

Competitive Advantage Variations between Strategic Group Members: A Comparison of Global Petroleum Producers

Hyungu Kang¹, Ph.D.

Abstract

A competitive strategy outlines how a company competes within its industry. Although each company employs its unique competitive strategy, strategic group assessments identify clusters of competitors that seek to execute similar competitive strategy. However, the empirical evidence for a direct link between strategic group membership and performance is inconsistent and conflicting. This is primarily due to the various approaches used, which have generally not adequately captured the differences in firms' strategies in competitive environments. This paper explores the different sources of competitive advantages between within-group rivals, British Petroleum (BP) and ExxonMobil, two leading competitors within the same strategic group in the global petroleum industry. This paper analyzes and compares the differences and similarities of the foundations of competitive advantages of within-group rivals, BP and ExxonMobil, and makes strategically meaningful suggestions based on building blocks of the competitive advantage approach.

Keywords: Global petroleum industry, Strategic Groups, Strengths and Weaknesses, Sources of Competitive Advantage, British Petroleum, ExxonMobil

1. Introduction

Successful strategic management must direct towards positioning the organization most effectively within its changing environment. Because there are a small number of genuinely unique strategies in any industry, organizations must frequently decide which group of competitors they should mimic, rather than how they can be genuinely distinct (Mintzberg, 1979; Scott, 1995; Zinn *et al.*, 1994). This means that managers must analyze other firms' strategies competing in their industry and which strategies give them the best chance for success. The configurational theory argues that this analysis must look at the organization as a tightly coupled whole and its relationship to the competitive environment (Miller, 1987). With this perspective, managers seek configurations that offer the best chance for success (Miller and Friesen, 1984). We can use one method to simplify and facilitate this strategic decision-making process through strategic group analysis.

2. Literature review and Research method

2.1 Strategic group and its membership

Strategic group analysis is useful because it helps administrators and researchers identify an organization's most direct and real competitors and the basis upon which they compete. Additionally, strategic group analysis can help identify critical internal strengths and weaknesses and external opportunities and threats. Strategic group analysis aids in the understanding of how competitors approach the marketplace and the impact their decisions have on performance (Osborne, Stubbart, and Ramaprasad, 2001).

The application of strategic group theory in strategic management research stems from an observation by Hunt (1972). According to Hunt (1972), a set of firms emphasizing similar strategic dimensions to use a similar strategy is called a strategic group. The competition between firms within a strategic group is greater than the competition between a member of a strategic group and companies outside that strategic group: Intra-strategic group competition is more intense than is inter-strategic group competition (Hunt, 1972).

The strategic groups model is useful for studying structured, stable, and capital-intensive industries, such as steel and iron producers, retail chains, beer producers, bulk chemical manufacturers, petroleum producers, and pharmaceutical producers.

¹ Management Department, College of Business Administration, Central Michigan University, Mt. Pleasant, MI 48859
E-mail: kang1h@cmich.edu

In these industries, the games' rules are established, products are sold as commodities, and manufacturing processes are well specified. The model assumes that small craft industries are in a hibernation stage and are waiting for a robust structuring process that should happen with the diffusion of large-scale operations. Once they are diffused, these processes will drive the industry dynamic toward establishing a dominant group of producers manufacturing standard products relying on cost advantage. This proposition is derived to a large extent from the structural, industrial economic perspective.

The extent of technological advancement, breadth of product offerings, product quality, pricing policies, distribution channels, and customer service are examples of strategic dimensions that firms in a strategic group treat similarly. Describing patterns of competition within strategic groups is evidence suggesting that "organizations in a strategic group occupy similar positions in the market, offer similar goods to similar customers, and may also make similar choices about production technology and other organizational features" (Greve, 1999). Thus, membership in a particular strategic group defines the essential characteristics of the firm's strategy (Reger and Huff, 1993).

The literature on strategic groups identified combinations of member-firm similarities based on scope and resource commitments (Cool and Schendel, 1988). Research does show that group membership can account for a significant portion of performance variance (Ketchen and Shook, 1996). For instance, firms in the pharmaceutical industry share the same risks with similar strategies, yet there is considerable variance in profitability (Cool and Schendel, 1988). A common economic principle is that "rent (i.e., advantage) commanded by a strategy declines with increases in the number of rivals that can replicate it" (Caves and Porter, 1977) because rivals will copy successful competitor's strategies.

