
Electrical and Electronic Appliance, Television, and Radio

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Executive Summary

This report provides an analysis of the external environment that impacts the Electrical and Electronic Appliance, Television, and Radio Set industry. Methods of Analysis include a PESTEL analysis, an evaluation of Porter's Five Forces and an insight to the opportunities and threats that affect this industry, as well as their application to Stryker.

Results of our data concluded that the main macro-environmental factors that influence the electronics industry were technological factors and economic factors. Technological development has a huge impact because of the expertise required in this industry, and economic factors are important because economic trends such as recession and inflation impact consumers' willingness to purchase electronics.

Analyzing the threats within the industry, we used Porter's Five Forces. The two forces that pose a very high threat are threat of buyers and rivalry within the industry. The reason for this is that electronics tend to be undifferentiated, consumers demand high quality and low prices, and competition is high.

Our research displayed many opportunities and threats within the electronics industry. Companies within the industry can take advantage of opportunities such as joint ventures as a means of maximizing value. These companies can also use their threats (such as rivalry and buyer power) to strategize and plan for the future. These companies must pay close attention to the opportunities and threats so they can work toward gaining a sustainable competitive advantage.

Table of Contents

Executive Summary2

Introduction.....4

Industry Description.....4

Research Methodology.....5

Analysis.....6

 Macro-Environment.....6

 Industry Analysis.....9

Findings.....13

 Opportunities.....13

 Threats.....15

Conclusions.....15

Figure/Tables.....16

References.....17

Introduction

This electrical and electronic appliance, television, and radio set industry analysis includes facts and statistics pertaining to the Electronics and Utilities Industry, focusing primarily on television. The report includes an Industry Description, gives Porter's 5 Forces analysis, discusses the natural macro-environment of the industry using a Political, Economic, Sociological, and Technological (PEST) analysis, and describes in detail the threats and opportunities that face the industry.

The Electronics Industry is a reseller market that is geared towards commercial and professional purchases. Because most health care facilities have some sort of video technology, Stryker must watch this industry to see who is gaining potential competitive advantages, which company is producing the best and cheapest technology, and what technologies can help increase Stryker's company's value.

Health spending by the U.S. government was nearly \$2.5 trillion in 2009 and is projected to reach \$2.7 trillion in 2011 (Wilson Katherine, 2011). Figure 1 illustrates rising healthcare costs per person, which has steadily risen from 2008 up until 2020 (Carroll Aaron, 2011). These increased costs, according to Kaiser Family Foundation, are related to the increased demand from hospitals for high efficiency technology. Many analysts state that development of these technologies, particularly in computers and televisions, contribute to the higher costs of healthcare per person, even if the developments don't make it to market (U.S. Healthcare Costs, 2010), which is why Stryker employees must use knowledge and research about this industry as a means of maximizing the value of their firm.

Industry Description

The electronics industry (NAICS code 423620) is made up of all retail sales of television displays, DVD hardware, camcorders, satellite and digital transmission. This industry is a sub-industry within the Electrical and Utilities Industry (Datamonitor, 2011).

The electronics industry is defined as “the merchant wholesale distribution of household-type electrical appliances, room air-conditioners, gas and electric clothes dryers, and/or household-type audio or video equipment” (acinet.org). Despite the fact that this industry had a rough market year in 2009, the trends bounced back and the industry outperformed expectations and forecasts, growing in value by 3.1% (S&P, 2011). Over the next 5 years, S&P expects the Electronics industry to be valued at 67.3 billion dollars, which is a 36.8% increase from its value today, at 49.2 billion dollars. Because many individuals and companies today consider televisions a necessity, this industry enjoys fairly stable incomes compared to many other volatile industries (Datamonitor).

Research Methodology

In order to obtain research material, our group used the NAICS to define our industry. We used secondary sources to obtain research material. We then classified the material as quantitative or qualitative for our macro environmental analysis of our industry. Our secondary resources involved various government sources, such as the Center for Disease Control and Prevention as well as the Bureau of Labor Statistics. Other secondary sources include online electronics information websites and various internal articles about electronic and electronic appliance producers like Sony. The Savvy Entrepreneurial Firm industry report was another main source for the research. The

information compiled through this source assisted our group in analyzing the external and internal environment of the electronics and electronic appliance industry. We used other sources that solidified the foundation laid by the main sources listed above.

Comment [M1]: If we have this cited, do we need a paragraph on it?

