# Consumer Electronics Industry Analysis: The Case of the Global Lithium-Ion Battery Market

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**Executive Summary**

This report has analyzed the consumer electronic industry under PESTLE and Porter’s five forces analysis. New electronic products have revolutionized the electronics industry, and Lithium-ion battery has a significant contribution to this revolution. The PESTLE analysis has revealed that Lithium-ion battery ensures the product safety and the industry operates within political, legislative and restrictions. The electronic companies should aggressively market the products having Lithium-ion batteries to attract the customers. Moreover, being environment-friendly, Lithium-ion battery has a significant positive contribution to electronics industry growth. In addition, Porter's five forces analysis has revealed that due to Lithium-ion battery advancements, competition rivalry has a strong force within the industry. The bargaining power of the buyers is strong due to low switching costs. On the other hand, the bargaining power of suppliers and threats of substitutes is moderate. The reason for this moderation is that Lithium-ion battery is itself a brand having its own property rights. Also, threats of new entrants have a weak force because producing Lithium-ion battery requires high technology and investment. In the last section, appropriate recommendations are provided to the consumer electronics industry that they should be investing in Lithium-ion batteries.

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## Introduction

Consumer electronics is one of the most competitive industries around the globe. Electronic companies, to achieve a competitive edge, must move constantly into the emerging markets in the world. In the recent decade, new electronic products such as wearable electronics, wireless electronics, and smart electronics have revolutionized the electronics industry. Lithium-ion battery, a type of rechargeable battery, is one of the products that have a significant contribution to the electronic industry revolution (Sodhi & Lee, 2007). A lithium-ion battery is vastly being used for portable electronics, and its popularity is growing for aerospace applications and the military; it can be found in smartphones, laptops, and PDAs, etc. (Petkova, 2003). This report briefly analyses the consumer electronic industry under PESTLE and Porter's five forces analysis considering the revolutionary role of Lithium-ion battery so that appropriate recommendations could be provided to the industry under the report findings.

## PESTLE Analysis of the Consumer Electronics Industry

The PESTLE analysis is concerned with the macro environment impact on the industry that is related to the strategic development of the industry. The PESTLE analysis for the consumer electronics industry is briefly presented in this section.

### 1.1 Political Factors

Political factors significantly affect the consumer electronics industry, considering the governmental activity influence on the macro environment or remote of the industry. Government decisions regarding legislation and policy are very important for the electronics industry. The minimum wage law keeps changing every year that causes the continuous change in electronic product's manufacturing cost, and the companies might have to face losses in certain circumstances (Nakayama et al., 2019). The consumer electronic industry enjoys benefits in the countries that are politically stable, such as the UK, because it minimizes the political barriers and provides opportunities for expansion of a business. The political factors concerned with safety directly impact the consumer electronics industry because electronic equipment is vulnerable to accidents. However, Lithium-ion battery ensures the product safety and consumer electronic industry operates within political, legislative and restrictions. Increasing the support of governments for online businesses and data security provides advantages to the consumer electronics industry because it provides broad sales platforms to the industry (Christensen et al., 2005).

### 1.2 Economic Factors

A broad range of economic factors is there that directly or indirectly impacts the revenues of the consumer electronics industry, such as a market recession or economic growth. Interest rate is one of the major economic factors affecting the electronic industry because various electronic goods are purchased on lease or installments in countries like the UK. Consumers having more loans than their income will spend less money on electronic equipment that will ultimately decrease the sales within the consumer electronics industry. In addition, labor cost is another economic factor affecting the industry along with stock market trends, currency exchange rates, and business cycle stages (Ioinovici, 2013). The consumer electronics industry has a growth opportunity in developing markets alongside economic growth. The growth rates are highest in these markets, which can boost the overall revenues of consumer electronic companies. Increasing disposable income level is another economic consideration for the consumer electronics industry; for example, the companies can more aggressively market the Lithium-ion battery products expecting that consumers are willingly buying the products having a rechargeable battery. Based on this aspect, opportunities are being presented to the consumer electronics industry by economic conditions in the macro-environment (Paul et al., 2014).