A group of researchers (Porter, 1976, 1979; Dranove, Peteraf, and Shanley, 1998; Cool and Dierickx, 1993; Smith, Grimm, and Wally, 1997) examines the degree of rivalry within groups. According to Bogner and Thomas (1994), a more significant within-group rivalry could result from the homogeneity of resources among members because each firm strives to achieve the same goals but does not have unique resources or isolation mechanisms that enable the firm to gain a competitive advantage (Smith *et al.*, 1997). The sources of competitive advantages among within-group rivalry have similarities and differences based on the rivals' different strategic directions.

Numerous studies have examined strategic group membership and performance across a variety of industries, such as insurance (Fiegenbaum and Thomas, 1990), home appliances (Hunt, 1972), pharmaceuticals (Cool and Schendel, 1988), and the steel industry (Nair and Kotha, 2001). However, no research has been applied to the global petroleum industry. No research has been done for the sources of competitive advantages of the strategic group members within the same strategic groups. Although the study of strategic groups has gained considerable currency in the strategic management literature, there have been very few studies that have looked at the different sources of competitive advantages among or between within-group rivals (Bogner, Mahoney, and Thomas, 1998).

Conceptual developments suggest that unique firm structure and conduct (i.e., dimensions not shared with other strategic group members) may significantly affect an individual firm's profit. Rumelt (1987) argues that strategies that are differentiated and difficult to imitate are the key to a firm's chances to earn above-normal profits. According to Teece (1986), the motivation to innovate also comes from rents earned on a differentiated market position. Hatten and Hatten (1988) cite strategic groups' potential use to identify dimensions shared by members so that the remaining non-shared conduct characteristics can be isolated to explain profits. Thus, though firms may conform in their behavior through imitation, non-cooperative signaling, or tacit collusion, it appears unjustified to assume a priori that such shared dimensions thoroughly explain the performance effects of firm conduct (Lawless, Bergh, and Wilsted, 1989).

Following this line of thought, we argue that strategic group membership's influence on performance should be weighed against each member's unique mix of competitive advantages. As Porter states, "A firm needs to develop its unique competitive advantages to its ever-changing environment if it is to attain its best performance" (1984).

2.2 The Foundations of Competitive Advantages

Hill, Schilling, and Jones (2019) address the generic sources of building and sustaining competitive advantages: superior efficiency, superior quality, superior innovation, and superior customer responsiveness. These core components are generic. They provide four critical ways to build and maintain competitive advantages: lowering cost and achieving high differentiation. Any firm can adopt these no matter what industry it is in or what product or service it provides (Hill *et al.*, 2019).

Each component is the result of the way the various value-chain activities within an enterprise are performed. By performing and focusing value-chain activities on achieving a high level of efficiency, quality, innovation, and customer responsiveness, a company can differentiate its product offerings, and hence offer more value to its customers, and lower its cost structure (Olulade, 2014).

Superior efficiency can be achieved by emphasizing lowering the cost of inputs required to produce a given output. The more efficient a firm, the lower the cost of its inputs needed to make a given output. Efficiency helps a firm attain a low-cost competitive advantage based on high productivity (Hill *et al.*, 2019). Superior quality has become imperative for survival in many firms. The impact of superior product quality on competitive advantage is creating a brand name reputation, higher productivity/efficiency, and lower costs (Hill *et al.*, 2019). This enhanced reputation allows the firm to charge a higher price. At the same time, the costs are down, so profits are much higher, thus a higher competitive advantage.

We can define superior innovation as anything new or novel about a firm's operation or product (Hill *et al.*, 2019). Innovation gives a firm something unique. When a firm is a first-mover in its industry, it can charge a premium price because of a lack of competition. Later, when there is competition, newcomers must deal with the pioneer's reputation. There are various potential opportunities for gaining a competitive advantage through technological innovation in products and processes. To achieve superior customer responsiveness, a firm must deliver the products or services exactly what the customer wants when they want it. Any company that can quickly respond to customers' needs and provides subsequent support will have a competitive advantage over competitors. A firm must do its best to identify and satisfy customers' needs to build a competitive advantage in customer responsiveness (Hill *et al.*, 2019). There are high demands for customization and individualization to meet customers' various needs. Customer response time has become a significant factor in increasing customer responsiveness. Other important areas to achieve superior customer responsiveness are superior product design, customer service, proper communication, and after-sales service and support.