Technological

The electronics industry is tightly related to technology. Since technological advances produce new electronics for companies, the speeds at which technological advances occur and new electronics are produced make it difficult for companies to enter the industry. By the time a new company develops a new product, a better version from a competitor may have been developed already. To differentiate into new markets with new products, companies must rely on innovation because it is a key to sustainability in the electronics and electronic appliance market. This is because consumers' needs are constantly changing. Electronics manufactures like Sony model their research and development around the user experience (Sony). With new technology, companies can appeal to households by promoting easier family and consumer interaction through electronic appliances.

Commercially, household appliances such as televisions, microwaves, and washing machines have useful lives that eventually end. Product development through technological advancement attempts to persuade customers into purchasing new electronics before the useful life of their old products expire and help customers satisfy their need in a more effective manner. Technology advances in electronics mean faster and higher quality products. The benefits from these advances range from more efficient medical operations due to high resolution operating monitors to conserving water through the use of an energy efficient washing machine.

As more green initiatives are passed, producers of electronic appliances must adapt their product to the legal specification. With more electronic products running at a higher efficiency with decreased energy inputs, the technology saves businesses' and households' money. Technology has even evolved to the point where electronic appliance producers are able to create products like air conditioners that are environmentally friendly and use renewable energy. This technology helps businesses create a brand identity that resonates with consumers who value the environment. Companies have developed air conditioners that not only increase efficiency, but also eliminate the gases that contribute to global warming (Savage). Technological development guides the industry in encouraging companies to model their products to satisfy customer needs.

Comment [M2]: Seems more political than tech... I would cut this part.

Economic

The global economic environment affects television in several ways. Television screens and monitors are used commercially for both recreational reasons and professional reasons such as medical device monitors in operating rooms. As global conditions fluctuate, so does the market for television screens and monitors. The recession in 2008 affected television electronic companies like Sony and Panasonic, posting profit losses and decreases in stock price. The non-commercial television monitor industry can fluctuate based on the industry in which they are being used. The medical television monitor manufacturers like Stryker contribute to the healthcare industry, which experiences rising costs as more Americans lose their insurance. As of 2011, 22% of Americans between the ages of 19-64 do not have health insurance (CDC, 2011). With more people requiring surgeries involving television equipment, the demand is growing too fast for prices to adjust.

As the economy suffers, the unemployment rate increases, which affects the spending power of the American consumer. Unemployment has risen from 4.2% in 2001 to 9.0% in 2011, hitting a high of 10.1% in 2009 (BLS). With more households incurring decreases in annual income, consumers' buying habits will shift from discretionary to necessity, eliminating luxuries such as large television sets and expensive electronics.

Comment [M3]: fluffy

Advances in technology drive the industry as a whole. Improved technology that will increase efficiency and lower costs is constantly in demand by businesses and commercial consumers.

Political/Legal/Environmental/Sociological

Within the electronics and television industry, the majority of the legislation and legal policies revolve around proper disposal of the technology so that no harmful waste finds its way into the environment. States have set up programs to promote the recycling of old or non-operational electronics that can be disposed of safely and in accordance with state laws and regulations. Improper disposal of electronics can result in fines imposed by the state (eHow). These regulations can affect companies negatively if the companies violate them, increasing unnecessary costs that can affect profits.

Technological advancements also affect society. Improvements in the quality of electronics and electronic appliances have helped modernize household tasks like laundry and cooking, saving time and money through increased user friendliness and green initiatives. Almost every economic industry has incorporated technology into its way of doing business. Televisions have become larger in screen size and smaller in width, making expensive electronics a social status symbol of wealth. Electronics also help

doctors save lives; hospitals use state-of-the-art equipment such as television displays to perform surgeries with higher success rates and lowered costs.

The customer base for the electronics and electronic appliances is broad because almost every aspect of life involves interaction with technology. Commercial electronics with recreational purposes have been marketed to all age groups. Adopting people to an electronic lifestyle at a young age familiarizes them and creates demand through brand recognition.

Industry Analysis

Porter's five forces help us better understand the threats within the Electronic appliances, television, and radio industry. These forces include the threat of new entrants, threat of substitutes, bargaining power of suppliers, bargaining power of buyers, and rivalry among competitors connecting us to the industry research. The threat of new entrants, threat of substitutes, and bargaining power of suppliers are all low within this industry, but the bargaining power of buyers and rivalry among competitors are very high.

Bargaining Power of Buyers

Within the electrical and electronic appliance, television, and radio set industry, the bargaining power of buyers is rather high. Part of the large effect of buyer power comes from the fact that products are fairly undifferentiated. For example, Sony is one of the leading manufacturers of electronics products, but a designer says, "The brand really needs to differentiate itself if it wants to charge more and win loyalty... [because] people buy [products from] its competitors Samsung and LG, which makes products that look about the same and are perhaps not of equal quality, but 'good enough'" (Arthur Wester).