### 1.3 Social Factors

The consumer electronics industry has a great impact on different cultural and social aspects, such as constantly changing consumer demographics that alter the cultural values and social trends. Social behavior and the size of the family impact consumer decision making for electronics product purchases. People's lifestyle and religion, technology accessibility to different people such as poor and disabled, and emigration are few of the major social factors that directly or indirectly impact the sales and revenue of the consumer electronics industry. The impact of emigration is positive most of the time for the electronic industry because people coming to settle in different countries like the UK need different product lines of electronic industry to live stably that ultimately increases the sales ratio for electronic companies (Turlais, 2016).

The improving wealth distribution and increasing adoption of wireless or rechargeable electronic products create opportunities for the consumer electronics industry to increase the profit from the sale products that have Lithium-ion battery. For example, electronic producers can expect a potential increase in sales revenues of the products that have Lithium-ion batteries because people prefer to use battery-efficient products. This aspect shows that the sociocultural conditions of the country might cause significant growth opportunities for the consumer electronics industry if used appropriately and strategically (Malatji, 2017).

### 1.4 Technological Factors

Different technological factors differently impact the consumer electronics industry, such as technology legislation, fostering innovation, research and development, and rate of technological change. The electronic companies spend more than a quarter of the revenue on product development and internal services that allow companies to maintain a competitive edge if handled appropriately using high-level technology. Technology factors allow electronic companies to freely decide the important modifications and enhancements for product development. There are various technical factors that the consumer electronics industry is struggling with and constantly trying to overcome, such as new product competition and technology rate and technology development rate (Cadle et al., 2014).

The growth opportunities for the consumer electronics industry are based on increasing industry dependence on technologies. For example, the digital technology's integration in smart homes presents opportunities for market expansion or new markets for electronic industry; Lithium-ion battery is one of those technologies. On the other hand, the increasing research and development activity rate within the consumer electronics industry increases the competition within the market. This technology factor can be a threat as well as an opportunity for electronic producers because more challenges are created for companies. Nonetheless, consumer electronic companies can use their research and development investment in favour of a differentiation strategy (Paul et al., 2014).

**1.5 Legal Factors**

The legal factors affecting the consumer electronics industry are intellectual property rights tax and protection, working hours for employees, and laws regarding business regulation. The consumer electronics industry must consider the different legal factors, such as improving patent protection, increasing e-waste regulations, and increasing product regulation. The intergovernmental, as well as governmental efforts, are highlighted through improving patent protection because it ultimately protects the patents. This legal factor has different opportunities for consumer electronics companies for business growth while facing minimal property rights challenges (Cadle et al., 2014). The increasing e-waste regulations, on the other hand, can be a threat to the consumer electronics industry in terms of the more expensive and efforts to reducing the negative environmental impact. The lithium-ion battery in this regard has a significant positive contribution towards consumer electronics industry growth because it is rechargeable and environment-friendly. Nonetheless, consumer electronic companies can strengthen their brand image by using Lithium-ion batteries in as many products as possible to minimize the environmental impact. In the legal aspect, the consumer electronics industry has considerable threats and opportunities in the macro-environment (Paul et al., 2014).

### 1.6 Environmental Factors

The environment ministry has become very active in countries like the UK and constantly working to maintain different environmental factors such as air quality. Pollution from the waste material during the manufacturing process of electronic goods and the transportation pollution for product delivery are the key environmental factors that affect the consumer electronics industry. The consumer electronics industry has growth opportunities on the basis of the high emphasis on the sustainability of the business. For instance, the brand image of electronic companies can be enhanced if it puts extra effort into sustainability. In relation, the consumer electronics industry can innovate by using environmental-friendly products such as Lithium-ion battery. More customers are attracted to environment-friendly products (Cadle et al., 2014).

