Research Project for the Course 'Understanding Modern Switzerland'

Big Swiss Companies

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Abstract

Switzerland is well known for its long-lasting neutrality, its banking sector, beautiful landscapes and its chocolates. Beyond this context, which can be misleading in some cases, there is a solid reality concerning the high number of big, multinational and leading companies that are established on its territory. This reality becomes even more important when the relatively small size of Switzerland, both in terms of population and land, is considered. Some paradigmatic examples of such companies are Novartis, Nestlé, ABB and Logitech. While the histories of Novartis, Nestlé and ABB date back to the 18th (Novartis) and 19th (Nestlé, ABB) century, Logitech was founded in 1981, meaning that Switzerland was a center of pioneering activities throughout the last centuries.

The present research project investigates these four 'Big Swiss Companies' and attempts to highlight the aspects that have contributed to their success and domination starting from their establishment towards today. The following sequence: Novartis, Nestlé, ABB, Logitech is followed in the whole paper, based on how back they are rooted in the history. In Chapter 2, the overview and the history of each company is presented. This chapter illustrates, among others, the current status of each company, its general expansion strategy and the solutions it implemented during crisis. Undoubtedly, a comparison between Novartis, Nestlé, ABB and Logitech is essential in order to further illustrate their similarities and differences, inside the Swiss and international framework. Therefore, a comparison between them is conducted in Chapter 3. More specific, first their history is compared. Then, a Market Analysis is done. Finally, the companies are compared in terms of their Research and Development. Through the aforementioned comparisons, it was found that early expansion abroad, high diversification of business and strategy based on innovation were some of the main factors for their success.

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1. Introduction

Switzerland as a federal state was established in 1848. Before becoming a ‘story of success’, it faced several challenges. One of the main was to achieve political integration and stability in a country with an important cultural diversity. Finally, social peace has been accomplished mostly through the political institutions by allowing all sides to be represented in the political decision making process, no matter the language, religion or class. Furthermore, in less than a century after the establishment of Switzerland as a country, two World Wars took place and created a big damage to Europe. Although Switzerland was surrounded by the fatalities, as it has borders with Germany, France and Italy, it managed to retain its neutrality and therefore reduce the negative impact of the wars to its economy. The long-lasting Swiss neutrality is in effect until today and continues enhancing the country’s financial interests.

Nowadays, the economy of Switzerland is one of the most stable economies worldwide. Its policy of long-term monetary security and political stability, combined with a strong political will, has made Switzerland a safe haven for investors and a friendly place for innovation and business activities. Moreover, the strong and reputable Swiss Franc has definitely played a crucial role to that direction. Because of the country's small size and high labor specialization, industry and trade are the keys to Switzerland's economic livelihood. In addition, Switzerland has achieved one of the highest per capita incomes in the world, with low unemployment rates and a balanced budget.

This frame explains the substantial number of big multinational companies that are based in the country and gives rise to the motivation for research on the ‘Big Swiss Companies’. More specific, in this project Novartis, Nestlé, ABB and Logitech are examined. It is apparent that the more newly formed Logitech is not comparable in terms of history and market capacity with the other three. However, based on the presentation of their establishment, expansion and domination in the global framework, important conclusions can be made about the strategies followed. Furthermore, a market analysis and an evaluation of the research and development as an integral part of their strategy are made. By conducting this research, the authors’ objective is to give a better insight into the ‘success stories’ of the ‘Big Swiss Companies’.

2. General overview and history of companies

2.1 Novartis

Novartis International AG is a Swiss multinational pharmaceutical company based in Basel, Switzerland, ranking number one in sales among the world-wide pharmaceutical industry in 2013.[1] Novartis products are available in more than 180 countries and they reached nearly 1 billion people globally in 2015. About 123,000 people of 144 nationalities work at Novartis around the world. With about 13,000 associates, research and development spending of USD 8.7 billion in 2015, and investments in infrastructure amounting to CHF 430 million, Novartis is a major economic driving force in Switzerland.[2] Novartis is also one of Switzerland's largest exporters, accounting for 14.3 percent of total exports. In 2015, Novartis exported goods worth CHF 28.9 billion. The businesses of Novartis are divided into three operating divisions: Pharmaceuticals, Alcon (eye care) and Sandoz (generics). Novartis operates directly and through dozens of subsidiaries in countries around the world, each of which fall under one of the divisions.

Novartis was created in 1996 from the merger of Ciba-Geigy and Sandoz Laboratories, both Swiss companies with long histories. Ciba-Geigy was formed in 1970 by the merger of J. R. Geigy Ltd (founded in Basel in 1758) and CIBA (founded in Basel in 1859). Combining the histories of the merger partners, the company's effective history spans 250 years.[3]

History overview

As mentioned, the history of Novartis traces is the history of three companies: Geigy, a chemicals and dyes trading company founded in Basel, Switzerland, in the middle of the 18th century; Ciba, which began producing dyes in 1859; and Sandoz, a chemical company founded in Basel in 1886. After invention of aniline dyes, such as mauveine and fuchsine, production of these synthetic dyestuffs has started in Basel.

1886–1918

The period before the First World War was characterized by a lot of investments abroad. Foreign factories and subsidiaries were organized at relatively early stage. This was encouraged by the eagerness to expand and ensure future growth. By the beginning of 20th century, CIBA and Geigy had production sites in France, Germany, Russia and North America. In 1911, CIBA acquired the English dye factory Clayton Aniline Company Ltd. in Clayton near Manchester.

The outbreak of war had both advantages and disadvantages for Basel chemical companies. On one hand, a lot of workers were forced to go to army, for instance half of all production workers and three quarters of chemists employed by CIBA. On the other hand, Swiss neutrality and German participation in war ensured favorable economic conditions. German companies, which were the largest manufacturers of dyestuffs, suspended their exports due to war. Since the English and French companies were not able to compensate for such a large demand, Basel companies were in the right position to make strong gains.

