

Sustainable competitive advantage of German automobiles

Abstract

It is becoming paramount for firms to understand how to strategize to maintain sustainable competitiveness in automotive industry. The aim of this paper is to understand what firms in German automobile industry must do to remain in business or even ahead in its domestic and international business arena over time. In doing so, Michael Porter's model of competitive advantage was used to analyse home-built competitive advantage of the German automotive industry and its links to global competitiveness. The results point to the fact that there are links between the German automotive industry's domestic and global competitiveness.

Keywords: competitiveness, decentralization, strategic position, automotive industry, sustainability

Introduction

Competitive advantage is a term that has become central in the discussions on the critical reasons why firms both in the domestic and global market remain ahead of competitors. As simple as the term may look, it encompasses many variables which one must consider to be able to grasp how to sustain competitive advantage. The classical trade theories point to operational effectiveness as key for business success. But since the advent of globalisation, the market is no longer isolated (as barriers to national

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boundaries are falling apart). The consumer has many product options to choose from, the number of competitors are on the increase, innovation is at a faster rate, values are changing, and national business conditions are changing to meet the main modern trends. The question that readily comes to mind is: how can a firm sustain competitive advantage? Although many firms in the industry where rapid change is driving the market have adopted some measures such as outsourcing, gig economy and sharing economy in the bid to ensure survival, the following question cannot be ignored: Is achieving operation effectiveness at home the only factor that will guarantee the sustainability of competitive advantage abroad?

Operational effectiveness although important, cannot be the only factor a firm considers sustaining its presence in the playing field (especially in an industry where rapid change in technology is predominant). The ability of the firm to adapt to these changes result in innovation which is key to remaining in the consumer shopping list. Understanding and even anticipating the drivers of consumer choices such as values, personality, and environmental awareness ensures that whatever product is directed to the consumer, it expresses the values and personality of the consumer. Therefore, it is highly significant that a firm considers its strategic position. In order to understand how a firm can sustain competitive advantage, this paper objectively examines the German automotive industry, primarily through the review of existing literature and scientific research reports using Michael Porter's diamond model as framework.

Literature Review

Relevant economic theories

One will not review economic and trade theories without being drawn to arguments posed by early economists. The first is mercantilism, a trade theory which holds that a government can improve the exports and stifle imports to accumulate wealth in the form of precious metals (Rugman–Collinson 2012). The world has advanced beyond this theory as it does not explain the kind of trade that is prevalent in the world today. It is then valuable to recognise the work of Adam Smith, who concluded that a country has full advantages if it can specialise in the production of goods with which it has full advantages, which in turn will result in a positive export turnover. On the other hand, the country should import goods with which it has absolute disadvantage as this

measure will result in gaining prosperity and enhancing the supply of goods (M-tigwe, 2006). Similarly, David Ricardo threw more light to the theory of absolute advantage by introducing the theory of comparative advantage, which recognises that market forces will allocate a nation's resources to those industries where it is relatively most productive (Costinot–Donaldson 2012). These theories underscore the importance of cost advantages. As a result, one can agree that it is still essential in describing international firms. But these theories failed in their underlying assumptions which cannot be used to explain in its entirety the trade patterns in modern times.

Relevant management theories

It is still not astonishing today to see managers who still nurse the idea that their job is to pilot the affairs of a firm in such a manner as to be the best among the firms, produce the best products, and employ the best professionals. The question that comes to mind is, whether this is the right strategy in the face of the current economic and business reality? If Henri Fayol's conclusion that the functions of management were common to all businesses (Robbins–Coulter 2012) hold water, can such a firm survive in the modern business world? In this context, Weber's bureaucracy which is the model picture of an ideal organisation, can be recalled (Robbins–Coulter 2012). But the reality today entails an organisation which is more flexible and allows more creativity at all levels of management. If one agrees that creativity is an integral part of modern-day organisations and management, then one will lean towards the behavioural approach in general. In this vein human resource becomes the most critical asset of the organisation, and invariably, should be appropriately managed to create the necessary sensitivity to the changing reality in modern times, which needs a rapid response (Robbins–Coulter 2012).

Methodology

The theory of competitive advantage by Michael Porter linked all the above mentioned economic, management and consumer behaviour theories based on strategic management, international economics and innovation to develop national and international competitiveness and its sustenance. It links the four factors of the diamond and the two external factors of a firm shown in Porter's wellknown illustration. Porter presented

a coherent and concise framework for understanding the relationship between the elements. Also, Porter concluded that all factors of the diamond include all assets and skills vital for an industry's competitive advantage and information which create the opportunities and answers how available assets and abilities are managed (Porter 1990). The next section will look at this factor and its determining variables.