## Porters Five Forces Analysis of the Consumer Electronics Industry

Porter’s five forces analysis is concerned with the microenvironment impact on the industry that is related to the strategic development of the industry. Porter's five forces analysis for the consumer electronics industry is briefly presented in this section.

### 1.7 Competitive Rivalry

The increasing aggressiveness of companies operating under the consumer electronics industry is a factor responsible for the competition rivalry’s strong force within the industry. Lithium-ion battery advancements have a major contribution in this regard. Low switching cost, however, is another contributor. Consumers, with low switching costs, can transfer conveniently from one to another electronics equipment provider. For instance, consumers can easily switch to Sony or LG products from Samsung products. There is a moderate contribution of the moderate number of companies to the competitive rivalry force. In the competitive rivalry aspect, consumer electronics companies need to remain cautious of the low switching costs and competitive rivalry effect on the industry environment (Cadle et al., 2010).

**1.8 Bargaining Power of Buyers**

A high information quality empowers the consumers of the electronic industry in product evaluation before making a final purchase decision. For instance, consumers are more powerful to decide that either they should switch from one to another brand or not. Hence, the companies under the consumer electronics industry need to implement aggressive information spreading and marketing campaigns effectively so that more customers could be attracted. The electronic companies can be partnered with Lithium-ion batteries to meet consumer demands and provide them environment-friendly electronic products. In relation, customers are enabled through low switching costs to transfer easily from one to another electronic company that intensifies the bargaining power of buyers more. The moderate purchase frequency does not have a large impact on the business of the consumer electronics industry. A higher purchase frequency corresponds typically to an increased intensity of the consumers' effect on the environment of the industry. This strong bargaining power of the buyers indicates that the consumer electronics industry needs to focus its attention on switching costs and information quality so that this strong bargaining power could be properly addressed within the industry (Porter, 2008).

**1.9 Bargaining Power of Suppliers**

The bargaining power of suppliers within the consumer electronics industry related to Lithium-ion batteries is moderate. However, the advancements in Lithium-ion batteries have revolutionized the consumer electronics industry. The size of suppliers within the consumer electronics industry is moderate, which corresponds to their limited and moderate influence within the environment of the industry. For instance, there will be a limited and moderate impact on the electronic company due to the strategic change in a supplier (Porter, 2008).

Furthermore, the overall supply within the consumer electronics industry has a corresponding limited and moderate influence on the materials' availability that the respective companies need. A moderate level of forwarding integration is one more factor contributing to the moderate bargaining power of suppliers within the consumer electronics industry. Forward integration allows suppliers within the industry to directly control or even own the sale and distribution of goods and services. Hence, it can be said that the moderate bargaining power of suppliers is a moderate issue in operations of the consumer electronics industry (Dong-sung et al., 2013).

### 1.10 Threats of Substitutes

The threats of substitutes in the consumer electronics industry are also moderate because Lithium-ion battery is itself a brand that has its property rights. Although the low switching costs allow customers to move from one to another established company, this force becomes limited due to the moderate substitutes variety. The moderate level of substitute threats within the consumer electronics industry creates a strong competition within the industry environment (Porter, 2008). For instance, consumers find that there are various other options to purchase the electronic equipment from, but when they visit the market, they might could not find the desired product with 100 percent similar specifications. The availability of substitutes varies in different areas such as non-commercial areas might not have any electronic outlet that further limits the substitute threats. For example, the home alliance electronic products might not available readily in many localities in brick-and-mortar stores (Dong-sung et al., 2013).

### 1.11 Threats of New Entrants

Threats of new entrants within the consumer electronics industry have a weak force because producing Lithium-ion battery requires high technology and investment. Although the new entrants can be empowered due to low switching costs to attract the consumers easily, a high investment cost of development of the brand is a major entry barrier to the consumer electronics industry. For instance, new companies need to allocate the high initial investment to meet the expenditure of established brands and maintain their strong brand. In addition, the high investment required to enter the consumer electronics industry prevents new companies from competing head-to-head with already established brands. Hence, there is a weak intensity of the threat of new entrants in affecting the consumer electronics industry, and the requirement of the large initial investment is a major reason (Porter, 2008).