2.3 Method

To understand the similarities and differences of each strategic group member's foundations of competitive advantages, we need to understand and analyze the different sources of competitive advantages of each member. This paper explores the various sources of competitive advantages of two close competitors within the same strategic group in the global petroleum industry. This paper employs an exploratory approach to investigate the similarities and differences of two strategic group members' building competitive advantage sources. To explore this topic, this paper undertakes an extensive review of literature relating to the strategic group formation and performances, the foundations of competitive advantages, and the sources of competitive advantages across different companies. To analyze and compare strategic group members' various sources of competitive advantages, a broad array of resources and literature was compiled to inform this article, including industry trade magazines, company's website, announcements, news articles, case studies, and various websites describing the topics of competitive advantages of British Petroleum (BP) and ExxonMobil, and the global petroleum industry. The majority of BP and ExxonMobil's corporate information came from their annual reports available on their web resources.

3. Global Petroleum Industry Overview

3.1 Industry Overview

The petroleum industry is perhaps the most influential industry in the world. There is not another single industry that is uninfluenced in one way or another by petroleum. It is the primary provider of energy in oil and gas, fueling electricity to all industries worldwide. Fossil fuels include coal, oil, and natural gas, make up more than 85% of the energy consumed in 2018. Oil supplies 40% of that energy (Investopedia, 2018). The industry itself is very competitive, with nearly unimaginable amounts of money moved annually.

The petroleum industry was born nearly 150 years ago and has grown ever since. While initial growth was limited to lubricants and similar oils, as refining and technology improved, so did the number of uses for this industry's products. Energy production opportunities increased, and the industry took off in leaps and bounds. Mass production of automobile and aviation transportation only increased demand for petroleum products, and the industry responded to exponential growth.

Competition, as can be imagined from the growth of the industry, has also grown substantially. Large multinational companies, frequently supported or even owned by powerful governments, dominate the industry. Relatively small- to mid-sized companies cut out profits through concentration on certain specific production areas or geographic regions.

The industry is broken down into three production areas of focus. Upstream operations involve the search for petroleum reserves, the extraction of those resources, and the transportation of raw materials to refining plants. Downstream operations involve the refining of oil into more useful petroleum products such as gasoline and lubricants. It also includes the transportation of products to the end-user. The petrochemical area involves the creation of products through further oil refining and development. Products such as plastics, synthetic rubbers, and other useful chemicals are produced through petroleum manipulation.

3.2 Strategic Groups in the Petroleum Industry

Due to the industry's required investment and commitment, there are three primary levels where companies compete based on total revenues and total production levels. At the top of the industry are megacompanies whose annual revenues frequently top \$350 or even \$400 billion U.S. dollars (*Statistica*, 2018b). These companies are giant multinational corporations conducting business in every environment imaginable, from the frozen arctic tundra to the boiling sand-strewn deserts. Of the top five companies, two are state-owned corporations, Saudi Aramco (Saudi Arabia) and Petro China (China). The others, Royal Dutch Shell (Netherlands), ExxonMobil (Texas), and BP (London), work closely with governments everywhere (Agnihotri, 2018). These companies focus on all aspects of the industry, from oil exploration to drilling and recovery, to refining and even petrochemical products derived from the refining process.

The next group includes still large companies that are also frequently state-sponsored but operate at a local or regional level. Russia provides numerous companies that fall into this level. Rosneft, Lukoil, and Surgutneftegas captured revenues between \$19 and \$42 billion in 2018. They conducted both drilling and refining operations at a regional level over numerous countries without real global operations (Carpenter, 2018).

The third group involves companies that are more focused on operations in some regions of the globe, specific industry areas, or both. These companies may only drill for oil, could solely focus on oil refiner, etc. They may also contract operations for larger oil companies. Horizon Oil Ltd is one such company that focuses resources on oil and gas exploration in the Asian Pacific region and managed revenues of \$66.31 million last year. Regal Petroleum-based out of London, England, produced \$27.6 million in revenue, focusing on oil and gas exploration. These are smaller companies that can eke out a relatively small profit compared to larger oil industries (Johnston, 2018).

