A REPORT ON TESLA'S INTERNATIONAL EXPANSION STRATEGY

INDIVIDUAL ASSIGNMENT

EXECUTIVE SUMMARY

Tesla, Inc. pursues a global standardisation strategy because of high pressures for cost reduction, particularly its sale of a commodity-type product and the highly competitive nature of the automobile industry, and low pressures for local responsiveness. In response, Tesla has standardised its product offering across markets and production processes, allowing for economies of scale, experience curve cost savings and synergies between its product divisions. By reducing the switching costs of adopting fully-electric vehicles and increasing consumer perceived value, Tesla intends to scale up its production and international operations. The company competes in an external environment shaped by limited pressures for local responsiveness, as it targets homogenous transnational consumer segments. Tesla would be, however, advised to differentiate its products horizontally, so as to reflect minor variations in cultural preferences. Its main challenges for now are to challenge consumers' doubtful attitude towards electric vehicles and scale up production to meet an ever-rising demand.

COMPANY PROFILE

Tesla, Inc., previously Tesla Motors, Inc., engineers, manufactures and sells fully electric vehicles and energy storage solutions. Incorporated in 2003, and founded by CEO, Elon Musk, and CTO, Jeffrey Straubel, amongst others, Tesla offers clean energy generation, storage and consumption technologies with a mission to accelerate the world's transition to sustainable energy. The automotive segment comprises the design, production and sale of fully-electric vehicles, targeting the premium sedan and SUV markets through its Model S and Model X, and the mainstream vehicle market through its recently introduced Model 3. The energy generation and storage segment comprises the design, production and sale of solar energy generation systems and energy storage solutions to industrial and commercial consumers. The company benefits from core competencies in powertrain engineering, vehicle engineering, innovative manufacturing and energy storage.

Key financial figures & Peer Analysis (Financial Times)	**Tesla**	**Ford**	**Volkswagen**
Revenue in USD:	7 billion	151.80 billion	217.27 billion
Net income in USD:	-674.91 million	4.60 billion	5.14 billion
Market capitalisation in USD:	42.87 billion	46.18 billion	68.72 billion
Operating margin	-9.53%	2.71%	3.27%
Number of employees	17.78k	201k	626.72k

Key products	**Image**	**Starting price in USD**	**Key features**
Model S		62,000	218 miles of range All-wheel Drive Infotainment System

Model X		77,100	237 miles of range Autopilot hardware Safety first design Falcon wings Seating for 7 adults
Model 3		35,000	215 miles of range Autopilot hardware Seating for 5 adults

IDENTIFYING AND EVALUATING TESLA'S INTERNATIONAL EXPANSION STRAETGY

While a majority of Tesla's revenues are generated in the United States (up to 60% in 2016, according to Thomson Reuters), its domestic market, the company has renewed efforts to expand internationally, aiming to tap a rising transnational demand for electric vehicles (EVs). Tesla notably targets European and Asian markets, so as to diversify its revenue streams. This section purports to identify and evaluate Tesla's international expansion strategy, and to offer an in-depth look at Tesla's approach to the Norwegian market.

a. Global standardisation, Tesla's strategic response to high pressures for cost reduction

Tesla targets three key transnational consumer segments (Mangram, 2012), which it seeks to penetrate through a standardised product offering. Firstly, the high-end sports car market is a relatively niche market initially targeted through the Tesla Roadster, the company's first model, whose production was terminated in 2012. Secondly, the luxury vehicle sedan and SUV market is a more competitive segment offering higher sales potential, which Tesla intends to tap with the Model S and Model X. Finally, the mainstream vehicle consumer segment allows for mass vehicle production, identified as Tesla's next step as Model 3 production beings in the second quarter of 2017.

The transnational homogeneity of these market segments means Tesla faces low pressures for local responsiveness and can offer a standardised product, with minimum differentiation across markets. Tesla's market segmentation is revealing of its high-end disruption innovation model, per which the company penetrated the higher end of the automobile market, where consumers are willing to pay a premium, before lowering prices to create a mass market with high unit volume.

