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The Sweet Secrets of the Swiss:

An analysis of the Swiss chocolate industry

Leah Hanvey
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ABSTRACT

Since the chocolate industry officially established itself in Switzerland in 1819, it has become an institution and ubiquitous with Swiss culture and Switzerland's international reputation. The purpose of this paper is to delve into the secrets of the Swiss chocolate industry and answer the simple question, why and how has Switzerland become the producer of arguably the best chocolate in the world? To do this, I will conduct an industry analysis of the Swiss chocolate industry utilizing a modified model of Michael Porter's Five Forces Model and will include discussing the Swiss chocolate industry's current market make-up and domestic manufacturers, the substitutes of Swiss chocolate, international and domestic consumers, suppliers and supply chain, and of course, what the future holds for the industry. This analysis will be based on research collected from secondary sources and statistics-based data, in addition to first-hand marketplace price data collection, and primary consumer data collected through means of a price elasticity experiment to gauge to what degree Swiss chocolate is substitutable with other competitive products.

INTRODUCTION

The chocolate trade has been around for thousands of years and the history is well known. Starting with the Aztecs in South America who harvested, ate and smoked it, chocolate began its journey overseas to Europe with Cortez and his Conquistadors in the 16th Century. There, in Europe, chocolate began to become more refined and more akin to what we know it to be today and slowly it melted into European culture over the centuries. Of all of the European states where this exotic cocoa bean took hold, chocolate seemed to find a special home in a small, landlocked country, with rolling hills, thousands of grazing cows, fresh water, and a dedication to the finer things in life – Switzerland.

Chocolate production came to Switzerland in 1819, and shortly after, through a collaboration of two Swiss chocolate pioneers, whose names would become synonymous with chocolate prestige worldwide in the future, came the invention of proper milk chocolate thus solidifying the prevalence of chocolate in the country. This paper strives to dig deeper into the secrets of the Swiss chocolate industry, starting with a brief historical overview and then an industry analysis utilizing a modified framework modeled after Michael Porter's Five Forces Model in order to give proper insight into all facets of the industry and to draw significant conclusions as to how the Swiss have become the makers of some of the best chocolate in the world. Specifically, the industry analysis will be divided into six parts, the first being an overview and explanation of the chosen framework, the second will be an analysis of the existing state of the industry, i.e., market competitors and current manufacturers of Swiss chocolate, their brands, and products; the third section will discuss the degree of substitution of Swiss chocolate and will test whether or not they actually do exist by means of a price elasticity and perceived quality experiment of a sample of a dozen participants by comparing taste test results and consequent willingness to pay for Swiss versus a foreign substitute. The fourth section will analyze the international profile of Swiss chocolate consumers, the future trends in consumer preferences, and potential emerging markets for Swiss chocolate. The fifth section will discuss the suppliers of the Swiss chocolate industry and will comment on the effects of the size

of a given supply chain relative to the perceived quality of the final good. Finally, the sixth section will discuss the barriers to entry of the Swiss chocolate industry and in addition, will discuss the future of the chocolate industry.

Research gathered for this paper include mostly secondary data collected from sources such as the International Cocoa Organization (ICCO) and Chocosuisse, the Association of Swiss Chocolate Manufacturers, but also, primary data was collected in two fashions: the first through surveying in-store prices at two, mid-range Swiss supermarkets in Zürich, Switzerland (Migros and Coop), the second through conducting a price elasticity and perceived quality experiment and surveying a sample of twelve (n=12) volunteers and their change in preference and willingness to pay when comparing a Swiss and non-Swiss chocolate product.

For the purposes of this paper, the definition of chocolate production does not simply consist of the making of conventional tin foil wrapped bars that come to mind when we think about chocolate. The Swiss chocolate industry also includes everything in the manufacturing of cocoa products such as powders, butters, liqueurs, artisanal chocolates and ingredient-added confectionaries such as pralines and bonbons, and chocolate for food manufacturers and commercial use (see Appendix 6 for examples).

HISTORICAL CONTEXT & THE INVENTION OF MILK CHOCOLATE

The first factory

Chocolate was not always the sweet, milky, solid treat we know today. In fact, before the Swiss got their hands on it, chocolate was an extremely dark and bitter hot drink that one would mix with sugar. It was also extremely expensive and only affordable for the European aristocracy. All of this was to change when in 1819, almost 300 years after Cortez and his Spanish Conquistadors brought the first cocoa from South America to Europe, François-Louis Cailler opened one of the world's and definitely Switzerland's first mechanized chocolate production facilities in the small town of Vevey just outside of Lausanne.¹ Cailler's example was soon followed by many promising Swiss chocolatiers such as Charles-Amédée Kohler (the inventor of nut chocolate) in 1830 in Lausanne, Rudolf Sprüngli in 1845 in Zürich, Philippe Suchard in Neuchâtel, and Rudolf Lindt and Jean Tobler (creator of Toblerone) in 1899 in Berne.² Many of these visionaries are now brand names and companies that we know and love today (although, many are not independent companies anymore as the Swiss chocolate industry has undergone significant consolidation over the last two hundred years). Further discussion of these brands and their family trees will take place in succeeding sections.

The invention of milk chocolate

After the establishment of the Cailler chocolate factory, a candlestick maker, Daniel Peter, married into the Cailler family and was subsequently submerged into the world of chocolate making. After years of experimenting, Peter decided to add milk to the chocolate substance to make it less bitter, but regular milk was too watery. It was not until he tested and succeeded with thicker, condensed milk that he created what we know today as milk chocolate.³ Not coincidentally, this newfound condensed milk was being made by an up-and-coming baby formula and dairy products business in a neighbouring town founded by a German migrant, Henri Nestlé. The resulting combination was cheaper to make, more pleasurable to eat in larger quantities, and uniquely Swiss. From that moment on, a new partnership was formulated that would go on to make one of the largest chocolate manufacturing companies in the world, but most of all, the whole concept of chocolate production had changed and the Swiss chocolate industry had begun to bloom.

INDUSTRY ANALYSIS

¹ Chocosuisse (2013), *History*. <http://www.chocosuisse.ch/chocosuisse/en/chocolate/history.html> Accessed November 24, 2014

² Bewes, D. (2010)

³ Chocosuisse (2013)

Analysis Framework

To fulfill an industry analysis of the Swiss chocolate industry, I will utilize a framework derived from Michael Porter's Five Forces model. The framework will be constructed as follows: first, I will analyse the current state of the existing marketplace of Swiss chocolate by looking at existing brands and producers and their competition dynamics; the second phase will consist of an analysis of the market of substitutes for chocolate in Switzerland; third, I will perform a demographic analysis, both internationally and domestically, of who in fact is buying Swiss chocolate in order to gain further insight into the current and future demand for the product; fourth, I will look at suppliers, the supply chain and the production of Swiss chocolate; and finally, the fifth phase of this industry analysis will consist of looking at the future of the Swiss chocolate industry with particular concentration on potential barriers to entry with an overall focus on the future growth, stagnation or decline of the industry.

