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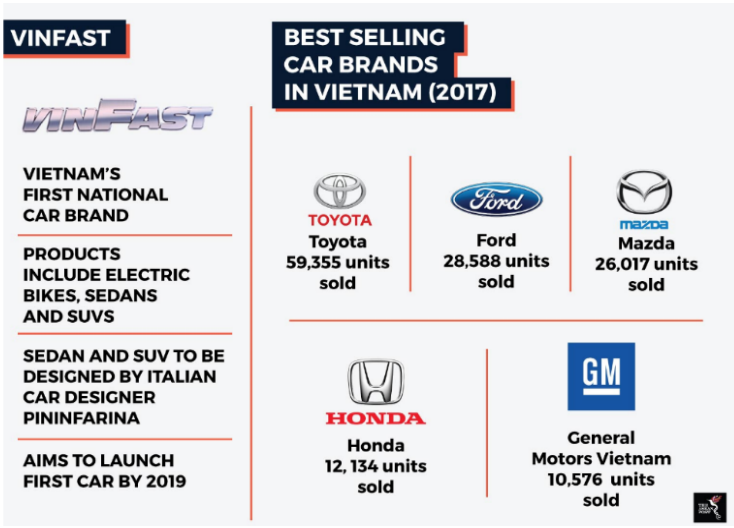
Vinfast and the Electric Vehicle Market in Vietnam

The Vietnamese electric vehicle (EV) market is full of energy. Rapid economic growth is increasing disposable income levels and major infrastructure projects are improving connectivity. Although motorcycles are still the vehicle of preference, the car market has been steadily growing in importance. According to the International Organization of Motor Vehicle manufacturers, Vietnam possessed just 23 cars per 1,000 people in 2015. This compares with 439 in Malaysia, 228 in Thailand and 145 in Singapore (NIA 2018). UK based automotive market research firm, JATO Dynamics highlighted that Vietnam's car market was the second fastest growing one in the world in 2016. Accordingly, BMO research expect the Vietnamese market to grow with 11.1% per year over 2017-2021 (BMO research 2018). In 2016, Vietnam reportedly spent nearly US$500,000 on purchasing EVs from overseas markets, including Japan, China and the US (Vietnamnet 2017). The Ministry of Industry and Trade expects new auto sales to more than double to 600,000 units annually in 2025 (NIA 2018).

Experts envision an especially promising future for electric vehicles given a number of local conditions. First of all, EVs meet the healthy and high mobility criteria associated with the smart city concept. Vietnam's cities are attracting more and more people each year amounting to an accelerating urbanization rate of around 3% per annum. The already highly congested roads, which serve 94% of all transportation, are being expanded quickly (Granthorton 2017). The young and increasingly wealthy middle-class is open to change and attaches more importance to personal and environmental health. Hanoi and Ho Chi Minh City suffer from – at times extreme - pollution and a chronically underperforming public transport system. Rising global fuel prices and low Vietnamese electricity prices work in favor of EV. In a recent study by Nissan, Vietnam's consumers showed to possess one of the strongest latest demands for electric vehicles in ASEAN.

As of now, Vietnam's supportive policies for EV's lag behind the ones from Thailand, Malaysia and Indonesia and to a lesser extent also to Singapore and the Philippines. Changing political winds could quickly create an enabling environment and to a booming EV market. These changing winds seem to be in the air due to the launch of a new national prestige project: VinFast. This subsidiary of Vingroup aims to earn a prominent place in the highly protectionist and oligopolistic car market with a specific commitment to EVs. Without taking into account Vinfast's operations, Vietnam produces just 190,000 cars a year – around 10% of Thailand's output - and most is limited to assembly of imported components (NIA 2018). In 2018 the inter-ASEAN tariffs on imported cars were abolished leading to fiercer competition and rising non-tariff barriers.



Little by little, the electric car market has been manifesting itself in Vietnam. Tourists are already driven around the sights of Hanoi, Ha Long Bay Ho Chi Minh City and Da Nang in EVs. Last year, the country's first public charging station was opened in Da Nang. DHL is planning to modernize its fleet with electric vehicles and creating several fast charging points for private use.

VinFast

VinFast is part of Vingroup which is Vietnam's biggest private enterprise. Owned by the country's unparalleled business mogul and sole billionaire, Mr. Pham Nhat Vuong, venture capital is abundant. Vingroup is aggressively trying to leapfrog into industrial manufacturing industries (e.g. smartphones, smart household appliances). With vested interests of government officials and a crucial role in the national development roadmap focusing on Industry 4.0, the Vietnamese administration shows itself highly supportive. Vingroup cooperates with 50 of Vietnam's leading universities and explicitly committed to employing 100.000 technology students within the next 10 years.