In its international expansion, Tesla faces several pressures for cost reduction. To begin, Tesla markets a commodity-type product, cars, which satisfies a universal need for private transportation. Furthermore, Tesla operates in a highly competitive industry where price is one of the key drivers of demand and consolidated industry players, such as Toyota, Volkswagen and BMW have raised barriers to entry. Additionally, consumers face low switching costs with regards to vehicles powered by internal combustion engines (ICEs), but

higher switching costs when purchasing EVs, because of added efforts to cope with their limited range. Finally, there are technological constraints to Tesla's expansion, particularly a high minimum efficient scale resulting from high R&D and operational fixed costs.

Tesla's response to these pressures for cost reduction has been to standardise its product offering and production processes. The company is characterised by a low product variety, with its efforts concentrated on the production of Models, S, X and 3. Moreover, Tesla displays concentrated production capabilities, with the production of vehicles located in Fremont and Lathrop (California) and Tilburg (The Netherlands), and of battery packs in its Gigafactory 1 (Nevada). These production capabilities are vertically integrated, with several manufacturing operations, such as paint operations and final vehicle assembly, conjunctively conducted at the Tesla Factory (Fremont). The company has also invested in flexible manufacturing equipment, with machines supporting the production of different models. This allows Tesla to reduce set-up times and improve quality controls. More importantly, the concentration of Tesla's production capabilities has enabled the company to benefit from economies of scale, as its high fixed costs are spread over a larger fleet of vehicles. In addition, Tesla's modular approach to battery system design has allowed the company to standardise its production processes, which helped it maximise productivity and ride down the experience curve, thus fuelling cost savings. Likewise, there are synergies between Tesla's product divisions, as its proprietary technology is used in the production of several products with a view to support future R&D developments. For instance, Tesla has used its vehicle component level technologies to enhance its energy storage products. Finally, the company has built vertical strategic alliances to produce its key components, partnering with Panasonic in the construction and operation of the Gigafactory 1. This alliance notably enables Tesla to share fixed costs and the associated risks of developing new battery capabilities and to establish technological standards for the EV industry.

b. <u>How Tesla has increased its products' customer perceived value</u>

The competitive nature of the car industry has placed high pressures on cost reduction, which has pushed Tesla to increase its products' customer perceived value. By creating value-added services, through a global network of stores, service centres and Superchargers, the company supports customers in their purchasing decisions and reduces the switching costs of buying

EVs. On the other hand, developing unique core competencies in powertrain engineering and energy storage has enabled Tesla to price its product at a premium. Finally, over-the-air software updates allow Tesla to limit its products' obsolescence, strengthening their value-for-money.

c. Reducing switching costs, Tesla's priority when entering foreign markets

The low pressures for local responsiveness Tesla faces have allowed the company to standardise its products, and consequently to focus on reducing customer switching costs. For instance, providing customers with a Universal Mobile Connector allows these to use different charging services worldwide. Similarly, developing a network of Superchargers (790 as of 31st December 2016, per Tesla's Annual Report) has made long-distance travelling convenient and, thus, undermined the conception that EVs' low range diminish their usefulness. Tesla has also increased the number of charging options available to consumers, by offering destination charging, in partnership with 4,140 hospitality locations (Tesla Annual Report, 2016). The collateral advantage of Tesla's network of customer service centres is the high volume of feedback it collects from customers, who inform R&D and facilitate a quick introduction of product improvements, thus prompting cost savings.

Additionally, Tesla reduces its channel length through direct-to-consumer distribution, made possible by its vast internet presence. The latter has created a customer-centric supply chain at a global scale, allowing for the mass customisation of Tesla vehicles. This presence is met with high customer engagement, as most purchases have been conducted online (Tesla Annual Report, 2016).

d. Case study, penetrating the Norwegian market

Norway has the highest rate of EVs per capita in the world, with EVs accounting for 22.2% of new car registrations in 2015 (Jolly). The vast demand for EVs is a result of Norwegian's rising concern with regards to environmental issues and very favourable government incentives to purchase EVs. For instance, import taxes, taxes on non-recurring vehicles fees and the 25% value-added tax are not imposed on the purchase of EVs. Overall tax breaks amount circa to 50% of Tesla's base product price (Mirani, 2013), meaning Tesla products are about half the price of rival products from the likes of BMW and Audi.