Part I: Existing marketplace for Swiss chocolate

The Association of Swiss Chocolatiers, recently renamed Chocosuisse, is the authority of Swiss chocolate manufacturing and represents the interests of all chocolate manufacturers in Switzerland. The association is made up of 18 independent company members and together they represent the entire community of Swiss chocolate manufacturers. All of the 18 members carry out manufacturing operations in Switzerland but four members actually are not originally Swiss companies and have acquired or moved their way to the world's chocolate epicenter, specifically, Storck® (Germany), Mars (USA), Mondelez International (demerged from Kraft Foods, USA in 2012), and Barry-Callebaut (Belgium and France, now officially headquartered in Zürich). See Table 1 for an extended list of all Swiss chocolate manufacturers currently operating in Switzerland.

Table 1: Comprehensive List of Swiss Chocolate Manufacturers

Company	Swiss Headquarters	Year Established
Chocolat Alprose SA	Caslano	1957
Barry Callebaut Schweiz AG (originally: FRA/BEL)	Zürich	1996*
Chocolat Bernrain AG	Kreuzlingen	1925
Chocolats Camille Bloch SA	Courtelary	1929
CSCC Compagnie de chocolats et confiseries AG (formerly Pfister)	Illnau	1951
Chocolats et cacao Favarger SA	Versoix/Geneva	1826
Max Felchlin AG	Schwyz	1908
Chocolat Frey AG	Buchs	1887
GYSI AG Chocolatier Suisse	Bern	1931
Chocolats Halba	Wallisellen	1933
Confiseur Läderach AG	Ennenda	1962
Chocoladefabriken Lindt & Sprüngli (Schweiz) AG	Klichberg	1845
Maestrani Schweizer Schokoladen AG	Flawil	1852
Mondelez Schweiz GMBH (formerly Kraft Foods) (originally: USA)	Glattpark	1903*
Nestlé Suisse SA (Cailler of Switzerland)	Vevey	1819
Confiserie Sprüngli AG	Zürich	1836
Chocolate Stella SA	Guibiasco	1925
Villars maître chocolatier SA	Fribourg	1901
Mars Schweiz AG (originally: USA)	Zug	1882*
Storck (Schweiz) GMBH (originally: GER)	Zürich	1903*

**Year of establishment of company in country of origin, not date of establishment in Switzerland*

Source: Chocosuisse (2013), Association of Swiss Chocolate Manufacturers

The competitiveness of the Swiss chocolate industry is complex and difficult to analyse. First of all, each of these brands has been able to differentiate their product offerings according to very different market segments. For instance, Nestlé SA has become an exceptionally diversified player in the global industry through means of acquiring one of Switzerland's most historical and highest quality producers, Maison Cailler, while also owning and producing international favourites such as KitKat and Aero. This is one example of how the Swiss chocolate industry has evolved over time. Many of Switzerland's current chocolate manufacturers have been derived from collecting brands over the years in effort to gain market share and attract a wider customer range. This is a trend happening all over the world. Larger manufacturers such as Nestlé are purchasing artisanal brands and marketing them as separate entities in an effort to have a personal story to tell and add emotional value to their products. As this happens in the aftermath of the financial crisis, consumers are increasingly looking for affordable products (provided by Nestlé's economies of scale) that go on to exceed expectations (Cailler's charming brand, history and commitment to quality). For a more in-depth look into consumer behavior and preferences, please see the following section. In order to get a sense of how the chocolate industry is structured and the scope of the brands and products offered by this industry, please see Appendix 1 for a map of the relative prices of chocolate brands in Switzerland as collected from two local mid-range Swiss supermarkets in Zürich, Migros and Coop. Unfortunately regarding consistency, the prices could not be collected from the same supermarket as both sell different brands however, the two supermarkets are at very similar price points, generally, and there is very little discrepancy between the price of a chocolate bar at Migros or Coop.

Regrettably, Chocosuisse is unable to disclose information on the composition of the market share of its 18 members within Switzerland. However, the international make-up of market share is interesting in of itself (see

Appendix 2). It is important to note that all three of the world's largest vendors of chocolate around the world hold major operations (Mars Inc. and Mondelez International Inc.) or are fully incorporated in Switzerland (Nestlé SA), and furthermore, two fully Swiss manufacturers are in the top ten, Nestlé SA and Lindt & Sprüngli AG. Together, the top three market leaders generated USD\$44,262 million in net sales in 2013 and compose 51% of the market share.⁴

Part II: Substitution and imports

The Swiss consume more chocolate per capita than any other nation in the world, coming in at just under 12.0 kg per person per year.⁵ But how much of that is actually Swiss chocolate? It is safe to say, according to this author's opinion that there truly is no substitute for anything but Swiss (which will be tested and verified later); however, neighbouring European states such as Belgium, Austria, Germany, United Kingdom, and even the United States across the Atlantic produce chocolate that is also bought and consumed in Switzerland. Unfortunately, there is little to no information from credible sources that present statistics on how much chocolate Switzerland imports or how much the Swiss demand foreign chocolate. In an effort to come to some conclusions regarding the extent to which Swiss chocolate is substitutable, an experiment with volunteers was conducted to see if any more valuable information could be obtained to generate conclusions.

When compared to purchasing decisions made in other countries, such as Canada, a consumer's price elasticity is fairly high – there is not much difference between a Hershey's milk chocolate bar (USA) and a Cadbury's milk chocolate bar (USA/UK). However, this experiment with a random sample of chocolate buyers in Switzerland demonstrates that a consumer's price elasticity when it comes to chocolate decreases rapidly when faced with a decision between Swiss chocolate and an imported brand after being given an opportunity to taste the difference.

The experiment followed the following design (see Table 2 for results):

The total sample consisted of 12 individuals (students with constrained weekly grocery budgets, particularly with the added pressures of living in Zürich, a city with high living expenses), each from different national heritage. Each participant also specified the frequency they purchase chocolate, which appeared to range from once every few days to once a week (each admitted they have started to consume much more chocolate since they moved to Switzerland). They were presented with two chocolate bars, the first, a milk chocolate bar from Maison Cailler priced at 2.10 CHF; the second, a Cadbury plain milk chocolate bar priced at 1.40 CHF (neither had added ingredients such as nuts, berries, etc.), making a difference in price of 0.70 CHF. All agreed that one pays a premium for the perceived higher quality Swiss chocolate.