This period was the time of first innovations in the field of dye production. At that time, Swiss companies based in Basel were producing only imitation dyes and this was encouraged by the non-existence of patent protection for chemical processes in Switzerland. However, already in 1870s, the Basel chemical industry began the development of new dyes. The relatively high rate of innovation in the Basel dye industry was partly due to its close relationship with the Federal Polytechnic Institute in Zurich (now the Federal Institute of Technology, Zurich). Chemists with practical training from Zurich played a key role in the Basel industry from the very beginning. In 1884, the German company Farbenwerke Hoechst brought fever-reducing antipyrine on to the market. This quickly became the

most successful pharmaceutical product of the century. As there was no patent protection, in 1887 CIBA began to produce this antipyretic drug. As was the case with dye production, although Basel companies entered the pharmaceutical business by imitating known products, they soon developed their research centers and focused on producing their own pharmaceutical products.

1919–1950

Market conditions radically changed after the end of First World War with introducing trade barriers such as export and import licenses, import quotas and foreign currency controls. Swiss companies based in Basel founded a number of subsidiaries all over the world in order to lower production and transport costs, circumvent import restrictions and obstacles to market entry, gain greater proximity to customers and tap new markets.

During the Second World War, Switzerland was mostly surrounded by the Axis powers and this had a large impact on its economy. As a result, foreign branches and production sites enabled the isolated Basel headquarters to participate in the international market and maintain key customer relationships. While dyestuffs were sold less, sales of medicines, chemicals and pesticides performed very well. Another problem of the isolation was the import of raw materials because most of the coal and starting products came from Germany. The key decision during the war was renovation and modernization of the production equipment, as well as expansion of the research activities. In this way, Basel companies were prepared for the peacetime business and large demands in the postwar period, when almost all the other companies did not have functioning facilities.

1951–1970

Further years after the war were characterized by steady growth, mostly due to increased sales of pharmaceuticals. This resulted in a large number of new subsidiaries all over the world ranging from Australia, New Zealand and Pakistan to Cuba and the Philippines. During this period, production had been highly decentralized in order to supply local markets and avoid customs duties, exchange regulations and import licenses. Although there were already a lot of production facilities abroad, what was specific of the 1950s was expanding the research and development activities out of Switzerland and founding new departments in the USA.

Although both CIBA and Geigy were very successful, in order to ensure the future growth in a competitive environment, Geigy Chairman Louis von Planta proposed closer collaboration with other Basel companies. While Sandoz was only interested in a precisely defined collaboration in specific areas, CIBA was willing to enter a wide-ranging collaboration. In October, 1970, the two companies merged into Ciba-Geigy.

1971–today

The 1973 oil crisis required restructuring of both Ciba-Geigy and Sandoz, although the pharmaceutical business proved to be largely resistant to economic fluctuations and this ensured the survival of Ciba-Geigy and Sandoz.

After reorientation, companies were looking for even greater stability of their growth. This ended up in an unexpected merger on December 20, 1996, which resulted in the formation of Novartis. New name was inspired by the Latin “novae artes“, meaning “new arts, new skills“. Since it was a merger of two equally strong companies, there were no payments of takeover premiums and Board of Directors comprised the same number of leading figures from Ciba and Sandoz.

Focus of this new company was set to life sciences: healthcare, agribusiness and nutrition. Furthermore, innovation was proposed as the main strategy and was strengthened by alliances and cooperation agreements with research institutes and biotech companies. Towards the end of the millennium, Novartis was deeply restructured and these measures led Novartis to become a healthcare

company as it is today and to the abandonment of the broad life sciences concept. By organizing all its generics businesses into one division called Sandoz, its predecessor brand name that was not used since the merger, in 2003 and acquiring Alcon, the world's largest eye-care company, in 2010, Novartis finished the process of focused diversification and was restructured into three new divisions: Pharmaceuticals, Alcon and Sandoz.

2.2 Nestlé

Nestlé S.A. is the largest food company in the world measured by revenues [4-6], and ranked #70 on the Fortune Global 500 in 2015 [6]. It is a Swiss transnational food and beverage company, headquartered in Vevey (canton Vaud, Switzerland). Farine Lactee Henri Nestlé and Anglo-Swiss Condensed Milk Company, the ancestors of Nestlé S.A., were established in 1867 and 1866 respectively and merged in 1905 [7]. The portfolio of Nestlé S.A. is wider than any other in the food industry worldwide and its products range between seven categories (starting from the most profitable in terms of sales) : a) Powdered and Liquid Beverages, b) Milk products and Ice cream, c) Prepared dishes and cooking aids, d) Nestlé Nutrition, e) PetCare, f) Confectionery and g) Water. Its total sales in 2015 were as high as USD 92.1 billion [8].

Although being Swiss, Nestlé S.A. sells in 189 countries. It has 166 factories in Europe, Middle East and North Africa, 161 in the Americas (North and Latin America), and 109 in Asia, Oceania and sub-Saharan Africa. Moreover, it employs 335,000 people, out of which 34.7% work in Europe, Middle East and North Africa, 32.5% work in the Americas, and 32.8% in Asia, Oceania and sub-Saharan Africa. 170,000 employees of Nestlé work in factories, while 166,000 in administration and sales. More specific, 10,885 (3.25%) of its employees work in Switzerland [8]. Nestlé has the largest R&D (Research and Development) network of any food company in the world, with 34 R&D facilities worldwide, where over 5,000 people are working in a variety of fields; from packaging and equipment, to food processing technologies and manufacturing new beverage systems such as Nespresso, Nescafé Dolce Gusto, Special T and BabyNes [9-11]. From all the above, it is clear that Nestlé has well expanded beyond Switzerland and today is highly ranked not only among the Big Swiss Companies, but also among the Biggest Companies Worldwide.

History overview

1866-1945

History of Nestlé [7] begins in 1866, when Charles and George Page, two brothers from the USA, establish the Anglo-Swiss Condensed Milk Company. They created the Europe's first production facility for condensed milk in Cham, by using fresh Swiss milk. Marketing it as a safe, long-life alternative to fresh milk, they started supplying Europe's industrial towns with the product under the Milkmaid brand.

At the same time, Henri Nestlé, a German born pharmacist and businessman, experimented with a number of different mixtures of wheat flour, sugar and cow's milk during the 1860s in order to create a product which would be nutritional for babies whose mothers were unable to breast feed them [12]. In 1867, Nestlé's founder launched his "farine lactée" in Vevey, Switzerland, and around that time he started using the well-known "Nest" logo. The name of his company was Farine Lactee Henri Nestlé [13].