Tesla capitalised on this high demand by investing in the development of charging infrastructures, opening Superchargers for the first time outside of the U.S. Direct-to-consumer capabilities were also strengthened by the opening of showrooms in Oslo's airport and shopping malls, along with service centres in Bergen and Trondheim.

EVALUATING THE EXTERNAL ENVIRONMENT IN WHICH TESLA EVOLVES

Tesla's international activity and development are also subject to exogenous factors, which shape the environment in which the firm evolves. Differences across markets create pressures for local responsiveness, which limit a company's ability to standardise its products. The CAGE distance framework, developed by Ghemawat (2007) measures cultural, administrative, geographic and economic differences across markets and helps firms gain visibility on their target markets. This paper focuses on a set of countries, selected for their high GDP per capita, an insightful indicator with regards to the affordability of Tesla's products in specific countries.

a. Cultural differences

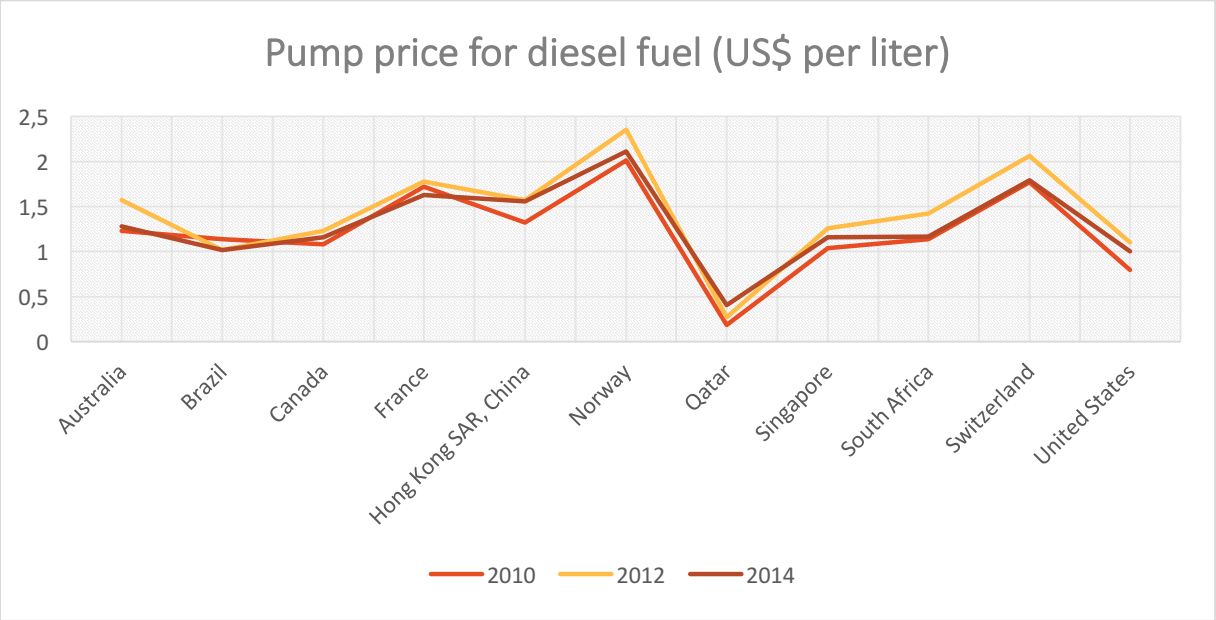
There are limited data on consumer attitudes towards EVs, though these are posited as the main cultural barrier to consumer widespread consumer adoption. This is because consumers consistently doubt EVs' range, ease of use, and disruptive technology. Positive attitudes towards EVs are however witnessed in countries where individuals share concerns regarding the environment, and are willing to take risks to contribute to its protection. There are also variations in cultural preferences with regards to car options, which Tesla must consequently incorporate in the marketing of its products.