Vingroup announced the building of:

1) Two research institutes (i.e. Big Data Research Institute and Vin Hi-Tech Research Institute)
2) Two investment funds. One for technology investment and the other for start-ups and scientific research. The latter will amount to VNĐ2 trillion (US$86 million).
3) Vintech City, a " Silicon Valley in Hanoi". dedicated to exploring A.I. and software

VinFast aims to become the leading automobile and motorcycle manufacturer in Southeast Asia. It plays a key role in Vingroup's vision to become an international standard technology-industry-service conglomerate by 2028 with a focus on technology development and application. Of those, technology will be the mainstream focus. (Vingroup, 2018). Initially targeting the domestic vehicle market, VinFast will fabricate electric motorbikes, electric buses and (electric) cars. Previously a company named Vinaxuki also aspired to build the first home-grown autos but failed due to the high entry barriers.

Car manufacturing

Early this year VinFast signed a strategic partnership with General Motors (GM). Following this cooperation agreement, VinFast will obtain GM's Hanoi plant, dealership network, and employee base by late 2018. According to LMC Automotive, the facility produced around 7,600 vehicles in 2017 but has the capacity to produce 30,000 a year. In addition, VinFast will exclusively distribute GM's Chevrolet cars in Vietnam (NIA 2018).

VinFast will set up a manufacturing, research, supplier park, and development complex at a greenfield factory in the Dinh Vu Economic Zone located in Cat Hai District, Haiphong. The manufacturing plant complex comprises 335 hectares and includes a Centre for Product Research & Development, Automobile Manufacturing Plant, Electric Motorcycle Manufacturing Plant, Training Centre and Localization Area. From now to 2025 – 2030, most R&D is expected to be channeled towards electric cars. VinFast diversified its product scope in an attempt to compete with both mid-high-level prices such as Mercedes-Benz, BMW, Audi, Lexus and electric models for lower segments.

In its first phase, VinFast will invest between USD 1-1.5bn with the aim of producing 100,000-200,000 vehicles per year, including 5-seat sedans, 7-seat SUVs and electric motorbikes. Total investment capital amounts to USD 3.5bn and local content up to 60% for cars and up to 100% for e-bikes (Financial Times 2018). VinFast is committed to producing 500.000 vehicles one a million e-scooters annually by 2025 (Autocar 2018). The car brand has bought in technology and services from Germany's BMW, Italian design house Pininfarina, and supplier groups Bosch and Siemens. The designs have been selected by means of an online survey in which 60.000 people participated. Where previously original equipment manufacturers took about 60 months from design to production, VinFast did not even exist 60 months ago. By cutting out the time-consuming clay remodification process and replacing it with digital modelling, the company reduces lead time to a mere 24 months.

Such an unconventional approach is illustrative of VinFast's daring business model. By proactively involving the general public, the company hopes to capitalize on national pride which should give the domestic consumer base the decisive push to purchase VinFast's vehicles. The business model is based on annual sales of 250.000 vehicles even though the current local car market only reaches 300.000 units sold per year. The lowering of intra-ASEAN tariffs could lead to a small number of regional sales.

Early October, David Beckham and Miss Vietnam presented VinFast's two gasoline car designs during the Paris Motor Show 2018. The Lux A2.0 and Lux AS2.0 are respectively a five-seat Sedan and a seven-seat SUV. Pilot production of the two will start in March 2019 and full production is assumed to commence around September 2019 in the newly build Hai Phong plant. During the car road show in Hanoi also the VinFast Fadil, a smaller hatchback, was presented to the public. (Vinfast 2018)

Doubts remain about the chances of success. To illustrate, the sedan carries a price tag of around $77.000 while the SUV and hatchback cost around $58.000 and $18.000 respectively. This remains a tough sell in a country where average annual income remains just short of $2.500. In an effort to boost sales, VinFast, in cooperation with the Vietnamese government, introduced the emblematic *Vietnamese goods conquer Vietnamese people* program which heavily subsidizes VinFast's cars. As a result, the price of the sedan excluding a 10% VAT drops to $49.000, of the SUV to $34.000 and of the hatchback to $14.000. Competition remains nevertheless fierce. To illustrate, a Hyundai Elantra 1.6 sport, a substitute to the SUV, stands in stores only $36.000 including VAT. (Voice of Vietnam 2018).