## Conclusion and Recommendations

In a nutshell, new electronic products have revolutionized the electronics industry, and Lithium-ion battery has a significant contribution to this revolution. This report has briefly analyzed the consumer electronic industry under PESTLE and Porter's five forces analysis. The PESTLE analysis has revealed that Lithium-ion battery ensures the product safety and the industry operates within political, legislative and restrictions. The electronic companies should aggressively market the products having Lithium-ion batteries to attract the customers. Electronic companies witness an increase in sales revenues in Lithium-ion battery products because people prefer to use battery-efficient products. The digital technology's integration presents opportunities for new markets, and Lithium-ion battery is one of those technologies. Moreover, Lithium-ion battery has a significant positive contribution towards electronic industry growth because it is environment-friendly and industry can innovate by investing more in Lithium-ion battery.

In addition, Porter's five forces analysis has revealed that competitive rivalry has a strong force within the industry, and Lithium-ion battery advancements play a significant role in this regard. The bargaining power of the buyers is strong which indicates that the industry needs to focus on switching costs and information quality provided to consumers. On the other hand, the bargaining power of suppliers and threats of substitutes in the consumer electronics industry is moderate. The reason for this moderation is that Lithium-ion battery is itself a brand having its own property rights. Last but not least, threats of new entrants have a weak force because producing Lithium-ion battery highly technology and investment-oriented.

Based on the PESTLE and Porter five forces analysis, the following are the recommendations that the consumer electronics industry can follow for further growth:

- The manufacturing aspects of Lithium-ion batteries are important while its installation process within electronic products, so it requires serious attention.
- A lithium-ion battery is environment-friendly, and this aspect can be aggressively considered while marketing the electronic products.
- The consumer electronics industry should let know its customers how Lithium-ion battery life can be improved, and it can be kept healthy.
- Since the competition and bargaining power of the consumer is high within the industry, these areas must be significant considerations.

**References**


Cadle, J., Paul, D., and Turner, P., 2010. *Business analysis techniques: 72 essential tools for success*. BCS, The Chartered Institute.

Cadle, J., Paul, D., and Turner, P., 2014. *Business analysis techniques*. Chartered Institute for IT.

Christensen, J.F., Olesen, M.H., and Kjær, J.S., 2005. The industrial dynamics of Open Innovation—Evidence from the transformation of consumer electronics. *Research Policy*, *34*(10), pp.1533-1549.

Dong-sung, C., and Hwy-Chang, M., 2013. *From Adam Smith to Michael Porter: evolution of competitiveness theory (extended edition)* (Vol. 7). World Scientific.

Ioinovici, A., 2013. *Power Electronics and Energy Conversion Systems: Fundamentals and Hard switching Converters, Volume 1*. John Wiley and Sons.

Malatji, M.M., 2017. *Social networking and its Impact on New Product Development within the Consumer Electronics Industry* (Doctoral dissertation, Masarykova Univerzita, Ekonomicko-správní fakulta).

Nakayama, W., Boulton, W., and Pecht, M., 2019. *The Japanese electronics industry*. CRC press.

Paul, D., Yeates, D., and Cadle, J. eds., 2014. *Business analysis*. BCS, The Chartered Institute for IT.

Petkova, V.T., 2003. *An analysis of field feedback in the consumer electronics industry*. Eindhoven: Technische Universiteit Eindhoven.

Porter, M.E., 2008. *Competitive strategy: Techniques for analyzing industries and competitors*. Simon and Schuster.

Sodhi, M.S., and Lee, S., 2007. An analysis of sources of risk in the consumer electronics industry. *Journal of the Operational Research Society*, *58*(11), pp.1430-1439.

Turlais, V., 2016. BUSINESS SCENARIO PLANNING FOR DECLINING INDUSTRY. *Journal of Business Management*, (11).