b. Administrative differences

Government regulations regarding health & safety and component standards and government incentive programmes differ across countries. Given that price is a key driver of competition in the automobile industry, these incentive schemes are often crucial to customers' purchasing decision. Equally, variations in import duties on cars may adversely affect Tesla, by raising the price of its products, and questioning its choice of importation as an entry mode into foreign markets. Additionally, government policies regarding the implementation of charging stations is decisive in undermining the perception that EVs are inconvenient for long-distance travel.

c. Economic differences

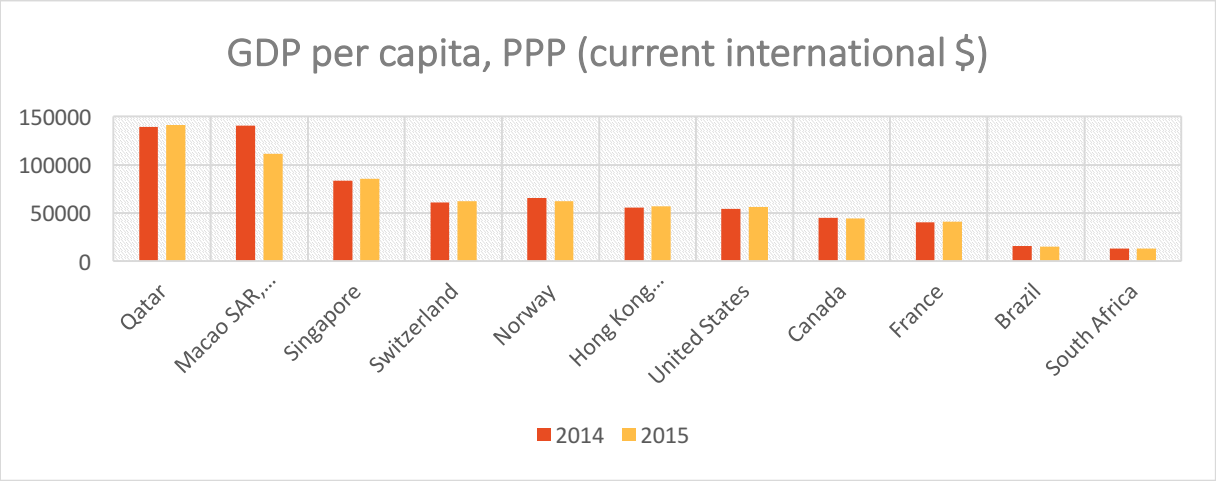
Economic conditions shape demand and Tesla's revenue streams and cost structures. Variations in fuel prices, for instance, affect the cost of ownership and may incentivise switching to EVs.



Source: World Bank's World Development Indicators

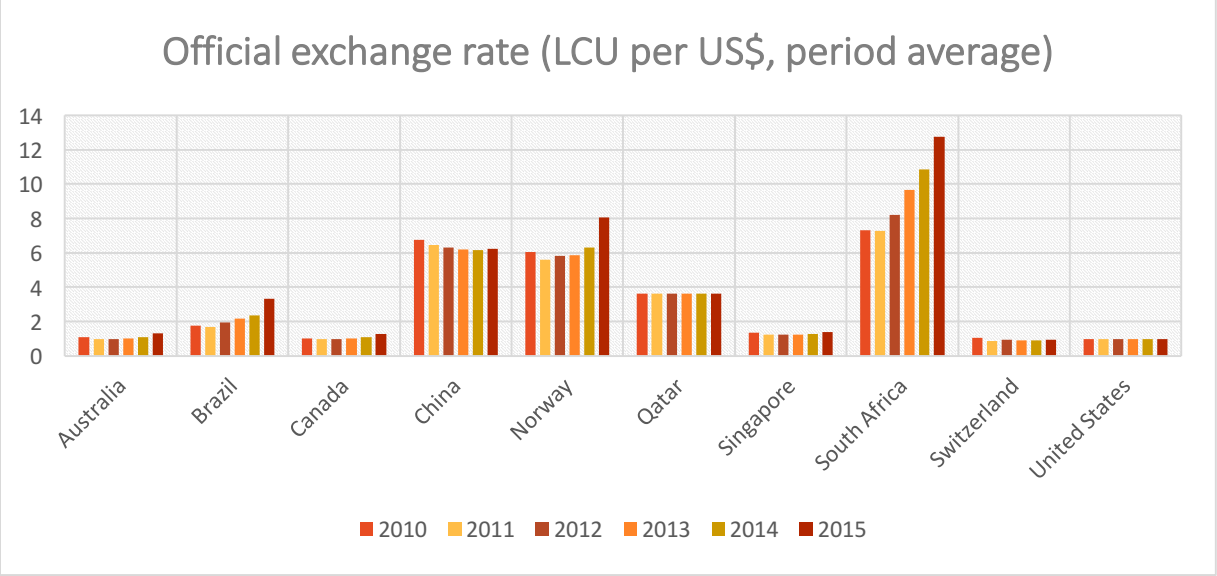
Tesla would be advised to target countries where fuel prices are high, such as Norway and Switzerland, so as to differentiate its product from vehicles using ICEs.