The two pioneering firms became direct and fierce rivals, when in 1877 Anglo-Swiss added milk-based baby foods to their products and one year later Nestlé Company added condensed milk to its portfolio, while both firms were expanding their sales and production abroad [7]. Finally, the two companies merged in 1905, the year after Nestlé added chocolate to its line of foods. The newly formed Nestlé and Anglo-Swiss Milk Company had factories in the United States, Britain, Spain and

Germany. Soon, the company was manufacturing in Australia with warehouses in Singapore, Hong Kong and Bombay. However, most of the production still took place in Europe [13]. Over several years the company expanded its range to include unsweetened condensed milk and sterilized milk. As World War One was approaching, the firm benefited from the period of prosperity known as the "Belle Époque" or "Beautiful Age", and became a global dairy company [7].

The start of World War One in 1914 made it difficult for Nestlé and Anglo-Swiss Milk Company to buy raw ingredients and distribute products, because of an increased demand for condensed milk and chocolate and a shortage of raw materials [7]. To overcome these difficulties, the company acquired processing facilities in the USA and Australia via large government contracts. Moreover, hostilities have also driven demand for Nestlé dairy products, as condensed milk is long-lasting and easy to transport. By the end of the war the company had 40 factories [7] and its production was doubled [13]. When the World War One was over, fresh milk became available again and Nestlé suffered and slipped into dept. In addition, the war has led to increased prices of ingredients and deterioration of exchange rates [13]. Falling prices and high stock levels led in 1921 to the only ever financial loss for Nestlé & Anglo-Swiss [7].

The outbreak of World War Two in 1939 affected virtually every market and in the onset of the war the company's profits plummeted. Due to its neutrality, Switzerland became increasingly isolated in Europe [13]. In the fear of possible occupation of Swiss territory by the Axis, Nestlé & Anglo-Swiss relocated some managers to a new office in Stamford in the USA, which operated as the company's second headquarters during the war [7]. Due to distribution problems in Europe and Asia, Nestlé opened factories in developing countries in Latin America [13]. While hostilities continued, sales of Nescafé, a powdered extract of pure coffee developed between the two World Wars, started increasing again and at the end this product was also included in CARE aid supplies in Japan and Europe. Moreover, Nestlé brands rapidly gained popularity among American service personnel [7]. To conclude, the Second World War was proved as very profitable for Nestlé, which can illustrated by the fact that its total sales increased by USD 125 million from 1938 to 1945 [13].

1946-today

Shortly after the end of World War Two, in 1947 Nestlé & Anglo Swiss merged with Alimentana S.A. and its new name was Nestlé Alimentana. Alimentana S.A. was a Swiss company that manufactured Maggi soups, bouillons and seasonings and its history dates back to 1884 when Julius Maggi developed a protein-rich dried soup to tackle malnutrition [7]. Soon after, Nestea and Nesquik were launched in the USA. In the years to come, by implementing several acquisitions, Nestlé attempted to enter in several fast-growing areas and also to expand its traditional business to ice cream and yoghurt business, frozen food and mineral waters.

While the commercial expansion and diversification was under implementation, in the meantime Nescafé instant coffee sales quadrupled from 1960 to 1974. However, very soon the company suffered with increasing oil prices and the slowing growth in industrialized countries. The price of franc, dollar and sterling pound increased due to the decreasing foreign rates. In addition, the price of cocoa and coffee beans rose dramatically. After being renamed Nestlé S.A., the company attempted to find a solution to these problems through further diversification – it became a major stockholder in L'Oréal cosmetics in 1974 and took over the USA pharmaceutical and ophthalmic products manufacturer Alcon Laboratories in 1977 [7,13].

After numerous acquisitions during the previous years, Nestlé disposed of unprofitable brands, entered new markets, such as pet care, and launched new brands (Nespresso, KitKat, Smarties) [7]. International trade barriers diminished in the 1990s, opening trade with Eastern parts of Europe and China [13]. Therefore, the company expanded in the USA, Eastern Europe and Asia, and targeted for global leadership in water, ice cream and animal food [7]. Its takeovers continued, while commercial alliances were formed.

2.3 ABB

ABB (ASEA Brown Boveri) is a Swiss multinational corporation founded in 1988 with its headquarters located in Zürich, Switzerland. It operates in such areas as robotics, power and automation technologies. ABB is one of the largest engineering companies as well as it has a title of being one of the largest conglomerates in the world. Its businesses are working in around 100 countries all around the globe with the current number of employees reaching 140,400 people. The market capacity is at USD 50.3 billion and sales by 2015 were numbered as USD 40.07 billion. [14] Company's shares are currently traded on Swiss Exchange in Zürich, Nasdaq, Stockholm and the New York Stock Exchange in the United States. [15] According to the rankings of Fortune [16] ABB was listed 284th in Global 500 in 2015 with key attributes of reputation such as #1 in innovations, global competitiveness and quality of products and services. ABB has four main divisions, namely Electrification products, Discrete automation and motion, Power grids, and Process automation.

History overview

1891-1939

In 1891 Charles Brown and Walter Boveri established BBC, the first company which was able to transmit the high-voltage power, while ASEA in couple of years earlier in 1889 invented the three-phase system for generators, transformers and motors. [17] As this project is more concentrated in the research on the impact of Switzerland to this successful evolution of ABB as the multinational company, the way of BBC's developing will be more in the paper's focus.

In the early ages Brown & Boveri realised the limitations of the Swiss market in terms of capacity, customers and the scales of operations, so they took the strategic decision to expand throughout Europe. This expansion was backed-up by the inventions made, which had a significant meaning for all the European community.