Phase 1: the participants were asked to choose, without tasting the chocolate, which one he or she would buy (Response: Y) given that they were in the market for a bar of chocolate and they could only buy one?

Phase 2: the participants were allowed to taste the chocolate and then were asked the same question as in Phase 1: which chocolate bar would you buy (Response: Y)?

⁴ ICCO (2014), *The Chocolate Industry*. <http://www.icco.org/about-cocoa/chocolate-industry.html>. Accessed December 2, 2014

⁵ Chocosuisse (2013)

Table 2: Price Elasticity & Perceived Quality Experiment Results

n=12	Phase 1: Before Taste Test		Phase 2: After Taste Test	
	<i>Maison Cailler (CH):</i> 2.10 CHF	<i>Cadbury Milk (UK):</i> 1.40 CHF	<i>Maison Cailler (CH):</i> 2.10 CHF	<i>Cadbury Milk (UK):</i> 1.40 CHF
Participant 1	Y		Y	
Participant 2		Y	Y	
Participant 3		Y	Y	
Participant 4	Y		Y	
Participant 5		Y	Y	
Participant 6		Y		Y
Participant 7	Y		Y	
Participant 8		Y	Y	
Participant 9		Y		Y
Participant 10	Y		Y	
Participant 11		Y	Y	
Participant 12		Y	Y	
Total:	4	8	10	2

As you can see in Table 2, the results are very clear: after the taste test, those who would buy Maison Cailler (premium brand) increased from 4 to 10 out of 12, with the first four remaining consistent in their decision and the two hold-outs maintaining they did not experience enough extra value to pay the additional 0.70 CHF. Some participants recognized the Swiss chocolate brand or had previous experience with the Swiss chocolate before and therefore knew their decision based on their previously established preferences, while others, who would have bought the Cadbury (and who are evidently more price sensitive) in the first round, changed their minds in the second round after experiencing the (objectively) better quality of the Swiss chocolate. Not only did they acknowledge the quality, but also after experiencing it, they were then willing to pay 50% more (+0.70 CHF) of their previously established chocolate budget for that quality. This signifies that these converted consumers' price elasticities have gone down as they realize that there are actually fewer substitutes for Swiss chocolate than previously thought. These consumers are now much more likely to repurchase Swiss chocolate rather than an imported substitute.

Admittedly, there are some constraints and drawbacks to this social experiment and it would have been more representative with a larger sample, but the conclusion that can be drawn is still clear: there really is no substitute for Swiss chocolate and consumers are willing to pay more for its high quality – even when their financial situation is strained.

Part III: International consumption and consumer profile

Since Switzerland exports an increasing portion of their chocolate abroad (109,662 tonnes in 2013, a 5.5% increase from 2012)⁶ and much of the industry's prosperity depends on international consumer preferences, I will discuss chocolate consumption within a global context and conduct a profile of international consumers. Additionally, it is safe to assume that Swiss chocolate preferences do not differ much from other major consumers of Swiss chocolate, i.e. Germany, United Kingdom, the Netherlands, Austria, Denmark, Finland,

⁶ Chocosuisse (2013)

Sweden, etc. (see Appendix 3 for per capital consumption levels by country).⁷ An industry overview report published by KPMG in June 2012 categorizes chocolate buyers into three groups: the convenience buyer, the value buyer and the luxury buyer. I will discuss each of these in turn.

According to a 2012 KPMG study, convenience is increasingly becoming a major driving force of consumer buying habits. In fact the study has found that as convenience becomes more important to time-sensitive shoppers, the sales of tablet bars have also grown (up by 37% in the United Kingdom).⁸ The prevalence of the convenience shopper is also demonstrated where consumers are buying their chocolate. 45.3% of all chocolate buyers are purchasing chocolate in supermarkets and discount stores with a “grab-and-go” mentality.⁹ Furthermore, now even premium chocolate manufacturers such as Lindt are beginning to alter products and presentation in order to cater to this emerging segment, specifically by introducing smaller bars, individually packaged bite-sized bonbons, and re-sealable packaging.

Value for money is another characteristic demonstrated by chocolate buyers where 79% of American chocolate buyers say they look for good value when choosing chocolate, while 70% still want a name brand – essentially, consumers are wanting to pay less for the same high quality and name brand guarantee.¹⁰ As the middle class becomes more well-defined in developing nations, a greater percentage of the global population is able to afford small luxuries like chocolate and are constantly seeking for a good option that gives them very high value relative to the amount of money they are willing to spend. For instance, in the United States, a 45g chocolate bar represents less than 1% of an average weekly shopping budget; however, in India, the same 45g chocolate bar can count up to as much as 18%.¹¹ This means that effectively communicating extremely good value for money is becoming vitally important for chocolate manufacturers around the world. These value-seeking buyers are also a part of the aforementioned 45.3% of consumers who go to discount stores for their chocolate as these stores are increasingly offering brand names and private labels for highly discounted prices. Low prices and greater choice are two competitive advantages these stores have over their smaller scaled competitors and are attracting more and more time-poor, and value-oriented chocolate consumers.

Additionally, for many chocolate buyers, luxury is still a very important and powerful aspect in making purchasing decisions. Chocolate has always been associated with decadence and luxury but most importantly, it is a luxury that most of us can still afford. With conservative spending remaining very much a dominant paradigm in post-recession years, the psychology is that even expensive chocolate is an affordable luxury and premium chocolate makers have embraced the fact.¹² This emotional value attributed to luxury is even more emphasized when it comes to Swiss chocolate: it is the most premium of the premium and everyone wants a piece as world income gradually increases over time. As such, major Swiss chocolate manufacturers are “premiumizing” their products and making an effort to create “everyday glamour.”¹³ This is being done by major Swiss manufacturers such as Lindt and Frey but additionally, the much larger, multinational manufacturers are keen to gain entrance into this luxury market through purchasing premium, artisanal brands with a story to tell: e.g., Nestlé SA through Cailler and Mondelez International through Suchard (was originally Swiss but now the brand is managed in Austria). What is vital to note, however, is that for these brands to continue to gain market share, these large manufacturers with artisanal brands must maintain their high quality, uniqueness, and independence.