GDP per capita is also revealing as to the affordability of Tesla's products, with countries with high GDP per capita representing significant market opportunities for Tesla, provided the market size is not too restricted.



Source: World Bank's World Development Indicators

A key metric for Tesla is currency stability against the U.S. dollar. On the one hand, given that Tesla's products prices are denominated in U.S. dollars, the appreciation of the currency raises the price of imports for foreign countries. On the other hand, certain expenses associated with the production of goods are denominated in foreign currencies, for instance battery cell purchases in Japanese yen. The risk is that a depreciation of the U.S. dollar increases the cost of goods sold.

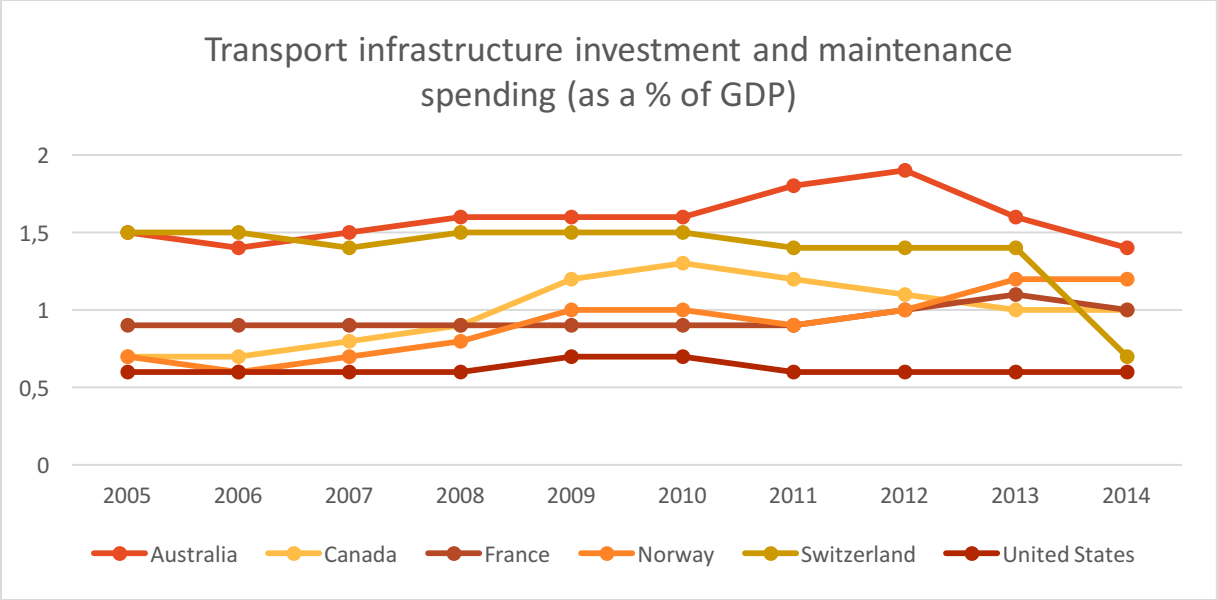


Source: World Bank's World Development Indicators

A strong variability in a country's exchange rate deepens differences with the U.S. market and increases the risk of operating in that country for Tesla.