Initially started as the manufacturers of the electric companies for European railway system, BBC was seeking further expansion, so in 1919 they agreed on the licensing with the British firm Vickers for the rights of manufacturing and selling BBC's product all around British Empire and some parts of Europe. This agreement was regarded as the great achievement in times of strict protectionist policies, which did not allow companies to expand beyond the boundaries of their own countries, therefore the access to the British market was crucial in terms of fund raising and sustainability. [18]

By 1920 BBC had already been operating in such countries as Italy, Germany, Norway, Austria and the Balkans, however the situation on the financial market was not that bright, as French franc and German mark were declining due to devaluation. That resulted with BBC losing money for the services and products they were selling abroad. Additionally, with respect to the domestic Swiss market and the strength of national currency, the production prices increased drastically while sales remained stable, which brought further losses to the company. Suffering from losing money, BBC had to account 30% of its capital formed by the benefits of previous sales to cover the incurred loss. The financial situation did not allow BBC to extend the contract with Vickers, so the trading with British Empire was over. These problems were overcome by putting emphasis on innovation and invention, as well as by big production and revenues of foreign subsidiaries which were operating individually and were consulted by local companies. By the time the Second World War was starting, BBC was a highly geographically diversified company. [19]

1940-1980

As industrialization kept going, the demand for electrical products was growing. By 1939 German electrical equipment industry was highly affiliated with the U.S. companies, such as General Electric, and 17% of the German production was accounted to BBC. [20] This presence helped big electrical

companies not to be bombed during the World War Two, the so called no bombing policy, however BBC's factory at Mannheim was subjected to precision raids. The huge role of BBC during the World War Two was allocated because of its ability to manufacture turbines, which were used in Navy to power the ships. After the war finished, there were lots of opportunities for BBC all around the world, as there was a high demand for electrical equipment solutions, especially due to the Cold War and the need for defense-related electrical contractors. However, here the high geographical diversification was not helpful to BBC as their subsidiaries in many countries were seen as foreign operations. It all made it difficult for BBC to win governmental contracts in certain countries. BBC was strong in eastern European countries such as Poland and Czechoslovakia, while gains in Latin America, Argentina and Brazil contributed to the growth of BBC as well.

In 1970 BBC began to expand abroad even more. The company was reorganized into 5 sectors - Swiss, French, German, Medium-sized and BBI (Brown Boveri International). Each of these groups contained power generation, electronics, power distribution, traction and industrial equipment divisions. The eternal rivalry with GE did not allow BBC for a long time to expand into the U.S. The company tried to go the Atlantic market with its own solution, as well as negotiating contracts with U.S.-based firms, however the financial obstacles did not let this to happen. North American sales were representing only 3.5% of total sales of the company. However, the newly born opportunity to provide the equipment for the electrification needs in Middle East and North Africa distracted BBC from its plan to expand in the U.S.

1981-today

The eighties are called the boom ages of the electromechanical industry. Westinghouse and AEG, the biggest companies of the times before, had disappeared, and the merger of ASEA and BBC, which was kept in secret, blowed the industry in 1987. This merger was logical, as BBC had a high presence and market power in the European part of the world, while ASEA was the leader in the Nordic countries, so the merger created the company which was able to influence things fully at this part of the globe. The second reason was that the expertise fields of these two companies were complimentary to each other, what helped the future company to master the skills in all the sections of electromechanical industry. This is how in 1988 the ABB was born with its headquarters in Zurich.

BBC and ASEA owned both 50% of the ABB company. In February 1999, the ABB Group announced a group reconfiguration designed to establish a single parent holding company and a single class of shares. In March 1999 ABB incorporated under the laws of Switzerland. In June 1999, ABB Ltd became the holding company for the entire ABB Group, the shares of two previous companies were exchanged to shares of the new formed ABB Ltd. [21] As the new company ABB was born, the diversification strategy was taken into account which resulted in a number of important mergers and acquisitions [22].

2.4 Logitech

Logitech is a Swiss company which aims to link people to the digital world in order for them to use easier technology for communication, education and entertainment. By providing innovative personal interface input devices, the company contributes to the more and more wide use of computers by all the categories of people, especially for communication and information access. However, some additional platforms such as consoles and cell phones are also becoming popular nowadays, offering an interactive relationship between people and computers.

Logitech was founded in 1981 [23], and began to diversify from the mid-1990s. By that period of time, the company started to become a world leader in peripherals with their main exploring and innovative areas to include games, social networking, video and communication on the Internet, musical and video broadcasting, video surveillance and the remote control of home entertainment.

Nowadays it employs approximately 9.000 people, having a global revenue of 2.13 billion USD and it also has subsidiaries in all over the world. [24]

History overview

The initial idea of starting Logitech was started for the first time at Stanford University, in Palo Alto by Daniel Borel and Pierluigi Zappacosta. In the last year of their studies, Borel, a Swiss, and Zappacosta, an Italian, were working on a project to develop an early word-processing system for the Swiss company Bobst. Shortly later, with the help of their friend Giacomo Marini, they started working as consultants in publishing related software development and hardware architecture. As a result of their excellent work, they have been awarded from Ricoh, a Japanese multinational imaging and electronics company, a four-month contract for a feasibility study on developing a graphical editor. By exploiting their profit, Borel, Zappacosta and Marini founded Logitech S.A. on October 2, 1981, and opened the first office in Apples, a municipality near Lausanne in the canton of Vaud, Switzerland. In January 1982, the Logitech team presented to Ricoh management a prototype of their graphical editor which impressed the company to the extent that they agreed to move forward on the project. As a result, Logitech team undertook the most of the software development and a bit later they opened their first office in the U.S., at 165 University Avenue in Palo Alto in California in order to be close to Ricoh's development office near San Jose. [25]

The concept of a mouse was surfacing through the research at the Swiss Federal Institute of Technology in Lausanne, Switzerland. Working hard with its developers, Logitech managed to evolve this idea and actually bring the mouse out of the lab and to the market by introducing their first hardware device. The P-4 mouse appeared in the market in the fall of 1982 in Las Vegas. Initially, Logitech made a few small Original Equipment Manufacturer (OEM) sales in the niche graphics market. There were some really interesting and beneficial deals by that time. [26]

In 1984, a contract has been signed between Logitech and HP in order to redesign a mouse at 44.95 USD per unit. [25] The OEM deals were continuing to grow and thus there was a demand for the company to expand its manufacturing abilities. In 1985 Logitech designed the C7 mouse and managed to make an agreement with Microsoft, a huge software company at that time, which proved to be a very big success. In more detail, they achieved to sell 800 units of the Logitech C7 mouse only in the first month in December 1985 in spite of their limited marketing resources. [26] After a complete and thorough research, the company chose to open a new manufacture in Taiwan which was officially opened in July 1986 and directly started the production. Another important fact by that time is that the company, in the end of 1986, moved its Swiss headquarters from Apples to Romanel. The result of growing was to make the company highly competitive and this led to the decision of expanding its global operations. In order for the European customers to be better served, Logitech established another new manufacture unit in Ireland. [25]