There are important implications of consumer buying habits domestically, too. As previously said, the Swiss themselves are the world’s largest consumers of chocolate at 12.0 kg per person per year, and are therefore a major market segment for Swiss chocolate makers. How much chocolate the Swiss consume can be attributed to

⁷ Chocosuisse (2013)

⁸ KPMG (2012), ‘The Chocolate of Tomorrow’ *Consumer Markets*, June 2012, p.6

⁹ KPMG (2012), p.6

¹⁰ KPMG (2012), p.6

¹¹ KPMG (2012), p.6

¹² KPMG (2012), p.7

¹³ KPMG (2012), p.7

several factors: they can buy some of the best chocolate in the world for relatively lower prices than the rest of the world, chocolate is more readily available, chocolate is more prevalent in Swiss identity, history and therefore supermarkets, and what is most interesting of all is to what extent Swiss purchasing decisions are derived from cultural norms. According to Geert Hofstede's Six Cultural Dimensions, the Swiss score relatively high in the "Indulgence" category at 66 out of 100.

People in societies classified by a high score in indulgence generally exhibit a willingness to realize their impulses and desires with regard to enjoying life and having fun. They possess a positive attitude and have a tendency towards optimism. In addition, they place a higher degree of importance on leisure time, act as they please and spend money as they wish.¹⁴

- Hofstede (2014), *Switzerland Country Profile*

A very appropriate profile for the land of chocolate.

The implications of this consumer profile for Swiss chocolate makers is an increasing emphasis on the underlying theme that international buyers are increasingly time-sensitive, determined to find the highest ratio of value to percentage of income spent, and the growing international middle class is shifting bargaining power and demanding luxury quality for less.

It may sound counterintuitive, but what's happening in the [global financial] crisis a quest by consumers for value, for more affordable products, but also for products that overtake their expectations.¹⁵

- Laurent Freixe (2013), head of Nestlé's European business, KPMG p. 7

Part IV: Suppliers and supply chain analysis

According to Chocosuisse, the term, "Swiss chocolate" can only ever be used to refer to chocolate products produced exclusively in Switzerland.¹⁶ The industry has been successful over the years in protecting the label and therefore, Swiss chocolate has remained a "badge of quality in its original sense, and enjoys an excellent reputation throughout the world."¹⁷ This section will go deeper into what truly makes Swiss chocolate, Swiss chocolate, and will discuss in detail the components of the supply chain of Swiss chocolate manufacturers from the cocoa beans to the packaging to the workers who make it.

The Swiss chocolate industry has left very little of its process to outside, uncontrollable hazards. The industry has internalized almost every step of the chocolate manufacturing process; in fact some manufacturers even make their own cocoa butter, powders, and other necessary inputs for production.¹⁸ However, the Swiss chocolate industry does (relatively) depend on two very important imports: cocoa beans and sugar.

In 2013, the world harvest of cocoa amounted to close to 4 million tonnes and only about 1% of this was imported to Switzerland.¹⁹ The international cocoa harvest is centralized in countries along the equator with the major producers being the Ivory Coast, Ghana and Indonesia (see Appendix 4). The Swiss chocolate industry obtains most of its cocoa from the Ivory Coast, Ghana and Ecuador.²⁰

¹⁴ Hofstede (2014), *Switzerland Country Profile* <http://geert-hofstede.com/switzerland.html>. Accessed December 1, 2014

¹⁵ KPMG (2012), p.7

¹⁶ Chocosuisse (2001), *Chocology*

¹⁷ Chocosuisse (2001)

¹⁸ Barry Callebaut (2014), *Chocolate for food manufacturers*. <http://www.barry-callebaut.com/foodmanufacturers>. Accessed November 16, 2014

¹⁹ Chocosuisse (2013)

²⁰ Chocosuisse (2001)

As a commodity and a major factor of production, the prices of cocoa, as well as sugar, and other imports have a great effect on the profitability of the Swiss chocolate industry (Appendix 5). In the past, the trade of cocoa was controlled by states and as a result volatile prices were often attributed to political instability and corrupt governments.²¹ Later in the 20th century, the cocoa market experienced liberalization and now independent harvesters and farmers deal primarily with private corporations and the states are decreasingly involved; this has reduced the volatility in cocoa commodity prices. However, according to the International Cocoa Organization (ICCO), today the cocoa trade faces different kinds of pressures: pressure for fair trade and organic, increasing overall global demand for cocoa, and changes in climate.²² These pressures are having negative effects on the cocoa production and could have significant implications on the manufacturing and price of Swiss chocolate – a discussion of the uncertain future of cocoa as a barrier to entry of the Swiss chocolate industry will occur in subsequent sections of this paper (see Appendix 5 for the most important raw materials for Swiss chocolate and their average import prices over the last three years).

Sugar is of course also one of the most important ingredients for chocolate, be it Swiss or any other kind. However, where most major manufacturers in other countries depend almost entirely on sugar imports from the major sugar production countries such as Brazil (31% of global sugar production) and India (21%), Switzerland does not.²³ In fact, Switzerland has been growing its own sugar, particularly sugar beets, since 1898 and protectionist policies have secured production ever since. Moreover, despite the liberalization and internal reforms in the 1980s, self-sufficiency in sugar production in Switzerland has increased from 55% in 1990/92 to 85% in 2002 and has remained steady between 65% and 95% over more recent years.²⁴ Gross national sugar consumption in Switzerland amounted to 392,657 tonnes in 2001, of which 45% was imported and the remainder (55%) was produced domestically.²⁵ Of course not all of the sugar consumed goes directly into chocolate manufacturing but the statistic does demonstrate the autonomy of Swiss sugar production.

The final, main ingredient is probably perfectly obvious coming from the home of milk chocolate and cheese. The dairy input of the Swiss chocolate supply chain is a major one and of course one that the Swiss do not have to depend on external sources or go very far to get. If there is anything that differentiates Swiss chocolate manufacturers and their products it is their unobstructed and consistent access to some of the best milk and dairy products in the world. For instance, back in the 1898 when Mr. Cailler began looking for the perfect place to set up his first chocolate factory, he looked no further than Broc, in the Gruyère region in the heart of the Swiss Alps. This choice was mainly due to its access to glacial clean water as well as 1775 cows, which all graze within a 30-kilometre radius of Broc. Cailler currently has partnerships with 56 local farmers and to this day derives 100% of their milk requirements for production from these local sources.²⁶ But Maison Cailler, albeit, a luxury brand that maintains a commitment to locally derived inputs as part of its brand, is no exception. In 2011, some 590,000 cows on 32,000 farms produced over 4 million tonnes of milk in Switzerland, of which 73% is manufactured into cheese, yoghurt, butter, and of course, chocolate.²⁷

Naturally, mere production is not enough, but both domestic milk and sugar production in Switzerland have to undergo rigorous and regimented quality control before their output can be sold to added-value manufacturers or end users. The quality of sugar, for example, is determined using the EU rating, which is based on a scale from 1 to 40. Switzerland only produces first grade sugar (rating 1-6) and mostly imports second grade sugar (between

²¹ Chocosuisse (2001)

²² ICCO (2012), *The World Cocoa Economy 2012: Past and Present*, July 2012, p. 4-5.