d. Geographic differences

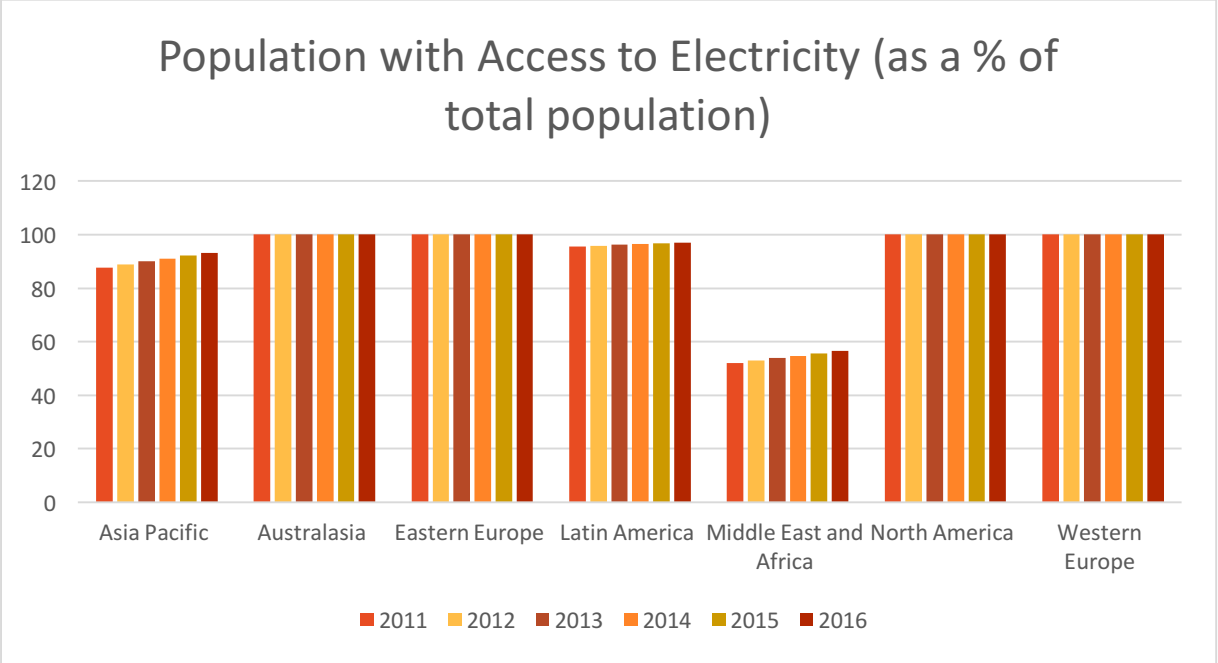
Geographic differences, including natural resources endowments and transportation infrastructures, complicate companies' international expansion. With regards to Tesla, the quality of a country's road network is key to the suitability of the companies' products, which are designed for good road conditions.



Source: OECD.Stat

Countries with higher infrastructure investment and maintenance spending thus display better geographic predispositions for the use of Tesla EVs.

Finally, access to electricity is a key limiting factor for Tesla's expansion abroad.



Source: Euromonitor

The above graph thus explains Tesla's initial focus on North America, Europe and Asia, and evidences steep differences that may impede the company's expansion in Latin America and the Middle East and Africa.

e. Case study, Tesla in China

Tesla's initial struggle to penetrate the Chinese market, posited to become the largest market for EVs, results from higher than usual pressures for local responsiveness, as evidenced in the following table:

	Differences	Tesla's response
Cultural	Preference amongst owners of luxury vehicles to be chauffeured around. Consumer reluctance towards EVs, because of alleged unreliability and maintenance costs (Wang, 2014)	Addition of a $2,000 executive rear seat option (Bloomberg, 2015) to its product offering.
Administrative	- Different plug standards - 25% import duties on foreign vehicles (Bloomberg, 2015). - Requirement that foreign carmakers create joint ventures with local players when localising production in China. - Lotteries and auctions to register new vehicles.	- Adapt products to meet market standards. - Negotiations with Jinqiao Group for a shared investment of $9 billion in construction of another Gigafactory (Bloomberg, 2016). - Negotiations with local authorities to bypass registration restrictions.
Geographic	Lack of charging infrastructures, undermining convenience of Tesla products	- Developing a network of Superchargers. - Provided customers with free home chargers