4. SOURCES OF COMPETITIVE ADVANTAGES OF BP AND EXXONMOBIL

4.1 Foundations of Competitive Advantages

In this part, the competitive advantage sources of two competitors in the same strategic group are analyzed and compared based on the building blocks of competitive advantage.

4.1.1 Efficiency and Quality Goals

Like the concept of productivity, efficiency in the production process helps a company build competitive advantages by providing a lower cost structure. Concerning efficiency, there are several ways to analyze any company in the petroleum industry. The industry has moved towards pushing efficiency by doing more and producing more energy from fewer resources. It is one of the critical foundations of building competitive advantages because it increases employees' overall productivity and capital, thus lowering its cost structure (Hill, Schilling, and Jones, 2019).

BP certainly made strides in that area. They are smart about the positioning of locations with refining locations positioned worldwide to take advantage of oil minerals extracted from the ground. Their efficiency was lacking in their push to extract resources from the ground, leading to cut corners with disastrous results. The explosion of the Deep-Water Horizon oil drilling rig in 2010 displayed BP's lack of appropriate corporate oversight and regulations and an ecological disaster that took years to overcome (Ebinger, 2016).

Like BP, ExxonMobil's efficiency concerning the standard operations is substantial. They have well-placed refineries and operation centers globally. They are in the business of increasing efficiency continuously, as evidenced by their annual reports showing such improvements (*ExxonMobil*, 2018). Even more, they have increased petrochemical production plants around the world to provide products efficiently to those that need them.

To develop competitive advantages, according to Agus (2008), quality is one of the significant components for firms. According to Hill, Schilling, and Jones (2019), superior quality is commonly viewed in terms of excellent product attributes and superior reliability. Quality is one of the fundamental foundations for firms to develop and sustain competitive advantages. High quality increases the utility to customers, which allows the business to control the flexibility of pricing (Mokhtar and Yusoff, 2008).

A product is a bundle of various product attributes, such as size, weight, form, features, options, performance, durability, reliability, style, and design (Agus, 2008; Garvin, 1987). When customers perceive that the product's attributes provide higher value than attributes of products sold by competitors, we agree that a product has superior quality (Hill *et al.*, 2019; Garvin, 1984; Crosby, 1980). When customers evaluate a product's quality, they measure it against two kinds of attributes - excellence and reliability. As with distinction in product attributes, the product's reliability increases the value a consumer gets from a product, the price the company can charge for that product, and the demand for the product (Hill *et al.*, 2019).

Based on the data and information, for BP, quality is one source of internal problems. Not a weakness in the quality of products as they provide many outstanding products. The weakness lies in the question about the quality of its operations. These operations led to two years, where BP lost revenue in 2010 and 2015 (*Statistica*, 2019a). The former's case came from the poor leadership, oversight, and decision-making, resulting in the loss of tremendous amounts of resources due to the Deep-Water Horizon explosion and oil spill (Ebinger, 2016). The clean-up costs and penalties were massive. According to BP, the latter was caused by the lack of leadership quality necessary to prepare for a downturn in the open market's oil price. While many companies experienced a reduction in revenue, BP experienced a loss (BP, 2019).

These operations have led to an increase in quality products that can improve people's lives worldwide. This is in addition to energy-producing products. ExxonMobil's petrochemical operations provide thousands of beneficial products to its clients (*Statistica*, 2019c). This same division gives tremendous strength to the company in higher quality, substantial innovation, and increased customer responsiveness. ExxonMobil is making strides towards strengthening those areas (ExxonMobil, 2019).

4.1.2 Innovation and Customer Responsiveness Goals

Innovation is being creative in introducing new services, products, or processes (Hill *et al.*, 2016, 2019; Lipinski, 2012). Innovation is not just a competitive advantage, but a capability that allows overturning the competitive advantage of other firms (Thylmann, 2003). Hamel (1996) argues that business concept innovation is the foundation for value creation in the new economy. There are two types of innovation: product innovation and process innovation. Product innovation refers to value creation by creating or developing new products or updated versions of currently available products that customers perceive as having more value, thus giving the company the option to charge a higher price (Hill *et al.*, 2019). Process innovation provides a company to create higher value by lowering overall production costs based on competitive cost structure (Hill *et al.*, 2019).