²³ FOA (2002), *Sugar and Beverages*, <http://www.fao.org/docrep/006/y4343e/y4343e05.htm>. Accessed November 24, 2014.

²⁴ Gerster, R. & Jenni, R. (2002) 'Sugar Protection in Switzerland' *Swiss Development Cooperation and the National Sugar Institute in Maputo (Mozambique)*, December 2002, p. 1.

²⁵ Gerster & Jenni (2002)

²⁶ Cailler (2014), *Milk*. <http://cailler.ch/en/about-cailler/the-brand-cailler/milk/>. Accessed November 22, 2014.

²⁷ Swiss Confederation (2013) 'Milk Production in Switzerland' *Federal Statistical Office News*, February 2013, pp. 1-4.

80-90%), although only up to a maximum rating of 10.²⁸ This difference in grade is linked to price as Swiss sugar producers can therefore charge a premium for their higher quality and can readily compete with cheaper imports.

The commentary that must be made is regarding the shortness of the Swiss chocolate industry's supply chain. Despite having the international reputation of some of the world's best chocolate, the Swiss account for 1% of the world's consumption of cocoa beans²⁹ and 0.175% of sugar imports.³⁰ Together with this minimized dependency, the remainder of inputs used to create arguably the world's best chocolate is done completely "in-house." This finding of the Swiss chocolate industry's supply chain length begs the question for further research, what is the relation between the length of a supply chain and the level of quality perceived and experienced by the end-user. Sadly this question extends beyond the scope of this paper but should be addressed in future literature. Furthermore, the Swiss have always been icons for efficiency and world-class quality and this could be no more evident than in how they make their chocolate.

Part V: Barriers to entry and the future of chocolate production

The Swiss chocolate industry, and the chocolate industry as a whole, for that matter, is an attractive one. As discussed in Part I, it is evident that there is a relatively small number of producers (18 in total) in the Swiss chocolate industry, so naturally one must conclude that the market is not necessarily saturated. Moreover, the overall global chocolate industry is expected to have a compounded annual growth rate (CAGR) of 2.7% between the years of 2011 and 2016.³¹ In fact, both domestic and foreign demand for Swiss chocolate has grown steadily over the past decade, there is no shortage of raw materials (with the exception in cocoa forecasts, to be discussed later in this paper), and start-up costs are not so astronomically high that they pose as a significant barrier (many prominent chocolate brands were started in someone's kitchen); all of these factors would lead to the assumption that this is a relatively attractive industry for new entrants. Moreover, considering the high demand of Swiss chocolate, the question is how come this industry has not undergone economies of scale and mass production? It will be presented in this section that not just anyone can simply become a Swiss chocolatier; it is in fact the essence of Swiss business culture that has made Swiss chocolate so special but is also one of the industry's major barriers to entry.

First of all, a direct barrier to entry and major threat to the global chocolate industry is the depleting annual cocoa harvest. Within the last year, major chocolate manufacturers, including Swiss chocolate manufacturer, Barry Callebaut (headquartered in Zürich), have claimed that the world is running out of chocolate.³² Chocolate deficits, where farmers produce less cocoa than the world is current consuming are becoming more and more the norm and today the world currently sits in what could be the longest streak of consecutive cocoa deficits in more than 50 years, where each succeeding deficit is larger than the last. For instance, in 2013 the world ate approximately 70,000 metric tonnes more cocoa than it produced and in 2020, this could increase to 1 million metric tonnes.³³ The reason for this huge discrepancy in supply and demand is two-fold. First, there is surging demand in emerging markets, particularly in Asia (China and India), where not only is the population increasing but also income and living standards whereby the growing middle class can more readily afford small luxuries such as chocolate.³⁴ The second smoking gun is undoubtedly the increasing rate of climate change. The Ivory Coast and Ghana, two of Switzerland's major cocoa suppliers (Appendix 4), have experienced prolonged unseasonably dry weather and a corresponding bout of fungal disease known as "frosty pod." According to the ICCO, the weather combined with

²⁸ Gerster & Jenni (2002)

²⁹ Chocosuisse (2001)

³⁰ 0.175% = Swiss imports of 177,200 tonnes (Gerster & Jenni, 2002) ÷ global production 101.2 million tonnes (FOA, 2002)

³¹ Rohan (2011)

³² Javier, Perez, M. and Almeida, I. (2013) 'Chocolate eaters drive record cocoa output deficit: Commodities' *Bloomberg Businessweek*, 13 December 2013. <http://www.bloomberg.com/news/2013-12-17/chocolate-eaters-drive-record-cocoa-output-deficit-commodities.html>

³³ Javier, Perez, M. and Almeida, I. (2013)

³⁴ Javier, Perez, M. and Almeida, I. (2013)

the disease is believed to have wiped out 30 to 40 per cent of global cocoa production.³⁵ Given that cocoa makes up about 10 per cent of the average price of a chocolate bar, these shortages will have major implications for the future of the chocolate industry; for example, in August 2013, Switzerland's Nestlé SA reported a six-month ended fall in profit margins attributed to the 29 per cent increase in cocoa prices as of that June.³⁶ Since 2012, cocoa prices have climbed by more than 60 per cent and these trends are fully expected to continue.

The other barrier to entry might not be as clear and direct as the global decreasing stock of cocoa but just as powerful for any who looks to do business in Switzerland. As a country, Switzerland is known for its unwavering commitment to quality and it is represented in everything that it produces from its watches to its chocolate. Furthermore, this quality is at the expense of quantity and the Swiss like it that way. In fact, the Swiss actually put a cap on level of production for many products, such as wine. Even if the season is spectacular, Swiss vigneron (winemakers) are only permitted to make a certain number of bottles of wine each year for the sake of quality. Although there might not be the same quota placed upon chocolate production, the same mentality applies. The global brand of Swiss chocolate is a trademark of world-class quality and Chocosuisse, the guild of Swiss chocolate makers, have worked exceptionally hard to keep it just so. As it is the definition of a luxury good (high quality, high price, relative scarcity) it is probably just so that the Switzerland only produces 2% of the world's chocolate sales.³⁷

CONCLUSION

The Swiss chocolate industry is one of quality, consistency and luxury. Every brand, every company, every product is connected to the country in some way, whether through its supply channels, its cultural norms, its commitment to quality, or its history. As we have seen through this industry analysis and brief historical overview, chocolate truly flows freely in Switzerland and in its essence represents everything that Switzerland stands for. From this we can draw significant conclusions not simply about the economics of chocolate but about Switzerland itself and its implications on doing business there.

