 to 70.9% in 2017 (compared to 74.1% of paved roads in Thailand by 2017), total highway length also increased almost tenfold from 89 kilometers in 2010 to 815 kilometers in 2017, which helped connecting major cities in Vietnam and support the use of passenger cars as well.

**Figure 13: Vietnam position in the reverse U-Shape relationship**



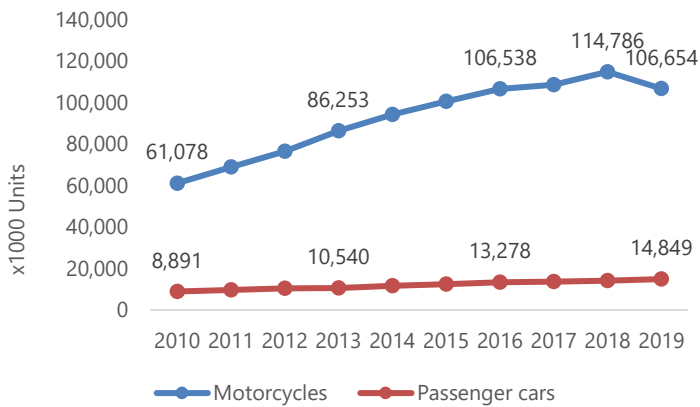
Source: ABeam Analysis

The Vietnamese market is dominated by five producers: Honda, Yamaha, Suzuki, SYM, and Piaggio, which together represented over 97% of the motorcycle market in 2019 (both locally produced and imported bikes). In 2017, the government announced the intention to shift from ICE motorized two-wheelers to 100% EVs by 2030, especially in Hanoi and Ho Chi Min by 2030, the two largest cities in Vietnam to ease traffic congestion and lower the number of traffic accidents as well as solving environmental pollution, to contribute to better living quality and cities' sustainable development in Vietnam. As a result, these makers are slowing down in introducing new features and models for the current ICE line-up and aim for electric model sales in recent years. The Vietnam Association of Motorcycle Manufacturers (VAMM) reported that Honda, Yamaha, Suzuki, Piaggio and SYM sold 3.3 million motorbikes in 2019 which is a reduction of 3.8% against the sales in 2018. In contrast, the coming wave of electric scooter manufacturers can be seen by the entry of VinFast, a local manufacturing giant. VinFast Klara was marketed in November 2018 and sold 30,000 units in the following year. The world's largest electric motorcycle maker Yadea from China has also just started their operations in Vietnam by 2019. Overall, ABeam believes that Vietnam is moving to the beginning of the saturation for motorcycle market as the number of passenger cars increased more rapidly than the motorcycle number, which in combination with the previously mentioned factors, points to a more mature future motorcycle market with stable numbers but without significant growth over the next decade.

## Indonesia

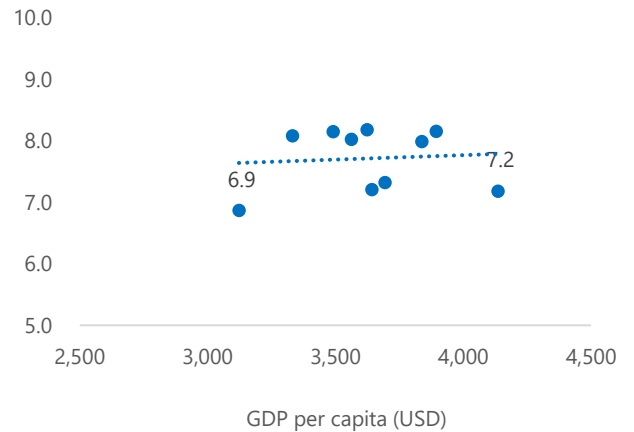
Globally, Indonesia is the third-largest motorcycle market after India and China. The current Indonesian market is dominated by lightweight scooters (below 150cc) which accounted for over 80% of all domestic sales in 2020. Honda and Yamaha are the top two players in the market, with Honda holding 76% market share in 2019. Registered motorcycles have gradually been increasing from 61 million units in 2010 to 106 million units in 2019, representing a 6.4% growth annually. In 2020, due to the pandemic, sales of motorcycles dropped sharply by 43.7%, the worst drop in the world. Before the pandemic, the market presented its highest figures at 8 million units sold in 2011 before a drop to 7 million units in 2012, due to the Indonesian government tightening its monetary policy, making financing for motorcycle purchases harder. After that, sales progressively declined from 7.7 million units in 2013 to 5.9 million units in 2017, even so, the market slightly improved before 2020, with sales reaching 6.4 million and 6.5 million units in 2018 and 2019 respectively. On the other hand, the number of registered passenger cars in Indonesia also rose steadily at a similar growth rate as motorcycles at 5.9% over the same period. When looking at the ratio between motorcycles and passenger cars, the ratio stayed constantly between around 6-7 over the past decade.