Innovation in products and processes is the essential foundation of competitive advantage for any business in the long run. Any type of competition can be viewed as a process driven by innovations in both products and processes (Hill *et al.*, 2019). Innovation is one of the essential components to build a competitive advantage for any business.

BP is moving towards expansion in petrochemicals and other opportunities. As evidenced by its increased profit compared to overall revenue, there is still some weakness in innovation. About mineral exploration and refining, BP has a unique position holding about 20% share of Rosneft, the largest oil company in Russia (Agnihotri, 2018). They signed a long-term project for the exploration and development of the Volga Urals region of Russia. There are significant political risks as both the European Union and the United States have slapped sanctions on Russia's oil production. Still, when and if these issues are resolved, this position could quickly become a strength. Process technology research at BP was yielding a potentially significant competitive advantage (Davis, 2013). And the latest technology developments have the power to change strategy as well as drive new investment and profits growth. A new acetic acid process is likely to shift BP's investment strategy for the widely used and fast-growing chemical. It could be developed to link directly to a new ethanol dehydration technology that can provide "green" ethylene, when produced from the right feedstock, to meet fast-growing demand. The new acetic acid process technology's principal advantages are that it eliminates the need to purify carbon monoxide, does not require expensive methanol, and contains no iodides (Davis, 2013).

At ExxonMobil, "R&D is in our DNA" implies its focus on innovation. ExxonMobil focuses on the next generation of energy solutions, collaboration with leading research and technology companies in energy research, and new technologies for emissions-reduction goals. ExxonMobil is looking to solve significant innovation challenges: Reducing emissions from manufacturing processes and process intensification. To build and sustain its unique competitive advantage based on process innovation, ExxonMobil has a goal; "Our goal is to develop novel process technologies, including membranes and other advanced separations, catalysts, and high-efficiency reactors, that can lower CO₂ emissions by 25% or greater" (ExxonMobil, 2019).

Superior customer responsiveness, or responsiveness to the customers, allows a company to customize and individualize its offerings, improve response time, and provide exceptional service (Hill *et al.*, 2019). Delighted customers attribute more value to products/services, creating a competitive advantage based on differentiation. As addressed previously, improving the quality of a company's product offering is consistent with achieving superior customer responsiveness, developing new products with features that existing products lack.

At BP, customer responsiveness, both on the front end (in providing products that respond/meet customer's ever-evolving needs) and the back end (with customer service and support), has long been a foundation of competitive advantage.

BP's responsiveness to customers is vital because it provides quality petroleum energy sources and petrochemical products to the market. As previously stated, about innovation, BP could strengthen this with increased movement towards a broader base of petrochemical products. Even BP's bounce back from net loss to net profits between 2015 and 2016 without as much gain in revenue may indicate that BP's customer responsiveness is becoming an internal strength (BP, 2018).

Since 2007, ExxonMobil has proactively committed to various 'Environmental, Social, and Health Impact Assessment' (ESHIA) projects and activities to successfully implement a project and develop long-term, positive relationships with the communities and host countries where they operate. ExxonMobil developed an ESHIA Guide for its upstream professionals to help ensure a consistent approach when conducting these assessments.

ExxonMobil seeks sustainable economic growth, social development, and environmental protection to promote customer responsiveness in its business perspective. ExxonMobil commits to protecting people, the environment, and the well-being of the communities where they operate.

4.2 Comparison of Sources of Competitive Advantages of BP vs. ExxonMobil

Both BP and ExxonMobil are potent companies with tremendous assets and the ability to produce large profits. Their tie to oil price is an overall weakness that may not be entirely avoidable for both companies. This weakness cannot be avoided; BP can use other strengths to mitigate it. Both companies are also expanding into other industry products through petrochemical innovation and the products produced through this technology. ExxonMobil is more potent in this area but can become a considerable strength for both companies.

BP's main competitive advantage over its competitors is its agreement and nearly 20% holding in the largest Russian oil company Rosneft (Agnihotri, 2018). Eventually, the resources in Russian oilfields will be extracted. BP is in a great position to profit from those operations, whether they conduct the upstream operations themselves or not. Due to favorable political impacts, they may increase their advantage in holding and increasing their profits in the future.