By using a modified version of Michael Porter's Five Forces model for industry analysis, we were able to analyse the industry from several perspectives. First, by analyzing the existing marketplace and competitors within the Swiss chocolate industry it was clear that although they compete for market share and prestige, they also work cohesively through their association, Chocosuisse, to maintain the unofficial brand recognition of Swiss chocolate worldwide as a trademark for quality and luxury. We also saw that of the largest manufacturers of chocolate in the world, the top three (Mars, Inc., Mondelez International Inc., and Nestlé SA) each conduct large-scale operations and/or are headquartered in Switzerland, always pointing to the fact that Switzerland truly is the chocolate capital of the world.

Second, through a small scale, price elasticity experiment, the preferences of consumers from different preference backgrounds before and after a taste test demonstrated that there is really no substitute for Swiss chocolate and that the average consumer, even when on a tight budget, is actually willing to spend up to 50% more on chocolate if it has the promise of Swiss quality.

In part three of this paper, an analysis of worldwide consumption and consumer profile of the Swiss chocolate industry showed the rise of the convenience buyer, the value buyer and the luxury buyer in the future of global chocolate sales. It discussed how manufacturers are marketing and modifying existing products according to each

³⁵ Javier, Perez, M. and Almeida, I. (2013)

³⁶ Javier, Perez, M. and Almeida, I. (2013)

³⁷ Global chocolate sales in 2010: USD\$83.2 billion and expected to grow at CAGR 2.7% until 2016 (Rohan, 2011):

$83.2 * (1 + 0.027) = \text{USD}\90.1 billion adjusted sales in 2013

2013 Sales of Swiss chocolate = 1.683billion CHF = USD\$1.815 billion*

*Conversion at average 2013 historical exchange rate = 0.9271 CHF / 1 USD (Credit Suisse 2013)

$\text{USD}\$1.815 / \text{USD}\$90.1 = 0.02 = 2\%$ global market share of chocolate sales

of these emerging segments and the implications of such on the global industry. Moreover, emerging markets in Asia and the Middle East will put pressure on Swiss chocolate brands as their products become in higher demand with the redistribution of wealth to the expanding middle class in these emerging markets. Furthermore, the domestic market itself is vitally important for Swiss manufacturers as the Swiss consumes more chocolate per capita than any other population, which is reflected in their cultural tendency towards the finer things in life and spending a greater portion of their annual income on leisure and indulgences, i.e. chocolate.

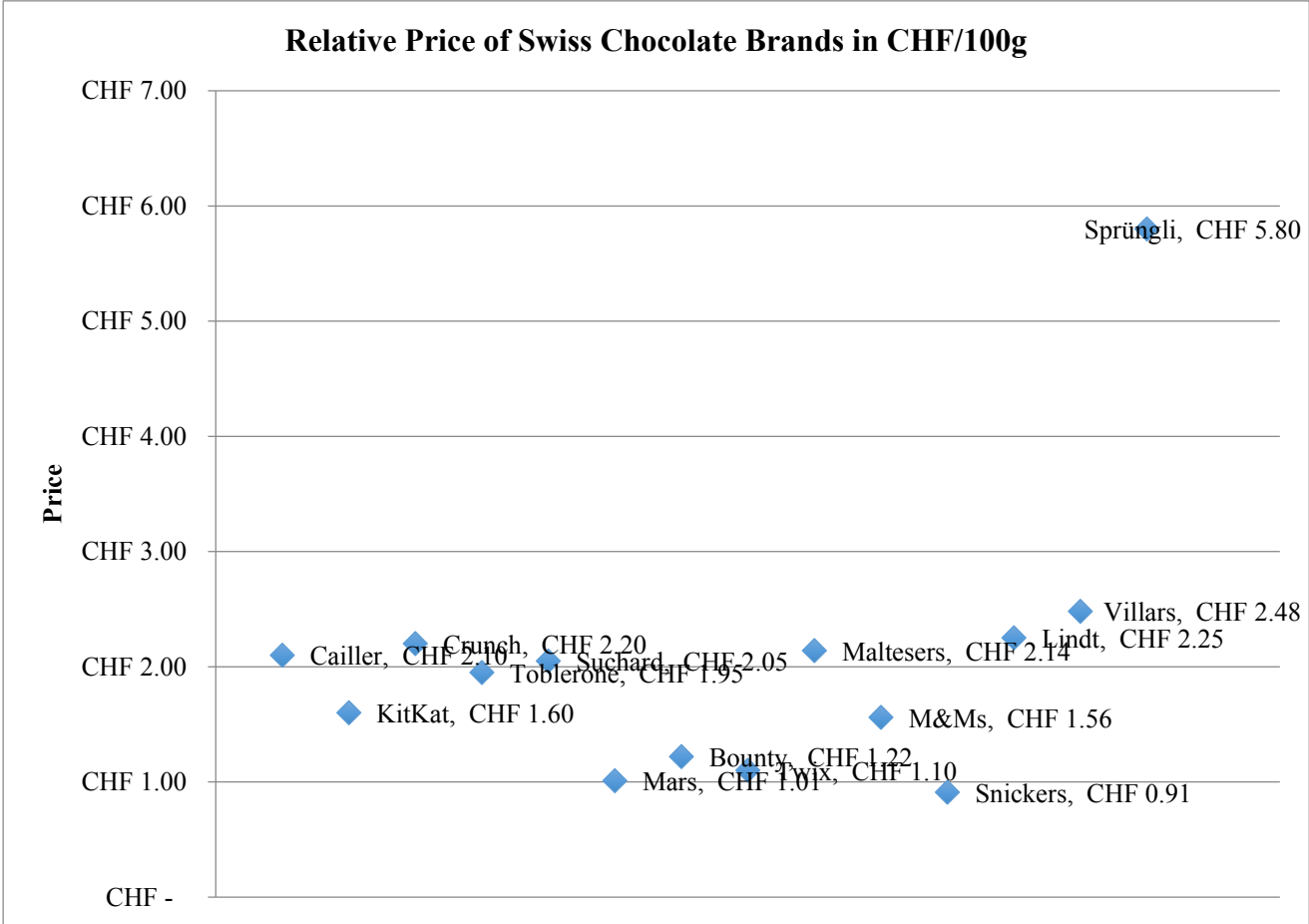
The main finding of part four when analyzing the Swiss chocolate industry's supply chain was how notably short it was and the connection made between the relative length of a supply chain and the perceived value of the finished good. This is definitely a topic for further research and I would like to explore this further, however, regrettably it extends beyond the scope of this preliminary paper but should be addressed in future literature.