Porter identified factors that have an impact on the competitive advantage of a nation under the so-called diamond figure. The factor condition, demand condition, the firm's strategy, structure and rivalry, and related supplier industries remain very close to the firms and internal operations. On the other hand, government and luck are external to the firms (Rugman–Collinson 2012). The competitiveness of the industry depends on the level of interaction between these. At this juncture, it is important to look at each of the above factors in more details and see how it relates to the German automobile industry.

Result / Result analysis

Factor conditions

Human resources: The dual education system in Germany has enhanced the quality of labour force available to the automotive industry. The system combines classroom and training approach to produce highly trained personnel that meets industrial requirements (GTAI 2016/2017). In 2015, the German automotive industry employed over 792,500 personnel, 100,000 of them were engaged in R&D (GTAI 2016/2017). The number of skilled labour force has increased over time. 84 percent of the population has university entrance qualification, 30 percent of the graduates have basic knowledge in natural science or engineering, and an increasing number of students are applying for courses which are directly related to mechatronics and automobile engineering (GTAI 2016/2017) (GTAI 2014). These and labour-related incentives such as training supports, recruitment support, and wage subsidies are the key variable that create home operation effectiveness and sustain the competitive advantage of the German automotive industry through strategic positioning.

Material/physical resources: Germany is a key country in Europe regarding automotive industry. Germany has the largest concentration of OEM (original equipment manufacturer) plants in Europe and modern research and development facilities. It is

estimated that Germany has over 41 OEM plants and 21 of the world automotive OEM suppliers are in Germany (GTAI 2014). This high concentration of automotive related R&D design, supply, manufacturing, and assembly facilities are vital to sustain competitive advantage as it is important in collaboration for research activities with leading automotive research institutions for the development of new technology and processes (GTAI 2016/2017). Also, the German roads, airports, railroads, seaports, communication and energy infrastructure have been rated world class (GTAI 2014).

Demand condition

The German home market has been known to be one of the world's most complex markets. The nature of the consumers in the home market becomes a key factor that drives the firms to meet some specific requirements to compete favourably in the home market (Porter 1990). But for a rapidly changing business reality and environment, a firm's strategy and ability to respond to this change are paramount if the firm wants to remain competitive. Understanding the consumption pattern of consumer and market realities of the home country, and aligning management, industry, and business strategy are keys that result into successful cost advantage. Therefore, the firms in the German automotive industry are conducting constant research to understand how consumers purchase, use, and dispose off products, services, ideas or experiences in the process of satisfying their needs (which is known as consumer behaviour) (Solomon 2011). One of the reasons the German automotive industry has grown over the past century is the nature of its home demand. The German home market is more of a free market with less government intervention over the years. It implies that traditionally the survival of a firm depends on the ability of the firm to identify the absolute, comparative, and cost advantages, as this will enhance innovation to meet the market demand of high quality, reliable, durable, efficient and safe products (Porter 1990). The players in this industry anticipate the future and innovate to remain the pillar of the nation's industry. It is of importance to gain competitive advantage at home and globally (Porter 1990). No wonder the German car is in high demand all over the world. This high demand can be attributed to the home market's developed product attribute such as quality, reliability, durability, efficiency, design, innovations and safety (GTAI 2016/2017). The increasing environmental awareness and sustainability issues are now part of the above attributes. The consumer is becoming more ethical. The consumer can use their purchasing power

to support the firms who are acting in a way that agrees with the consumer's value. Therefore, the market demand for made in Germany vehicle with optimised environmental friendly features has increased worldwide.

The industry has achieved a high advantage in respect to the attributes (efficiency, durability, reliability, quality, safety, and innovation) that meet the market need to move towards more clean products that are sustainable based on the value attached to the environment by both the domestic and international consumers. This clearly point to understanding industry positioning and strategic business position (Porter 1990).

Related and supporting industry

Related and supporting industry is one of the main advantages at the disposal of the German automotive industry. There are successful firms linked vertically (to create high quality) and horizontally connected firms (to create competitive firms that develop values which support the automotive industry and remain competitive). Decentralization of the automotive industry encouraged the springing up of small, medium and large-scale auto-related R&D, design, supply, manufacturing and assembling firms in Germany (GTAI 2016/2017). Building a local supplier base, creates an enhanced supply network and boost capacity. It is necessary because the innovations will need the value that suppliers bring to the German automotive industry. The supplier input has become key to value added to products in technical advancement in the German automotive industry. Firms can develop most aspects of their businesses such as working capital, research and development, specific purpose and personnel, using financial incentives provided by both private and government financial institutions. Grants, loans, guarantees, equity capital and Mezzanine capital are geared towards meeting the needs of diverse economic activities of firms in Germany at different stages of their investment process (GTAI 2016/2017).