In the early 1990s, Logitech faced fierce competition in the mouse business. To respond, the company made two important moves. In 1994, Logitech consolidated its manufacturing in Suzhou, China. Also, Logitech identified a larger market opportunity for computer peripherals and began growing its business beyond the mouse. Meanwhile, the development of the Internet and the applications that helped drive the home PC market also strengthened the retail opportunity for Logitech branded products. A new demand was born for aftermarket peripherals that helped people take advantage of the Internet's offerings, from the World Wide Web, to music, audio and video communications, and gaming. Subsequently, Logitech's business continued to grow beyond its OEM roots and into retail, while consumer awareness of the Logitech brand soared. At the beginning of the millennium, most of the production has been moved from the sites in the USA, Taiwan and Ireland to China. [27]

The company's product portfolio continued to expand, and the company has grown both through its own innovation and through acquisitions. Both of these modes of expansion strengthened its position in a wide range of hardware products and peripherals. The diversification of business has proved to be very important in such an emerging market, where trends have changed very fast over past 20 years.

3. Comparison

3.1 History

Although all four companies cover different markets, there are several things that they all have in common. Some of the main points that ensured their growth are early and successful expansion abroad, emphasis on innovation and diversification of business. Even though Logitech is a much younger company than the other three, it is still possible to make a comparison with respect to these aspects.

Since the Swiss market is relatively small, companies were trying to expand abroad since their very beginning. First foreign subsidiaries were founded in neighboring countries like France, Germany and Italy, while soon after the USA became the most interesting foreign market. Although this led to a successful expansion in case of Novartis and Nestlé, which now make most of the sales in the USA, for ABB it was much harder because of the strong competitor General Electric. Nevertheless, ABB and its predecessor, BBC, expanded successfully in other foreign markets, as was the case for all the four companies. Although Logitech expanded abroad very early, this can not be taken into direct comparison with the older companies. These companies were going abroad at a time when there was no globalization as we know it today. Moreover, they were at the forefront of the globalized world and they had a long tradition of doing business in foreign countries. On the other hand, Logitech was formed in that globalized world and was boosted by contracts with already existing multinational companies.

Despite the different history of the four companies, the importance of innovation can easily be recognized. The predecessors of Novartis had a strategy “imitation and then innovation”, which means that they were first using patents of other companies and were placing these products on the market. Only after they opened their own research departments. On the other hand, Nestlé, ABB (BBC) and Logitech all started with an invention in the early stage. However, it is not only important that they had innovation in the beginning, but it is the emphasis they put on innovation that was very important in the lives of these companies. Furthermore, in cases of Novartis and Logitech, the Swiss universities played a key role in setting up the companies on their feet with respect to R&D.

Another important point that is common to all the studied companies is the fact that they were entering different markets through reorientation and acquisitions. This has ensured stability with respect to market changes. Novartis went from dye production to pharmaceuticals and Nestlé from condensed milk products to ice creams, mineral waters and pet care. It turned out to be very important that these companies were able to follow trends and to accommodate the demands of the market. The three older companies were formed by mergers. While ABB serves as an example of a company formed by a Swiss and a non-Swiss company merger, Novartis and Nestlé went through mergers with Swiss companies only. Although Logitech did not merge with other companies, it depended on various close collaborations with larger companies.

Being Swiss had both advantages and disadvantages. On one hand, Swiss neutrality helped the companies during the war in order to keep their facilities untouched. This resulted in the fact that Novartis (Geigy, Ciba and Sandoz), Nestlé and ABB (BBC) made profit during the two World Wars, even though they had problems with shortage of raw materials. It can be also seen that foreign subsidiaries played a crucial role in breaking the isolation of Switzerland during the Second World War. On the other hand, for BBC it was hard to expand because such a business required governmental contracts for large-scale jobs in foreign countries, and in this case, the fact that it was Swiss was more a disadvantage. Swiss strong currency was useful when large Swiss companies wanted to acquire foreign companies or facilities. However, with respect to export, it was often causing problems. For these reasons, all the four companies moved some of their production sites, and soon after a part of their research departments, outside of Switzerland in relatively early stage, in

order to lower the costs of their final products and make them more competitive. To conclude, the companies benefited from their Swiss origins, but only with the aid of their foreign subsidiaries.

3.2 Market Analysis

As one of the dimensions of comparison among companies, the market analysis was chosen in order to identify common trends that could have been emerged during times of the companies' evolution. The hypothesis was made that as companies had to deal with early and fast expansion outside Switzerland, that might have affected the strategy and the vision of these companies. Therefore, the idea is to look at the latest financial performance overall represented by the net sales as well as the sales allocated to different regions. However, it is quite important to emphasize that Logitech, on contrary to ABB, Novartis and Nestlé, does not have quite a long history and main external and internal processes, that defined the strategy of the company happened in different times. Additionally, with respect to the size of Logitech, the order of magnitude of its sales differs as well from the one of big companies, however, the trends might be seen and it is included in the hypothesis made.

Figure 3.1 and *Table 3.1* represent the total sales in USD millions by company. The financial data was taken from the annual reports of the companies [8, 24, 28-36, 37-43, 44-52] and analysed further. As can be seen according to the graph, companies might be ranked with respect to the revenues they make, which overall gives an idea about the size of the company. Therefore, Nestlé is the largest out of four, followed by Novartis and ABB. As was discussed earlier, the comparison with Logitech is not applicable, as its net sales represent only 2% of the sales of Nestlé, 4% of Novartis sales and 5% of sales of ABB. However, what is interesting here is the change in revenues for the companies as the reaction to the financial crisis of 2008. Defining the firm's performance, industry effects account only to 20% of influencing the profitability, while firm's effects to 30-45% and other effects, as for example yearly effects, crisis etc. account for 35-50%.

According to *Figure 3.1* it might be concluded that pharmaceutical industry did not experience lots of influence of the financial crisis as the sales of Novartis kept increasing, while ABB and Nestlé sales showed a decline. Interesting point, it took 3 years for ABB to recover from the financial crisis of 2008 to be able to get back to the same level of sales, while Nestlé did it within one year, but experienced the second wave of the crisis in 2010, which may be referred as the peak sales year for Nestlé. It took 2 years respectively for Logitech to recover from the crisis, however since 2011 the sales for Logitech kept falling down. The overall decline in sales in 2015 for all four companies might be explained with the volatilities of the currency exchange rates with respect to the USD and the oil prices that declining.