Sedan

Hatchback

SUV

Electric bus manufacturing

VinFast has signed two contracts on the supply of technology and spare parts for electric bus manufacturing with Siemens Vietnam Company. The first line of electric buses is expected to debut in late 2019 (Reuters 2018).

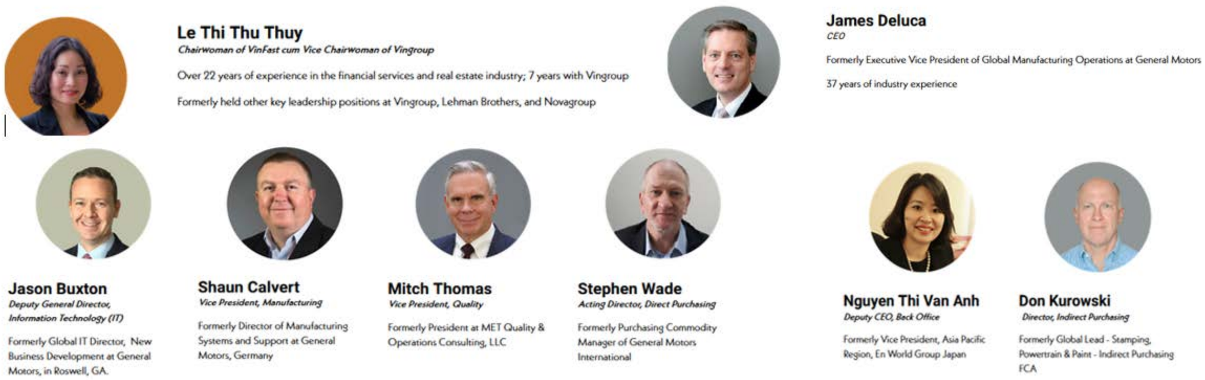
Electric motorbike manufacturing

VinFast's first model of electric motorbike – Klara – is made in its factory in the Dinh Vu Economic Zone with technology from Bosch and batteries supplied by LG Chem. The e-scooters are expected to be available for consumers next year as a "warm-up" for VinFast electric vehicle production.

The following companies are VinFast's key partners:

EDAG	Technical Partner – BEV	FFG	Engine Shop Supplier
EBZ	Weld Shop Supplier	SCHULER	Press Shop Supplier
GROB-WERKE	Engine shop	EISENMANN	Assembly Shop Supplier
SCHEUCHL	Engine Shop Supplier	AVL	Engine development partner Supplier of Engine Test Equipment
ITALDESIGN	Design Partner	PININFARINA	Design Partner
MAGNA STEYR	Technical Partner		

With an aggressive recruitment strategy, VinFast is attracting top talents for CEO, managers and staff for the new factories. Some key positions are taken by former high-level managers from GM, Bosch, Hoden. Notably, attractive packages are introduced to hire a pool of skilled staff from Samsung.



Other developments

VinFast's production seems to be attracting more investment already. Mid-November, a cluster of car parts producer lead by Peyong Haw Automotive Ltd, committed to investing $32.3 million into the Hai Phong Deep C Industrial Zone. The cluster will produce parts starting September 2019 for a number of cars including BMW, Ford, Audi, GM, Hyundai, Kia and others. The other involved firms are: YMP Plus Co. Ltd., Dong Yang Vina Industry Co. Ltd., and MiChang Vietnam Co. Ltd. (VIR, 2018)

Regulations and Government Policy on EV

Vietnam's government policy to reduce CO2 emission (-8% by 2030) and ease public health concerns is currently mostly geared towards improving the urban public transportation system and not towards hybrid or EVs. Indeed, Vietnam lacks a comprehensive e-vehicle development strategy. Elements aimed to stimulate the manufacturing and use of e-vehicles are scattered in numerous legal documents, including the National Automobile Development Strategy by 2025 and tax change decrees. As Vietnam has a 200-plus-volt system, it should be easy to charge EVs at home (NIA 2018).

Accordingly, current hybrid and EV sales are very low and government policy remains unsupportive. Only 1,229 hybrid vehicles and seven electric units were shipped to Vietnam between January 2010 and March 2017 (VIR 2018). The number remains very small compared to the country's annual imports of tens of thousands of petrol- or diesel-powered vehicles. One of Vietnam's leading EV distributors "Electric Car World" sold only 500 cars in 2017 of which most to the tourism industry (Vietnamnet 2018).