ExxonMobil, on the other hand, has two competitive advantages over its competitors. One advantage that ExxonMobil exploits are oil refining in which it is heavily invested. It is the largest oil refiner globally, refining around 5.5 million barrels a day (Alotoibi and Malibara, 2016). ExxonMobil is also a leading researcher on Carbon Capture Storage (CCS) technology, hoping to improve greenhouse gasses' capture and reduction (Alotoibi and Malibara, 2016). This falls in line with how far advanced they are in their petrochemical division, which could almost be listed as a third competitive advantage. Their petrochemical division is firmly entrenched in developing and producing beneficial products worldwide (ExxonMobil, 2019c).

ExxonMobil has significant potential opportunities and competitive advantages in its innovative proprietary technology, global customer scale, and an integrated system that allows unique operational efficiencies.

5. Summary Of Findings

Both BP and ExxonMobil are two big companies, fully integrated organizations with exposure to oil, natural gas, refining, and downstream products. They have internal weaknesses, as evident from their ties to the price of their main commodity, crude oil.

Both companies are firmly entrenched in vertical integration to maintain their competitive advantages based on efficiency. They have essential business divisions that work in both the upstream operations of identifying new mineral resources, extracting that resource, and moving it to refineries. As addressed, both companies are deeply involved in downstream operations as they refine crude oil and deliver it to the market to build competitive advantages in efficiency and innovation. ExxonMobil needs to continue its refining operations to harness its current advantage and reap the profits. Despite the low margins, downstream is one of ExxonMobil's main competitive advantages, so it is no surprise that the company is positioning itself for a favorable future.

Horizontal integration is one area where both companies need to expand to build competitive advantages in customer responsiveness. Both companies are well-positioned to take advantage of various business opportunities worldwide. ExxonMobil is further on its way in this area through its petrochemical division. As BP and ExxonMobil continue to create new products through petrochemical research, they can expand into the production of those products through expansion and other companies' creation for that purpose.

BP and ExxonMobil can use strategic outsourcing to benefit competitive advantages in efficiency and quality. As addressed previously, BP is in a good position as BP teams up with Rosneft in the Russian oilfields. Both companies can find other opportunities to do the same in other areas of the world as they can find and exploit opportunities while teaming up with smaller companies that can concentrate on exploration and drilling in various parts of the world.

Finally, oil, gas, and coal will be an "incredibly important" part of the global energy mix in the future, not least due to the fact that the world's population is expected to expand by a quarter over the next couple of decades. Doubts over the future of global oil company business models have also been stoked by the sector's tacit recognition that the outlook for future oil and gas prices is less rosy than previously thought. BP and ExxonMobil need to focus on building and sustaining their unique mix of competitive advantages based on core foundations of competitive advantages; efficiency, quality, innovation, and responsiveness to customers.