***Table 3.1**: Sales in USD millions per company for 2006-2015.*

	Nestlé	Novartis	ABB	Logitech
2006	78766	34393	27048	1797
2007	89926	38072	34348	2067
2008	101391	41459	38282	2370
2009	99370	44267	30969	2209
2010	104997	50624	32681	1967
2011	94298	58566	40210	2363
2012	98279	56673	40232	2316
2013	99415	57920	38896	2099
2014	100013	57996	41515	2129
2015	92101	49414	36429	2114

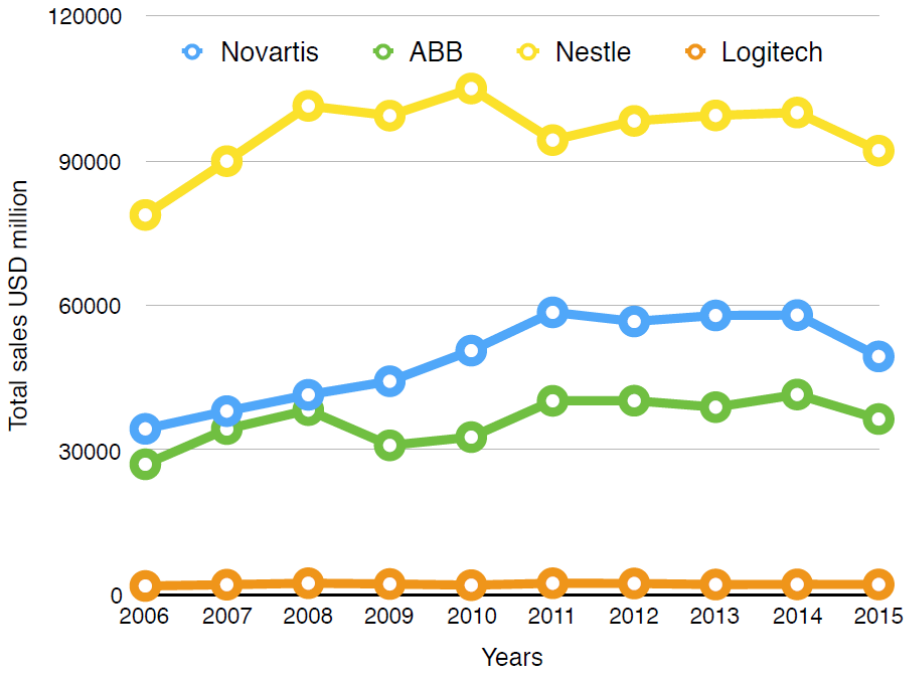

***Figure 3.1**: Sales in USD millions per company for 2006-2015.*

Although the overall sales are important for the companies, it is interesting to have a look at the distribution of the sales per continents or regions, as it is defined in each of the companies strategic business units. In general, companies determine their regions division differently, however it can be observed that all four have two same regions to which they allocate their sales: Europe and The Americas.

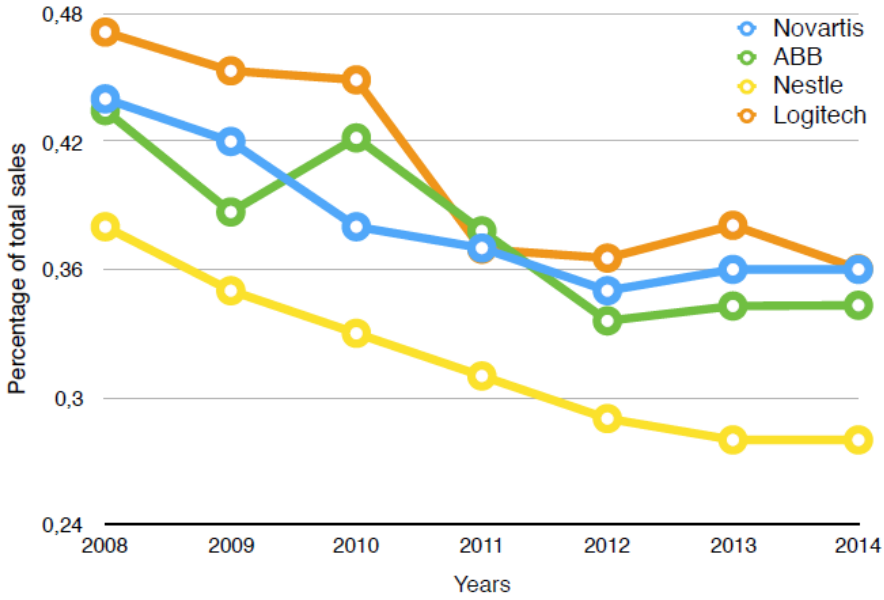

***Figure 3.2**: Percentage of total sales allocated to Europe region.*

According to *Figure 3.2*, it might be concluded that there is the general trend of declining the importance of the European market for all the companies. The remark must be done that for Logitech there is no separate region as Europe existing, while it is defined as EMEA (Europe, Middle East, Africa). The question is, as the European market is experiencing this relative decrease in sales, there should be another market strengthening its positions or a new market emerging to take the share of

Europe. *Figure 3.3* represents the trends occurring on the American market. As for Nestlé and Novartis the situation is quite stable, ABB is definitely experiencing an expansion to the American market, which is very interesting due to the earlier difficulties with respect to the competition with GE. Nowadays, ABB found the way to get their products sold in America too.