Vietnam aims to increase public transport modal share from the current 10% to 25%-30% by 2030. This entails both the construction of metro lines in Hanoi & Ho Chi Minh City and the improvement of the existing bus network operating far under capacity. Hanoi will increase the number of public buses from 1,000 to 1,500 and expand its heavily delayed metro system in the coming years. In Ho Chi Minh City, authorities are trying to find the money to pay for nine metro, monorail and tramway projects. By 2020, Vietnam's goal is to have 20 per cent of buses and taxis using LPG, CNG or solar energy. (Vietnam economic times May 2018). Indeed, in a five-year plan up to 2020, the Vietnam Ministry of Transport aims to introduce 200 hybrid and 50 plug-in hybrid buses. This plan is on top of other pockets of EV initiatives, such as promoting EV for tourist taxis. Vietnam will likely start looking into private EV adoption during 2018 (Motion Digest 2017).

Mitsubishi cooperates with Ministry of Industry and Trade to study efficient EV usage and public policy programs that can support speedy adoption of sustainable automotive technology. Under the agreement, the Japanese carmaker will share its knowledge on tax and subsidies related to those vehicles, as well as conduct research on charging infrastructure and the country's road system. Mitsubishi plans to introduce EVs to the local market in a long-term strategy, but for now Vietnam's existing supportive policies for EV remain severely underdeveloped. In Vietnam, there are neither tax incentives nor price subsidies for EVs (VIR 2018).

Tariffs, taxes and regulations

Vietnam maintains fuel economy policies in the form of labelling and standards. Additionally, the government, in contrast to many of its ASEAN peers, has a dedicated Department of Environment to promote EV use, even though it has a small staff of 11 FTEs (Bakker et al. 2017).

In terms of tariffs: EVs originating from ASEAN, South-Korea and China are immune, while Japanese cars will face a 4% tariff. Tesla cars from the US are taxed at 70% under Most Favoured Nation treatment. In recent proposals announced to collect public opinions, the Ministry of Finance suggested cutting tariffs levied on e-cars with less than nine seats to 50% from the current 70%, serving to boost the local EV market. Besides import duties, EVs shipped to Vietnam are subject to special consumption tax rates ranging from 15-70%, thus forcing the prices up 15-20% (Vietnamnet 2017).

In the new Decree on Import-Export Duties, the Government of Vietnam specified a support for domestically-manufactured cars which need imported spare parts. Specifically, the 0% import tariff is applied for accessories and spare parts for car manufacturing in Vietnam.

VN Car Tariffs (VIR 2018)	
Type	**Tariff**
Cars with an internal combustion engine combined with an electric propulsion system where petrol accounts for max 70% of power (Hybrid)	30% lower tariffs than conventional fuel-powered vehicles
Bio-energy	50% of tariffs on conventional fuel-powered vehicles
EVs	85-95% lower tariffs than conventional fuel-powered vehicles
Car's accessories and spare parts	0% of import tariffs

The 2008 Law on Special Consumption Tax and the 2016 Revised Law on Special Consumption Tax reiterated Vietnam's policy of promoting the use of hybrid cars. However, in reality imported hybrid cars have not yet been granted special tax cuts as in reality it proves difficult to allocate where power originates from[1].

EV imports to Vietnam are facing tough regulations as stipulated in the government's Decree 116. All imported car batches need to be inspected upon strict safety and emission standards together with the building of workshops or service centers for imported EVs. This has led to an almost complete freeze of all imports by late 2017. Recently, Thailand and Indonesia have begun to issue such certificates, which are normally issued by authorities in the importing country. Although the resumptions of exports will help bring Vietnam's auto market closer to normal, shipments from countries like Japan remain halted as authorities there are not issuing the required quality certificates.

[1] The Ministry of Finance claimed that the Law on Special Consumption Tax stipulates that if cars run on petrol combined with electric power and biofuels in which the proportion of gasoline does not exceed 70% of the energy, the SCT rate shall be equal to 70% of the tax rate applicable to vehicles of the same type. However, in the amended SCT Law, the Ministry of Finance claimed that only cars with gasoline combined with electric power (recharged with their own power) will receive tax benefits. This also means that cars using hybrid engines, which have electric power converted from gasoline fuel, will not enjoy the tax benefits.