References

- Agnihotri, G. (2018). *A Closer Look At The World's 5 Biggest Oil Companies*. Retrieved from <https://oilprice.com/Energy/Crude-Oil/A-Closer-Look-At-The-Worlds-5-Biggest-Oil-Companies.html>.
- Agus, A. (2008). Quality management and profitability linkage: Does the length of QM adoption act as the moderating variable? *International Journal of Management Studies*, vol. 15 (Bumper Issues), pp. 1-23.
- Alotoibi, J. & Malibara, M. (2016). *A Comparative Analysis of ExxonMobil, ConocoPhillips, BP, Chevron, and Shell Societal and Environmental Sustainability Strategies*. Researchgate.net. Retrieved from https://www.researchgate.net/publication/309533241_A_Comparative_Analysis_of_ExxonMobil_ConocoPhillips_BP_Chevron_and_Shell_Societal_and_Environmental_Sustainability_Strategies.
- Bogner, W., Mahoney, J. T. & Thomas, H. (1998). Paradigm shift: The parallel origin, evolution, and functions of strategic group analysis with the resource-based theory of the firm, *Advances in Strategic Management*, vol. 15, pp. 63-102.
- Bogner, W. & Thomas, H. (1994). Core competence and competitive advantage: a model and illustrative evidence from the pharmaceutical industry, in Hamel, G. and Heene, A. (Eds), *Competence-Based Competition*, John Wiley, Chichester, pp. 111-144.
- BP. (2019). *Annual Report and Form 20-F for years 2013, 2015, 2017, and 2019*. Retrieved from <https://www.bp.com/en/global/corporate/investors/results-and-reporting/annual-report/annual-reporting-archive.html>.
- BP. (2020a). *Our History*. Retrieved from <https://www.bp.com/en/global/corporate/who-we-are/our-history.html>.
- BP. (2020b). *BP Strategy 2018-2020*. Retrieved from <https://www.bp.com/en/global/corporate/investors/results-and-reporting/annual-report/strategy-2017-2020.html>.
- Carpenter, J. (2018). *The Five Biggest Russian Oil Companies*. Retrieved from <https://www.investopedia.com/articles/markets/100518/5-biggest-russian-oil-companies.asp>.
- Caves, R.E. & Porter, M.E. (1977). From entry barriers to mobility barriers: conjectural decisions and contrived deterrence to new competition, *Quarterly Journal of Economics*, vol. 91, pp. 241-62.
- Cool, K. & Dierickx, I. (1993). Rivalry, strategic groups, and firm profitability, *Strategic Management Journal*, vol. 14, pp. 47-59.
- Cool, K.O. & Schendel, D. (1988). Performance differences among strategic group members, *Strategic Management Journal*, vol. 9, no. 3, pp. 207-23.
- Crosby, P. B. (1980). *Quality Is Free*, New York: Mentor.
- Davis, N. (2013). New technologies can drive BP, *ICIS Chemical Business*, vol. 285, Iss. 15, p. 9.
- Dranove, D., Peteraf, M.A. & Shanley, M. (1998). Do strategic groups exist: An economic framework for analysis, *Strategic Management Journal*, vol. 19, no. 11, pp. 1029-44.
- Ebinger, C. (2016). *6 years from the BP Deepwater Horizon oil spill: What we've learned, and what we shouldn't misunderstand*. The Brookings Institute. Retrieved from <https://www.brookings.edu/blog/planetpolicy/2016/04/20/6-years-from-the-bp-deepwater-horizon-oil-spill-what-weve-learned-and-what-we-shouldnt-misunderstand/>.
- ExxonMobil. (2019a). *Financial Statements and Supplemental Information 2019*. Retrieved from <http://corporate.exxonmobil.com/en/company/publications/overview>.