**Figure 14: Total number of registered motorcycles and number of registered passenger cars in Indonesia**



Source: ASEANstats DataPortal

**Figure 15: Ratio of number of motorcycles to number of passenger cars and GDP per capita in Indonesia**



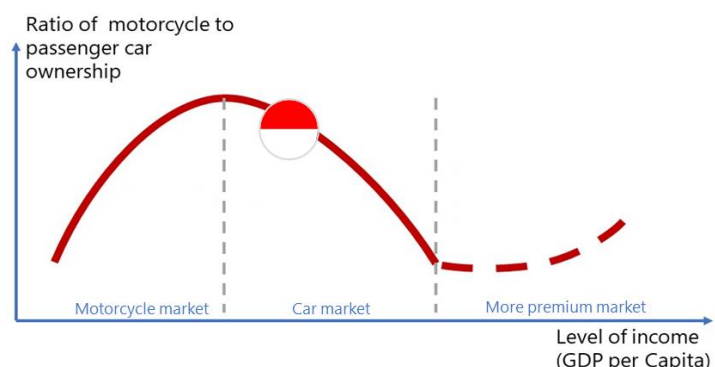
Source: World Bank, ABeam analysis

Reasons for this identical increase were economic trends and growing mobility services. The recent official numbers show that the GDP per capita was USD 4,135 as of 2019 growing from USD 3,122 in 2010; its annual growth rate was at 3.2% and was considered as the second lowest in the region. Even though Indonesian people's wealth did not go up as much compared to other countries in the region, there are many mobility service providers growing rapidly in Indonesia like Gojek, Tokopedia and Bluebird, which accelerated the demand in motorcycles and passenger cars parallelly over the past decade.

Another reason was the government announcing not to raise electricity tariffs in 2018 and postponing any increase in fuel prices. Studies found that, the key factors for the growth were due to the increase in disposable income, rising demand for cheaper personal transportation and increase in female riders, improving road infrastructure and growing popularity of credit & loan facilities.

From the ups and downs over the past decade, the market can be considered fairly sensitive to various factors such as, economic trends that impact purchase power of the low-income demographic of the country. ABeam believes that Indonesia is in the transition from a motorcycle market to a car market or just went after the top of the U-Shape relationship line due to the gradual decrease in the growth of motorcycle sales each year, the current level of income per capita and the expansion of mobility services in Indonesia.