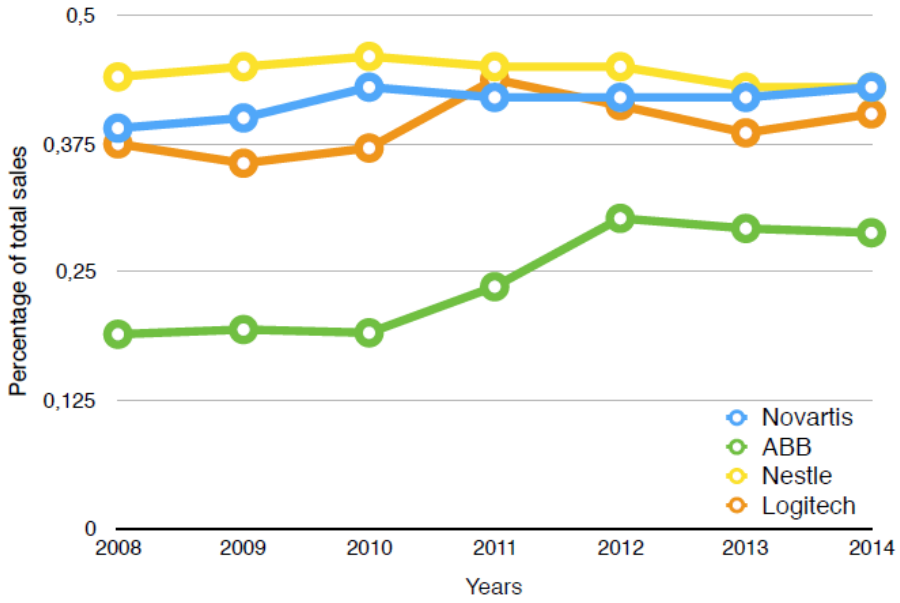

***Figure 3.3**: Percentage of total sales allocated to America.*

Regarding other markets per company, for Novartis it was a clear expansion Asia, Africa and Australia as the company was able to gain 5% to their presence at these markets. For ABB the Asian market was quite stable during these years as well as the Middle East and African one, therefore in 2015 ABB decided to merge these regions together. As a result since that time they account their sales to the market of Middle East, Asia and Africa as a whole, and this market ranked 1 with its share of 37% with a comparison to the other markets. Nestlé followed the same trend as Novartis with its expansion to East and they have been able to almost double their presence from 13.9% in 2006 to 23.4% in 2015, while their Oceania/Africa market is quite stable at 6% shares. Logitech is going East too with its share in Asia increased from 16% to 23%. Overall, it can be concluded that in recent years all the companies started to pay attention to the Asian market as it emerged to be one of the main consumers in the World. With respect to the situation in 2015, regarding the latest annual financial reports of the companies, the markets distribution shares for companies is illustrated in *Figure 3.4.* According to the markets distribution for 2015 it can be concluded that Logitech, Novartis and Nestlé profit the most from The Americas market, while ABB is still mostly present in Europe and competing a lot in East and Africa.

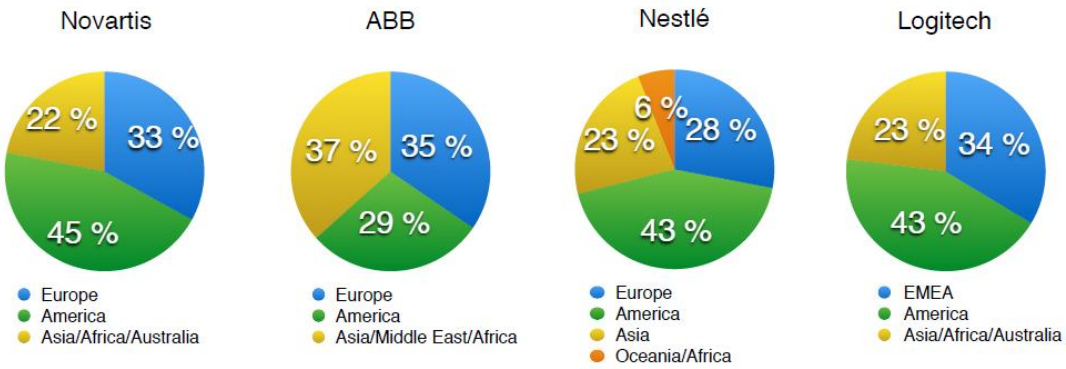

***Figure 3.4**: The markets distribution shares in 2015.*

To sum up, although each company experienced different historical and evolutional processes to establish itself as a multinational company, some similar patterns can be defined due to the fact that companies found out quite early that dimensions of Swiss market are not sufficient and had to find strategies to expand abroad.

3.3 Research and Development

Research and Development (R&D) has always played a crucial role in the establishment and evolution of the aforementioned 'Big Swiss Companies', even during the years when the term did not exist. Indeed, innovation was the force which has driven Nestlé, ABB and Logitech towards success during their first steps. In the case of Nestlé, it was the experimentation of Henri Nestlé during the 1860s that led to the launching of "farine lactée" in 1867 and the pioneering activities of Page brothers that created the Europe's first production facility for condensed milk in 1866; undoubtedly products with great recognition. Moreover, ABB ancestors made important inventions in the late 19th century, when ASEA invented the three-phase system for generators, transformers and motors, and BBC was the first company to transmit the high-voltage power. Concerning Logitech, the development of a graphical editor gave rise to the financial capacity and establishment of the company during its first steps. In contrast, research and development was not the reason of Novartis ancestors' success during their first activities, which were mainly imitation of already existing products. However, already in 1870s the pharmaceutical companies based in Basel began the development of new dyes.

Today, R&D has well evolved in all these companies and is actually a basic pillar of their strategy. In terms of R&D employees, over 5,000 people are working for Nestlé [9], over 8,000 for ABB [53], and approximately 700 for Logitech [24], while no relevant data is available for Novartis. These four companies have R&D facilities which aim to further develop the already existing products, but also to conduct research in order to expand beyond the current commercial reality. This can be illustrated by the Nespresso™ system of Nestlé or the computer mice of Logitech. These R&D facilities are located both in Switzerland and abroad and they are not limited inside the European borders [9,10,24,54,55].

It is noticeable that there is R&D collaboration between all these four companies and Swiss Institutions, at least in some research domains. To begin with, both Nestlé and Logitech have R&D facilities in the EPFL campus, namely the Nestlé Institute of Health Science (NIHS) and the Daniel Borel Innovation Center, respectively [56,57]. Furthermore, the ABB Corporate Research Center in Baden-Dättwil (Switzerland) collaborates with leading universities around the world, including EPFL and ETHZ [58]. However, the most characteristic example of collaboration with institutions is the case of Novartis, which dates back to the 1870s when the Basel chemical industry started its close relationship with ETHZ for the development of new dyes. This tradition is kept until today and Novartis is working actively to be constantly connected with Swiss universities [59].