- ExxonMobil. (2019b). *Liquefied Natural Gas Production*. Retrieved from <http://corporate.exxonmobil.com/en/technology/liquefied-natural-gas/operations>.
- ExxonMobil. (2019c). *Our History*. Retrieved from <http://corporate.exxonmobil.com/en/company/multimedia/publications/overview>.
- ExxonMobil Chemical. (2019). *Consumer Products*. Retrieved from <https://www.exxonmobilchemical.com/en/solutions-by-industry/consumer-products>.
- Fiegenbaum, A. & Thomas, H. (1990), Strategic groups and performance: the U.S. insurance industry, 1970-84, *Strategic Management Journal*, vol. 11, no. 3, pp. 197-215.
- Garvin, D. (1984). What Does Product Quality Really Mean?, *Sloan Management Review*, vol. 26, pp. 25-44.
- Greve, H. R. (1999). Managerial cognition and the mimetic adoption of market positions: What you see is what you do, *Strategic Management Journal*, vol. 19, pp. 967-988.
- Hamel, G. (1996). *Strategy as Revolution*, Harvard Business Review.
- Hatten, K. J. & Hatten, M. L. (1988). Strategic groups, asymmetrical mobility barriers and contestability, *Strategic Management Journal*, vol. 8, pp. 329-342.
- Hill, C. & Jones, G. (2009). *Strategic Management Theory: An Integrated Approach*, 9th ed., South-Western Cengage Learning.
- Hill, C., Schilling, M. & Jones, G. (2016). *Strategic Management Theory: An Integrated Approach*, 12th ed., South-Western Cengage Learning.
- Hill, C., Schilling, M. & Jones, G. (2019). *Strategic Management Theory: An Integrated Approach*, 13th ed., South-Western Cengage Learning.
- Hunt, M.S. (1972). Competition in the major home appliance industry 1960-1970. (Unpublished doctoral dissertation, Harvard University.
- Investopedia. (2018). *The Industry Handbook: The Oil Services Industry*. (OPEC) Organization of the Oil Exporting Countries. Retrieved from http://www.opec.org/opecweb/en/about_us/25.htm
- Johnston, K. (2018). *Three Small-Cap Oil Stocks for 2018*. Investopedia. Retrieved from <https://www.investopedia.com/investing/small-cap-oil-stocks/>
- Ketchen, D.J. & Shook, C.L. (1996). The application of cluster analysis in strategic management research: an analysis and critique, *Strategic Management Journal*, vol. 17, pp. 441-58.
- Lawless, M., Bergh, D. & Wilstead, W. (1989). Performance variations among strategic group members: An examination of individual firm capability, *Journal of Management*, vol. 15, Iss. 4, pp. 649-658.
- Lipinski, J. (2012). Knowledge stickiness, knowledge management, and their impact on firm level competitive advantage. *International Journal of Management Studies*, vol. 19, Iss. 2, pp. 1-13.
- Miller, D. (1987). The genesis of configuration, *Academy of Management Review*, vol. 12, no. 4, pp. 686-701.
- Miller, D. & Friesen, P. (1984). *Organizations: A Quantum View*, Prentice-Hall, Englewood Cliffs, NJ.
- Mintzberg, H. & Waters, J. (1985). Of strategies, deliberate and emergent, *Strategic Management Journal*, vol. 6, Iss. 3, pp. 257-272.
- Mokhtar, S. & Yusoff, R. (2008). The impact of process quality measurement on financial performance of market oriented firms, *International Journal of Management Studies*, vol. 19 (Bumper Issue), 115-130.
- Nair, A & Kotha, S. (2001). Does group membership matter? Evidence from the Japanese steel industry, *Strategic Management Journal*, vol. 22, pp. 221-235.
- Olulade, D.A. (2014). *12 Best Sources of Sustainable Competitive Advantage in Business*, Retrieved March 15, 2018 from <https://www.linkedin.com/pulse/20140723185841-260783246-12-best-sources-of-sustainable-competitive-advantage-in-business>.
- Osborne, J.D., Stubbart, C.I. & Ramaprasad, A. (2001). Strategic groups and competitive enactment: A study of dynamic relationships between mental models and performance, *Strategic Management Journal*, vol. 22, pp. 435-454.
- Peteraf, M. & Shanelly, M. (1997). Getting to know you: A theory of strategic group identity, *Strategic Management Journal*, vol. 18 (Special Issue), pp. 165-186.
- Reger, R.K. & Huff, A.S. (1993). Strategic groups: A cognitive perspective, *Strategic Management Journal*, vol. 14, pp. 103-123.
- Rumelt, R. (1979). Evaluation of strategy: theory and models, in Schendel, D. and C. Hofer (eds.), *Strategic Management: A New View of Business Policy and Planning*, pp. 196-211.
- Scott, W.R. (1995). *Institutions and Organizations*, Sage, Thousand Oaks, CA.
- Smith, K.G., Grimm, C.M. & Wally, S. (1997). Strategic groups and rivalrous firm behavior: towards a reconciliation, *Strategic Management Journal*, vol. 18, no. 2, pp. 149-157.
- Statista (2019a). *BP Group revenue from 2003 to 2019 (in million U.S. dollars)*. Retrieved from <https://www.statista.com/statistics/264185/bp-group-revenue-since-2003/>.
- Statista (2019b). *Average annual OPEC crude oil price from 1960 to 2019 (in U.S. dollars per barrel)*. Retrieved from <https://www.statista.com/statistics/262858/change-in-opec-crude-oil-prices-since-1960/>.

- Statista (2019c). *ExxonMobil's revenue from 2001 to 2019*. Retrieved from <https://www.statista.com/statistics/264119/revenue-of-exxon-mobil-since-2002/>.
- Teece, D.J. (1986). Transactions cost economics and the multinational enterprise: An assessment, *Journal of Economic Behavior and Organization*, vol. 7, pp. 21-45.
- Thylmann, O. (2003). *The Nature and Sources of Competitive Advantage*, OUBS Blog, June 29.
- Zinn, J.S., Aaronson, W.E. & Rosko, M.D. (1994). Strategic groups, performance, and strategic responses in the nursing home industry, *Health Services Research*, vol. 29, pp. 187-205.