Products between major electronic brands have few differences; however, Samsung is releasing a new line of LCD TVs specifically designed for hospital use. These models feature TeleHealth services interactive technology. This innovation will help Samsung create product differentiation when supplying to hospitals, which will have an effect on Stryker.

Comment [M4]: fluff

Also, buyers face few switching costs and low searching costs. It costs hardly anything for a consumer to switch from one electronic and electrical appliance brand to another. Also, the Internet has made the bargaining power of buyers skyrocket. Instead of having to search for electronics, a consumer can merely sit down at his or her computer and locate a product that fits his or her needs. This luxury protects buyers from having to purchase products that are merely “convenient” or “good enough;” instead, they can search for exactly what they need in terms of quality and price.

Comment [M5]: fluff

A third reason that buyer power is high in the electronics industry is that consumers are price-sensitive and demand high quality. A study was done by Rockbridge Associates to determine the value that different consumers place on attributes of electronics. In this study, the attribute was green certification. Most consumers said they would purchase a green-certified electronics product over a regular product if they were the same price, but as the green products price increased, the quantity of consumers willing to purchase it decreased dramatically, especially among naïve consumers and anti-greens. The purpose was to illustrate consumers’ price-sensitivity among electronics. Aside from being price sensitive, consumers demand quality. Typical television buyers might want a large screen and a choice between Plasma and LCD. They might look for a setup that connects to the Internet. Some consumers even look into the 3DTV option.

Consumers do not want to “settle” when it comes to buying electronic appliances for their home.

Comment [M6]: mostly fluff

All of these factors contribute to the high bargaining power of buyers within the electronics industry. A health care specialist for Cigna Health Care says that LG and Samsung are definitely taking a bite out of Sony’s market share, which is why electronics brands like Sony, Samsung, LG, Nokia, and Motorola need to work on differentiating their products and focusing on high quality and reasonable prices if they expect to gain a sustainable competitive advantage within the electrical and electronic appliance, television, and radio set industry (Sarah Kong).

Comment [M7]: Not sure we need a full conclusion here

Threat of New Entrants

Recently, companies like Sony have been innovating new products to keep the customers interested in the quality of their items. These innovations have left the new entrants at a disadvantage because they do not have the financial investments to catch up with the innovations of the stable corporations have in the industry. As Sony’s senior VP claimed, “The secret to success in this market, and in the CE (consumer electronics) industry as a whole, is ‘innovation’” (Smith 2011). It is easier for large corporations to keep improving their products because they have a brand image and are stabilized. However, if these new entrants have a great idea, they will most likely have a hard time starting up the company because of start-up costs and brand images. This barrier makes the threat of new entrants low.

Threat of Substitutes

The threat of substitutes for the Electrical and Electronic Appliances, Television and Radio Industry is nearly nonexistent. Most industries don't have the skills or power to make similar products, and if they do, they are within the industry. However, since there are no substitutes in different industries, there has been a change to substitutes within this industry. "The extending functionalities of computers may threaten the traditional TV set and audio products" (Porter 2011). This is what stems the rivalry within the industry, which will be explained more in the corresponding section below. Because the majority of substitutes are within the industry, the threat of substitutes is extremely low, if present at all.

Bargaining Power of Suppliers

The industry has been trying to please customers through the quality of products instead of the quantity since the economy in the United States has been struggling. This recession requires the suppliers to decrease their prices because the electronic company will either go to a different supplier or start producing their own items in their warehouses. For example, Sony is "...looking to put more priority in gaining profit than seeking a quantity increase" (Tarr 2011). This means that the bargaining power of suppliers is low.

Rivalry Among Existing Competitors

Rivalry within the television and video industry is high. Companies often have to be ready to produce and distribute unproven technologies in order to keep up with the competition in the industry. Companies in this industry also sell similar products, so there is little brand differentiation, and the switching costs between brands are low for most

consumers. For example, making a switch from a LG TV to a Sony TV won't cost a consumer very much money other than the cost difference between selected models.

Despite a decline in the industry market in 2009, there have been significant gains the past two years, encouraging struggling companies to continue manufacturing goods. The industry is expected to keep increasing in market value for the next five years, so competition within this industry will remain at a moderate to high level (Datamonitor).

Opportunities

The electronics industry has many opportunities in general that can help an electronics firm to maximize shareholder wealth and firm value, and gain a sustainable competitive advantage among customers. Some of these opportunities stem from the macro-environmental factors, one being the economy. Tough economic times severely limit the spending power of the consumer. In order to maintain sales figures, companies in the electronics and electronic appliance industry must offer lower priced products. Companies must find new ways, through technology or innovation, to offer products of acceptable quality at reasonable prices. This is an opportunity for companies within the industry to formulate and sustain a cost advantage through having the lowest prices.