**Figure 16: Indonesia position in the reverse U-Shape relationship**



Source: ABeam Analysis

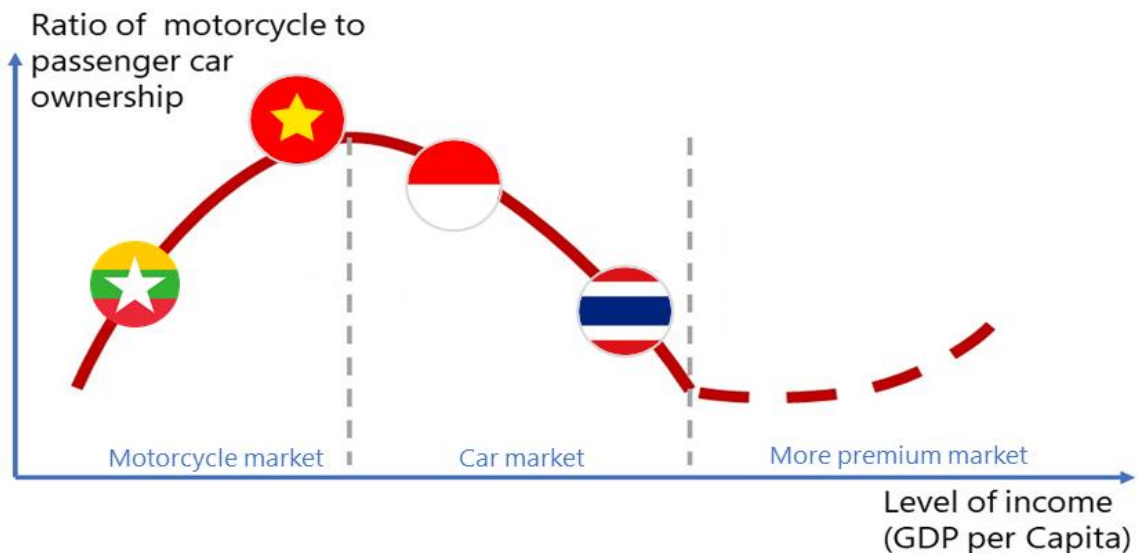
ABeam expects further slowdown for the motorcycle growth, but an increase in the numbers of passenger vehicle sales for Indonesia in the next few years.

## Conclusion

In summary we can see that most ASEAN motorcycle markets will still be profiting from stable sales over the next years, but that overall, the trend will be moving towards a car market within the next few years. The figure below shows the estimated position of each studied country with the ratio of registered motorcycles to passenger cars and GDP per capita levels for the last 10 years.

Key factors that have accelerated the surge in two-wheeler ownership in ASEAN include the lack of public transportation systems that are unable to support the growth of population and the need for higher living quality like in Myanmar. The motorcycle will still be their main option due to traffic conditions, congestion and the lower purchase cost and greater fuel efficiency. While Vietnam and Indonesia are still depending a lot on motorcycles, the trend of replacing their motorcycles with passenger cars will become more and more apparent over the next few years thanks to an increase of national income, policy initiatives and expansion of the car industry in their respective countries. Thailand is likely to move from a car market towards a more premium motorcycle market as the growth in large-engine size motorcycles is increasing and a decline of the ratio between motorcycles and cars can be observed.

**Figure 17: Country position in the reverse U-Shape relationship**



Source: ABeam Analysis

Based on our insights and analysis, there are two major takeaways. Firstly, understanding the market and customers is the key. Data and details of customer and market intelligence will enable manufacturers and mobility service providers to prepare more appropriate products and strategies to ramp up the sales in the region. A wide range of electric vehicles or e-bikes, chargers, ride-hailing services, e-commerce delivery fleet management, cold chain storage, smart maintenance capabilities, etc. as well as engagement with digital platforms can help to increase market share.

Players need to focus on and gather more data, not only about the market metrics, but driver behavior, bike usage patterns, customer preferences, which are all essential for optimizing the user experience and achieving better results to retain or convert customers. Historically dealers in the motorcycle business have been more passive than their automotive counterparts when it comes to customer interaction and follow-ups. Looking for an upgrade of existing services for better customer experience can help capitalize on stable markets and win over more users. Dealer Management Systems and solutions supported by flexible low-code solution that can be deployed easily to mobile devices can support dealers in new and innovative ways, maybe even helping the guide customers with history to a more luxurious offering as income levels increase in the region.

### **How can ABeam support motorcycle dealers and OEMs?**

ABeam has been a leader in the implementation for countrywide Dealer Management Systems across South East Asia, supporting clients in selecting the best solutions and or enhancing dealers with light-weight add-ons to smoothen the sales & service process with its **ABeam DRIVE** suite.

Contact us if you are interested in our research and more information [https://www.abeam.com/th/en/contact\\_th](https://www.abeam.com/th/en/contact_th)

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## About ABeam Consulting

ABeam Consulting provides business transformation services that create strategic advantage, improve business processes, leverage technology innovation, and enhance organizational performance for leading multinational and domestic companies worldwide. ABeam partners with clients to diagnose and solve their real challenges with solutions that combine industry and operational best practices with technical expertise. Pragmatic approaches ensure that clients gain measurable value more quickly. Headquartered in Tokyo, ABeam's 6,600 professionals serve more than 800 clients throughout Asia, the Americas and Europe. For more information, please visit

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