CONCLUSIONS

High pressures for cost reduction and low pressures for local responsiveness have enabled Tesla to adopt a global standardisation strategy. The company has successfully concentrated its production capabilities and created technological and operational synergies, allowing for economies of scale and experience curve cost savings. Three homogenous transnational consumer segments have been targeted through a limited range of products, which rely on unique core competencies and value-added services to differentiate themselves from that of competitors. Tesla's international expansion strategy consistently relies on the deployment of networks of charging stations to increase customer perceived value. Though the company faces low pressure for local responsiveness, it is highly subject to national regulations, particularly with regards to its autopilot features and government incentive programmes to purchase EVs. Tesla's international expansions strategy also places severe pressures on its cash resources, which questions the sustainability of the company's business model. Finally, repeated delays in the scaling-up of production generate frustration amongst consumers and may undermine the firm's brand image on which it relies to overcome consumer reluctances.

Word count: 2,459

REFERENCES

Bloomberg News. 2015. *Musk Reboots Tesla's China Strategy*. [Online] Available at: https://www.bloomberg.com/news/articles/2015-03-29/musk-reboots-tesla-china-strategy-as-range-anxiety-crimps-sales [Accessed on: 25/03/17]

Bloomberg News. 2016. *Tesla Eyes Shanghai as Front-Runner for China Production*. [Online] Available at: https://www.bloomberg.com/news/articles/2016-06-20/shanghai-said-to-be-front-runner-for-tesla-china-production-site [Accessed on: 26/03/17]

Euromonitor. 2017. Passport Database. Access via UCL Login. [Online] Available at: http://go.euromonitor.com/passport.html [Accessed: 27/03/17]

Ghemawat, P. 2007. *Redefining Global Strategy*. Boston, Massachusetts: Harvard Business School Publishing Corporation

Jolly, D. 2015. Norway Is a Model for Encouraging Electric Car Sales. *The New York Times*. [Online] Available at: https://www.nytimes.com/2015/10/17/business/international/norway-is-global-model-for-encouraging-sales-of-electric-cars.html?_r=0 [Accessed on: 20/03/17]

Mangram, M.E. 2012. The globalization of Tesla Motors: a strategic marketing plan analysis. *Journal of Strategic Marketing* 20(4), pp. 289-312

Mirani, L. 2013. Why Tesla is focused on oil-rich Norway as it expands beyond the US. *Quartz*. [Online] Available at: https://qz.com/119662/why-tesla-is-focused-on-oil-rich-norway-as-it-expands-beyond-the-us/ [Accessed on: 20/03/17]

Organisation for Economic Cooperation and Development. 2017. OECD.Stat Database. [Online] Available at: http://stats.oecd.org [Accessed: 25/03/17]

Tesla, Inc. 2016. *Annual Report*. As submitted to the United States Securities and Exchange Commission. [Online] Available at: http://ir.tesla.com/secfiling.cfm?filingID=1564590-17-3118&CIK=1318605 [Accessed on: 06/03/17]

Tesla, Inc., Company Website. [Online] Available at: https://www.tesla.com [Accessed: 13/02/17]

The Financial Times. *Market Equities Database*. [Online] Available at: https://markets.ft.com/data/equities [Accessed: 25/03/17]

Thomson Reuters. [Online] Database access via UCL Login. Product description at: https://www.thomsonreuters.com/en.html [Accessed: 21/03/17]

Wang, S. 2014. *Chinese Consumers Reluctant About Electric Vehicles.* GFK Insights. [Online] Available at: https://blog.gfk.com/2014/04/chinese-consumers-reluctant-about-electric-vehicles/ [Accessed on: 27/03/17]

World Bank. 2017. World Development Indicators Database. [Online] Available at: http://data.worldbank.org/data-catalog/world-development-indicators/ [Accessed on: 20/03/17]