Fifth and finally, this paper addressed potential barriers to entry of the Swiss chocolate industry. With the declining cocoa production, attributable to disease and climate change, and inclining global demand for chocolate, particularly concentrated in the aforementioned emerging markets (i.e., China, the Middle East, and India), the deficit in cocoa stocks is worrisome for current producers and is most definitely a large barrier to entry for any potential entrants given the future of the industry is in question. Another barrier identified was the Swiss themselves and the cultural differences as well as political agendas that have minimized the scope and scalability of chocolate production for the sake of consistent and desirable Swiss quality.

In summary, the Swiss chocolate industry is dynamic and innovative as it is solid, predictable and static, and the Swiss like it that way. New products and age-old recipes come together with always the promise of perfection, quality, and a small taste of Switzerland.

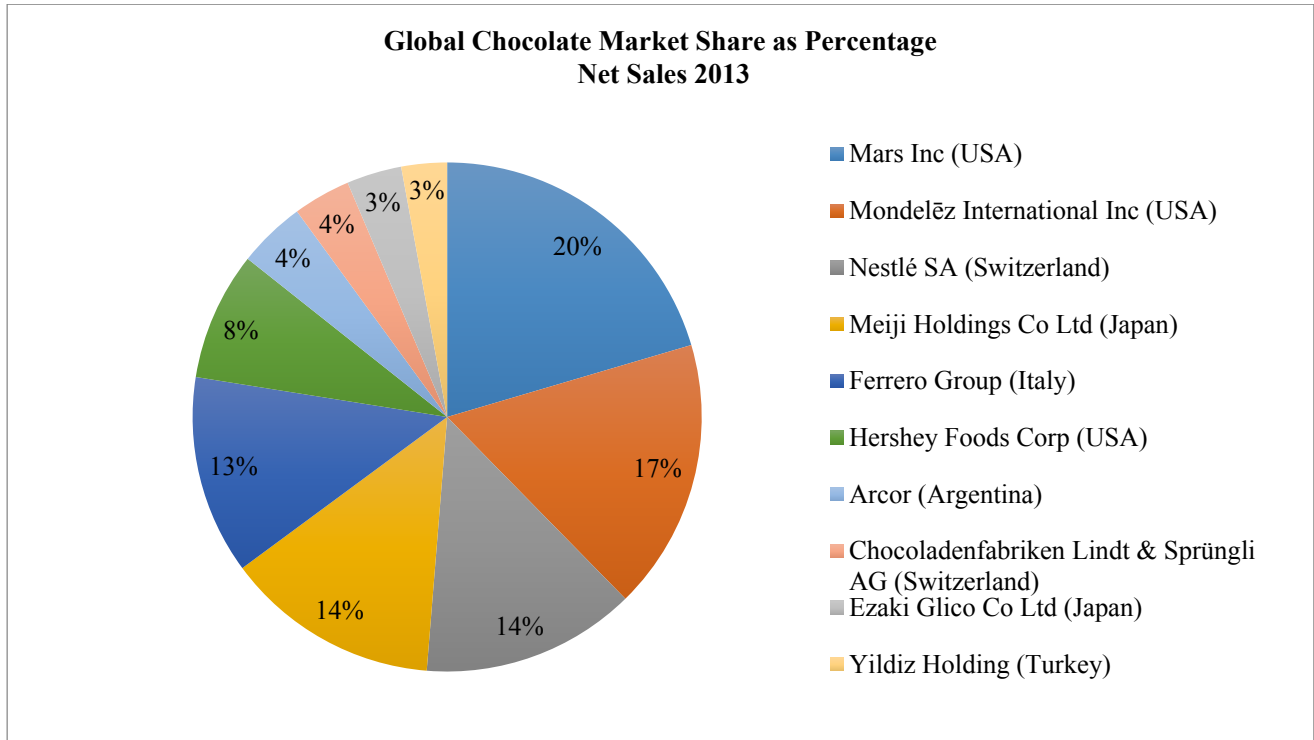
APPENDICES

Appendix 1: Price Map of Relative Prices of Swiss Chocolate Brands in mid-range Supermarkets located in Zürich