Firm strategy, structure and rivalry

The firms in the German automotive industry compete with differentiation strategy which is founded on high quality and reliability, high performance and fast delivery. They mostly compete in the premium brand and as such get the premium price compared to their competitors internationally (GTAI 2014). German OEMs international focus is evident in the number of the exported vehicle from the German home pro-

duction and foreign profit. And the massive domestic and international investment in R&D is a proof of the ability of German OEMs to compete more on performance and not price, which is a more important priority of the home consumers.

The Role of chance/government

Germany has remained economically and politically stable over some decades. There have not been any significant economic or political setbacks that had impacted on the business environment adversely. The legal system in Germany is also world class; as a democratic nation, contractual agreement and patents are ensured. The German government has continually improved the tax system and has put in place a reliable infrastructure such as road network, sea ports, rail lines, communication and energy facilities which are key to the favourable business environment.

Conclusions

Although Germany is rich with basic and advanced factors of a production, the competitive advantage of the automotive industry comes from the advanced and specialised nature of these resources. The anticipation of changes in the key drivers of consumer values, personality, and environmental awareness kept the German automakers on edge and enhanced their high investment in research and development resulting in a high level of innovation. It is the key driver of sustained competitive advantage.

Secondly, the German market in principle is a market where entry and exit are free. This results in the decentralisation of the automotive industry creating room for small, medium and large-scale firms to compete. Again, solid economic, political, and business environment have ensured sustained strategy and growth in the industry. Sustainability of competitiveness has not been achieved in isolation by the German automotive industry. German firms have remained sustainable and has considered both the internal and external environments. They are ready to adapt to changes as soon as possible.

References

- Cavanaugh, L. A. (2016): Consumer behavior in close relationships. *Current Opinion in Psychology*, 10(1), 101–106. Retrieved from www.sciencedirect.com.
- Costinot, A. – Donaldson, D. (2012): Ricardo's theory of comparative advantage: Old idea, new evidence. *American Economic Review*, 102(3), 453–58. Retrieved from <http://dx.doi.org/10.1257/aer.102.3.453>.
- Ernst–Young (2013): Coping with the crisis, the European way. Berlin: Ernst–Young Global Limited. Retrieved from [http://www.ey.com/Publication/vwLUAssets/European-Attractiveness-Survey-2013/\\$FILE/European-Attractiveness-Survey-2013.pdf](http://www.ey.com/Publication/vwLUAssets/European-Attractiveness-Survey-2013/$FILE/European-Attractiveness-Survey-2013.pdf).
- German Trade–Invest (GTAI). (2016/2017): Industriall overview: The automotive industry in Germany. Berlin: German Trade and Invest. Retrieved March 16, 2018, from <http://www.gtai.com>.
- Germany Trade–Invest. (2014): The automotive industry in Germany. Berlin: Germany Trade and Invest. Retrieved from <http://www.gtai.com>.
- Joireman, J. – Durante, K. M. (eds.) (2016): Consumer behavior. Editorial overview. *ScienceDirect*, 10(1), iv–vii. Retrieved from www.sciencedirect.com.
- Kim, J.-O. – Forsythe, S. – Gu, Q. – Ja, S. (2002): Cross-cultural consumer values, needs and purchase behavior. *Journal of Consumer Marketing*, 19(6), 481. Retrieved from <https://doi.org/10.1108/07363760210444869>.
- Ma, H. (2004). Towards a global competitive advantage creation, competition, cooperation, and co-option. *Management Decision*, 42(7), 907–924. Retrieved April 5, 2018, from <http://www.emeraldinsight.com/0025-1747.htm>.
- Mtigwe, B. (2006): Theoretical milestones in international business: The journey to international entrepreneurship theory. *Journal of International Entrepreneurship*, 4(1), 5–25. Retrieved from <https://doi.org/10.1007/s10843-006-5872-5>.
- Onel, N. (2015): Understanding environmentally sensitive consumer behaviour. *World Journal of Entrepreneurship, Management and Sustainable Development*, 11(1), 2–16. Retrieved from <https://doi.org/10.1108/WJEMSD-07-2014-0021>.
- Phulpagar, S. A. (2010): Review of models used for selection of corporate strategies. *Summer Internship Society*, II(1), 57.
- Porter, E. M. (1990): *The Competitive Advantage of Nations* (first edition ed.). London: The Macmillan Press LTD.

- Robbins, S. P. – Coulter, M. (2012): *Management* (11th Edition ed.). New Jersey: Pearson Education, Inc.
- Rugman, A. M. – Collinson, S. (2012): *International Business* (6th ed.). Harlow: Pearson.
- Smith, P. A. (2011): Elements of organizational sustainability. *The Learning Organization*, 18(1), 5–9.
- Solomon, M. (2011): *Consumer Behaviour: Buying, Selling and Being* (10th edition ed.). Saddle River: Pearson Prentice Hall.