Another opportunity that the television industry and Stryker can capitalize on is outsourcing, which also relates back to economic factors that affect the industry. Development costs can become increasingly high in the U.S., a reason for many companies transferring their manufacturing operations overseas. According to iSuppli, a global leader in providing comprehensive market and industry reports, outsourcing television manufacturing will produce 127.9 million LCD TVs in 2015, compared to 65.1 million in 2010 (Jeffrey Wu, 2011). Outsourcing is a common means of decreasing

manufacturing costs and provides an opportunity for the television industry to make more of a profit.

Another opportunity stems from environmental factors. Energy efficient appliances and electronics are becoming more popular as the green initiatives (initiatives to conserve energy and protect the environment) gain support. Companies that make an effort to incorporate these initiatives appeal to customers who value conservation and preservation of our natural resources. “The environmentally smart design and purchase of new electronic products combined with the reuse and recycling of old ones, saves energy and uses resources more efficiently” (EPA). Companies who design and distribute products that are environmentally friendly will have an extra appeal to their products.

Aside from the macro-environment, other opportunities come from analyzing the threats within an industry. In response to the threat of rivalry in an industry, a firm might want to consider forming a joint-venture with another company in order to reduce business risk and to maximize expertise. Sony formed a joint venture with Ericsson to form Sony-Ericsson, which ended up being one of the top mobile phone manufacturers in the world.

Threats

Many threats within the electronics industry keep companies like Sony and Nokia on their toes. The threat of substitutes from outside the electronics industry is almost nonexistent; however, the threat of rivalry within the industry is very high. There is very intense competition composed of numerous and diverse competitors. Companies like Dell, Sony, Nokia, Vizio, Samsung, Motorola, and LG all compete with fairly undifferentiated products. The lack of differentiation makes it difficult for these

companies to gain a sustainable competitive advantage among the electronics consumer base. This poses as a threat because these companies must incur the extra cost of focusing on expanding their consumer base.

Other threats come from macro-environmental factors. Rising healthcare costs lead to fewer Americans having the ability to afford coverage to pay for surgeries and other medical issues. This affects the electronics industry because electronic products are used throughout hospitals. New developments in medical technology are safer and more efficient than old technologies, but can be very expensive. A single surgical monitor can cost thousands of dollars, making it difficult for hospitals to afford. This inability to purchase new products is a potential threat to the electronics industry.

Conclusion

The Electrical and Electronic Appliance industry is an industry that can feed into hospitals and, in turn, affect Stryker. Companies within the industry must watch out for rivalry among competitors and buyer power, as well as economic and environmental threats that make business more difficult. However, this industry has many opportunities but must understand the threats that are posed by Porter's forces and macro-environmental factors. With undifferentiated products, firms within the electronics industry must focus on other strengths like brand loyalty to gain a sustainable competitive advantage.

Tables and Figures/Appendices

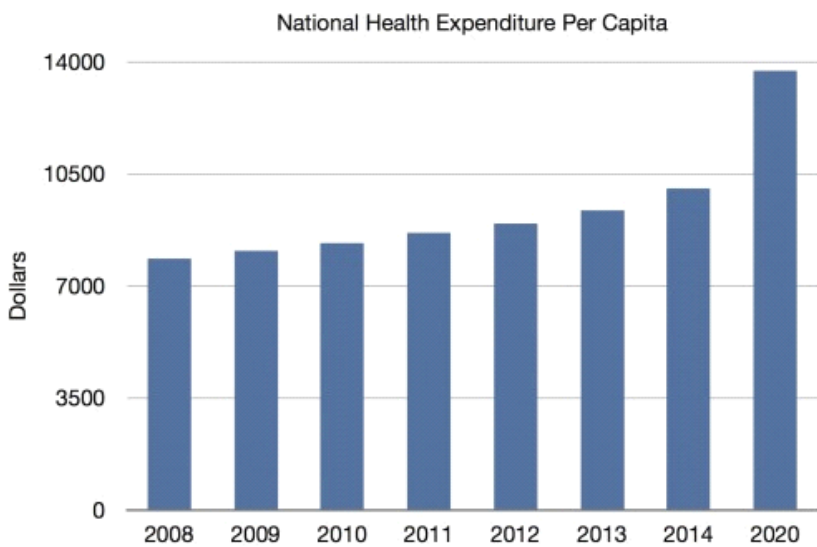


Figure 1 (*The Incidental Economist*)

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