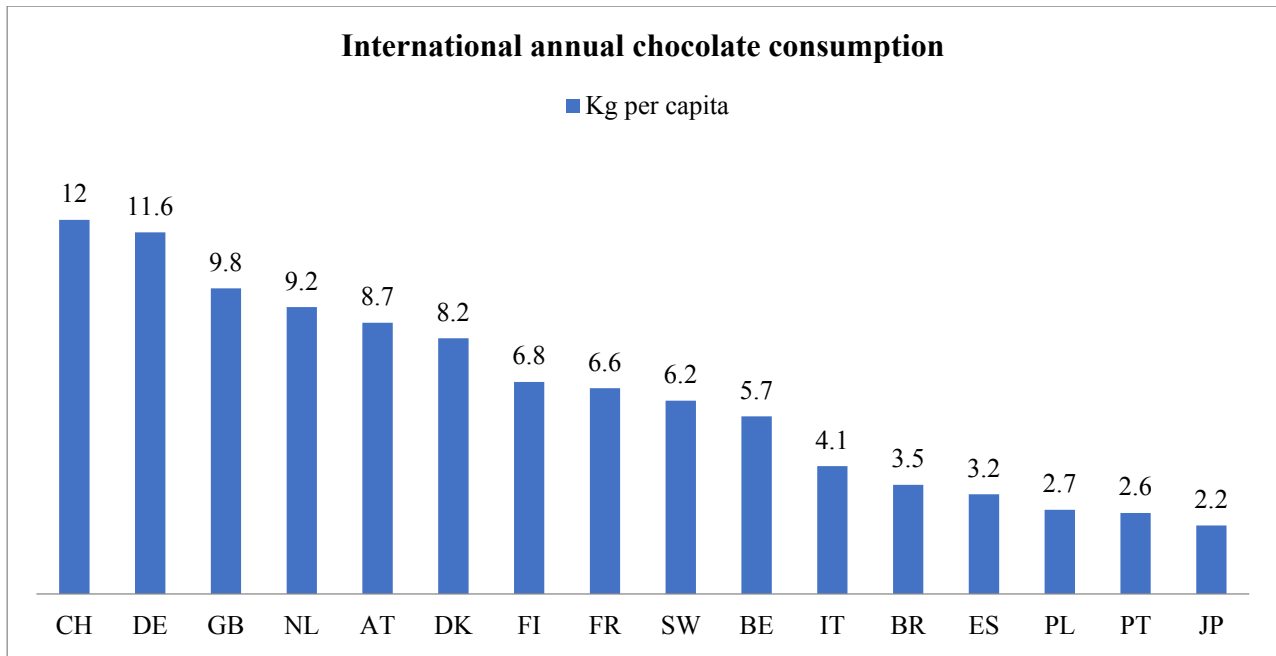
Source: primary market data collection

Appendix 2: International market share of largest chocolate manufacturers



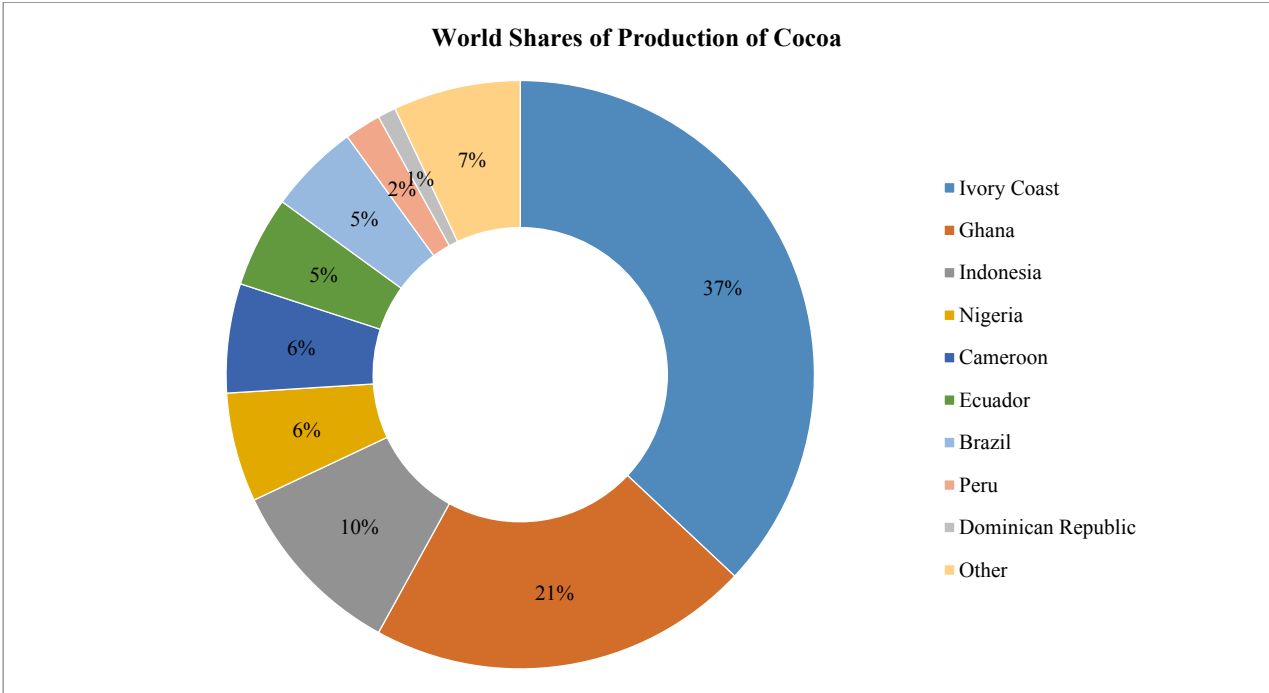
Source: ICCO, 2013

Appendix 3: International chocolate consumption (2013) per capita



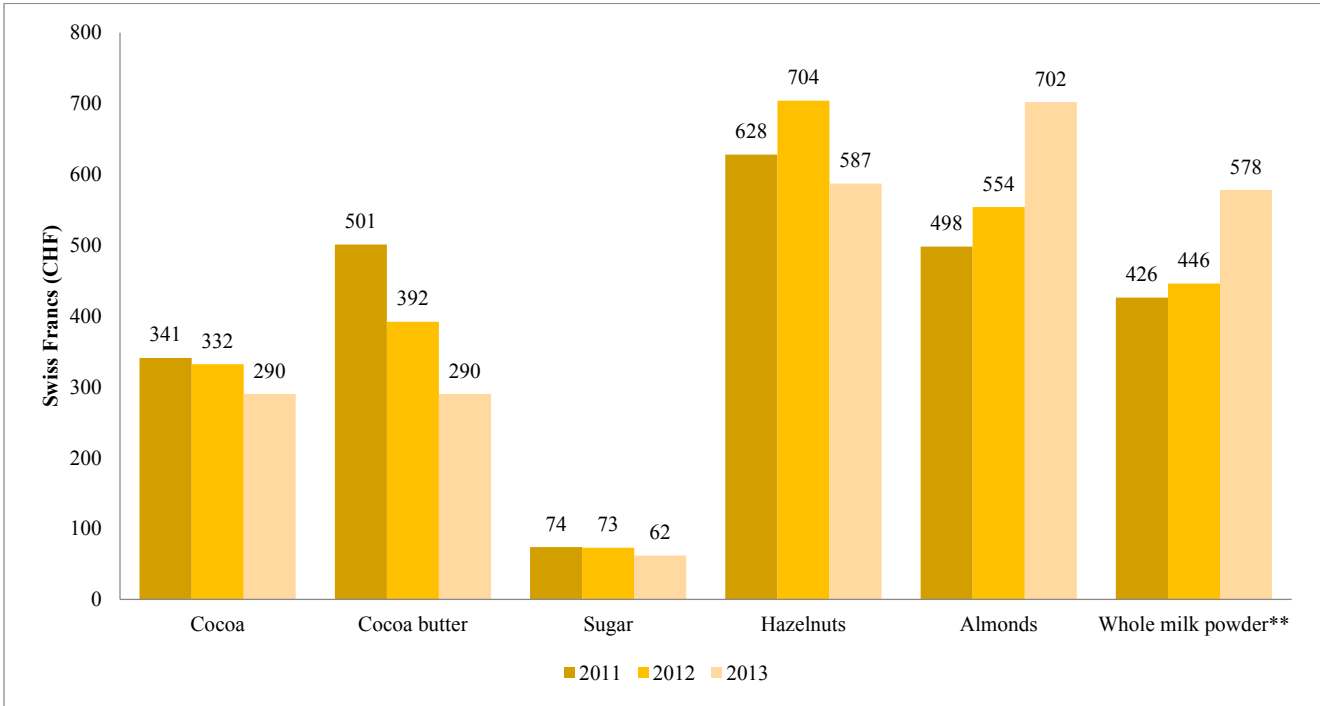
Source: Chocosuisse, 2013

Appendix 4: World Shares of Global Cocoa Bean Production (2014)



Source: ICCO, 2014

Appendix 5: Average Import Prices of Raw Materials for Swiss Chocolate, 2011-2013 (in order of importance)



Source: Chocosuisse, 2013

Appendix 6: Examples of Swiss Chocolate Products



Lindt: Truffles



Barry-Callebaut:
Cocoa butter



Nestlé:
KitKat



Frey: Pralines



Nestlé:
Cailler of Switzerland

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