Table 3.2 summarizes the annual R&D spendings (in USD millions) of the aforementioned companies for the decade 2006-2015 and the evolution of these numerical data is illustrated graphically in *Figure 3.5* [24,44-52,60-70]. The difference in terms of size between Logitech and the other three companies is apparent (as already discussed in the Market Analysis) and this is also depicted in *Figure 3.5*. The first conclusion that can be made based on these data is that in overall there is an increase of R&D spendings in each company during this ten-year period. A very interesting observable is that the R&D costs of Novartis have rocketed during the period 2006-2013, after which they stabilized. Moreover, Nestlé annual investments in R&D declined between 2009-2012, with the main drop observed in 2011, which coincides with the year of the main fall of its sales (Market Analysis). However, then both the sales and the R&D spendings of Nestlé recovered. Although for the case of ABB a continuous growth until 2014 is shown, a considerable drop of R&D expenditure in the last year is evident. Furthermore, Logitech R&D spendings have reached their peak in 2012, after which a downward trend was followed. Finally, it has to be noticed that while there was a substantial decline

in the sales of Nestlé, Novartis and ABB in 2015 (Market Analysis), the same trend is not observed in *Figure 3.5*, at least at the same extent. This fact reveals the importance of R&D in these big companies as an internal part of their strategy.

***Table 3.2**: Annual R&D spendings in USD millions for the period 2006-2015.*

Year	**Nestlé**	**Novartis**	**ABB**	**Logitech**
2015	1741	8700	1406	131
2014	1777	8700	1499	139
2013	1621	8900	1470	155
2012	1506	8400	1464	162
2011	1604	8400	1380	156
2010	1800	8100	1340	135
2009	1866	7300	1304	128
2008	1824	7200	1242	124
2007	1568	6200	1173	108
2006	1387	5300	1079	87

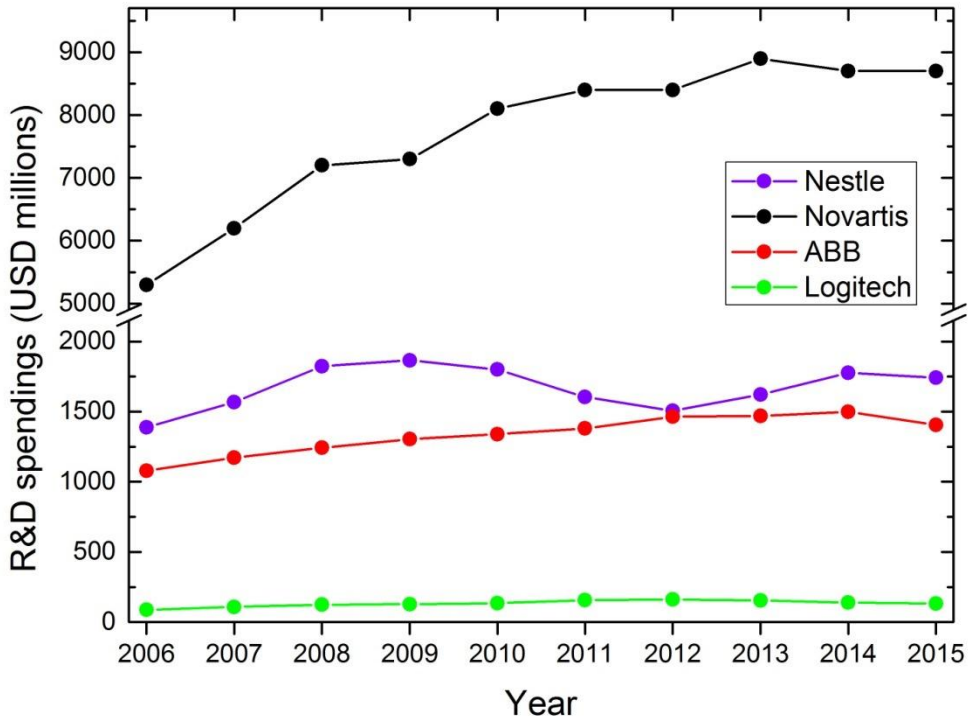

***Figure 3.5**: Annual R&D spendings in USD millions for the period 2006-2015.*

Although being Swiss, these companies are multinational and well established beyond Switzerland and Europe. This is definitely true in terms of commercial activities, where Switzerland plays a minor role as a market. However, in R&D the situation changes for some of these companies. First of all, the main R&D facilities of Nestlé (Nestlé Research Center, Nestlé Institute of Health Science, Nestlé Clinical Development Unit, Nestlé site at Orbe) [10,71], Novartis (Basel campus) [59] and Logitech (Daniel Borel Innovation Center) [57] are all located in Switzerland. Furthermore, it is surprising that 50% of Nestlé [72] and 42% of Novartis [59] total R&D investments are made in Switzerland, while Switzerland represents only the 1.74% of Nestlé [8] and 2% of Novartis [59] total sales. This reality reveals how incredibly Swiss these companies are and even after so many years of global presence and domination they continue to be linked with their 'homeland', contributing to its economy and prosperity.

4. Conclusion

In this project, four multinational companies with Swiss origins were compared: Novartis, Nestlé, ABB and Logitech. In order to elucidate the reasons behind their success, their histories were taken into account. Market analysis was performed for past several years with focus on the trends regarding the net sales and their geographical distribution. Since all of the companies are strongly innovation oriented, their Research and Development divisions were compared in terms of facilities, number of employees, annual spendings and collaboration with Swiss universities.

Several things can be pointed out as important for the growth of the studied companies. Due to the limited Swiss market, companies were expanding abroad at early stage. In order to survive in a competitive environment, their strategies were based on innovation, expansion abroad and diversification of business. Their Swiss roots proved to be useful in the 20th century due to Swiss neutrality during the two World Wars and due to the stable economy in the post-war period. Furthermore, their innovation was facilitated and strengthened through continuous collaboration with reputable Swiss universities. Main things observed in market analysis include the growing tendency of expanding East, differences in sales behavior with respect to financial crisis and the evolution of the presence in the world's markets. The comparison of R&D activities showed that all four companies make a lot of investments in innovation. In addition, their R&D departments are mostly based in Switzerland and Europe, along with the USA. However, there is a new trend of establishing research sites to new emerging markets, like China. In conclusion, all these points lead to a common property of big Swiss companies, which proves their ‘swissness’ - the ability to adapt to the environment and demands of the time.

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