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**A STRATEGIC MARKET  
RESEARCH FOR VALIO LTD.:  
VIETNAMESE POWDERED  
MILK MARKET ANALYSIS**



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## **A STRATEGIC MARKET RESEARCH FOR VALIO LTD.: VIETNAMESE POWDERED MILK MARKET ANALYSIS**

ABSTRACT:

Valio Ltd, a Finnish owned dairy producer, is the market leader and guardian of Finnish healthy lifestyle. Beyond the success in European market, the company is now aiming to other destinations in Asia. Vietnam, an emerging market in Southeast Asia with large population, has a great demand for dairy products as well as other consumer goods. It is estimated to be among the 20 biggest milk importers in the world, and the amount of powdered milk imported is increasingly high.

This study, commissioned by Valio Ltd, is an initial attempt to investigate the potential of Vietnamese dairy industry by undertaking a specific research on powdered milk market as well as the consumer purchasing habits and product interests, based on which the company may have proper strategies for its business expansion later on. To achieve this goal, an external analysis of the country, the powdered milk industry and consumer behaviors are entirely studied on.

The market research was conducted using both qualitative and quantitative methods, based on deductive approach. With a theoretical framework provided in the literature part, secondary data was collected from academic reports, articles and other legal documents; meanwhile primary data was obtained from interviews with expert and a consumer group, a survey on consumer habits and authors' own observations to analyze the market for the empirical section.

By way of conclusion, Vietnam is a very fast developing market where the consumption of powdered milk products is emerging. Likewise, the demand for new powdered milk as well as free lactose products is also favorable these days. Although there are evitable obstacles and challenges the company should take into consideration prior to making the internationalization, this market has many advantages that may not be found in other countries. Finally, the authors positively recommend Valio to expand its product portfolio to this promising destination.

KEYWORDS:

Powdered milk, powder, consumer goods, Valio, Vietnam, dairy industry, lactose free, ingredient, dairy market

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## LIST OF ABBREVIATIONS (OR) SYMBOLS

PEST	Political, Economic, Socio-cultural, Technological
4 Ps	Product, Price, Promotion and Place
WB	World Bank
ASEAN	Association of Southeast Asian Nations
APEC	Asia-Pacific Economic Cooperation
IMF	International Monetary Fund
CAGR	Compound Annual Growth Rate
BMI	Business Monitor International
EMI	Euro Monitor International
FMCG	Fast Moving Consumer Goods
BCG	Boston Consulting Group
FDI	Foreign Direct Investment
GSO	General Statistics Office
CIA	Central Intelligence Agency
R&D	Research and Development
MIT	Ministry of Industry and Trade
WSJ	Wall Street Journal
PR	Public Relation

# 1 INTRODUCTION

## 1.1 Background

Valio, established in 1905, is the market leader in Finnish dairy industry and a famous worldwide brand for natural healthy tastes, innovative dairy products and technologies. The company holds a diversified product portfolio as a producer of cheese, powdered ingredients, butter, yogurt, functional food and milk; and it owns various patented technologies, typically lactose-free production. At the present, Valio is looking for new potential markets for its business expansion. (Valio Oy, 2014)

On the other hand, Vietnam has been a salient example of fast growing economies for nearly a decade. With a competitive consumption volume, it is considered as one of the most attractive emerging markets in the world (WorldBank, 2010). The country belongs to the most developing Fast Moving Consumer Goods (FMCG) marketplaces in Asia, in which the spending of milk based products is among the highest categories, and powdered milk is the fastest developed sector of dairy industry (Nielsen, 2013).

Given the above conditions, it is reasonable for Valio to aim Vietnam as the next promising destination. Commissioned by Valio Ltd, this thesis, therefore, is to undertake a research on Vietnamese powdered milk market as a basis for an exploration of consumer purchasing habits and product interests, including lactose free product demands. This study is also inspired and motivated by the authors' intention to provide the case company with local expertise and a profound understanding about the target market.

## 1.2 Research objectives and questions

Assigned from Valio, this thesis aims to *research Vietnamese powdered milk market*; and *identify the consumers' purchasing habits and interests*. As a commissioned thesis, the following main research question was proposed:

***Is the powdered milk market in Vietnam potential for Valio's products?***

In order to fully answer the main research question, the below sub-questions were formed with corresponding objectives.

***Sub-question 1: How is the powdered milk market in Vietnam?***

Suggested by Valio, this sub-question targets to:

- *Explore the market size and the consumption growth*
- *Discover what types of powdered milk are available in the market and how they are packaged*
- *Evaluate the pricing situation of those products*
- *Analyze how powdered milk products are marketed*

***Sub-question 2: How are the consumers' purchasing habits and product interests?***

The objectives of this question are to

- *Assess the powdered milk consumption habit*
- *Examine the sources of information used before purchasing and the common distribution channels chosen*
- *Explore the product selection criteria*
- *Locate future demands for new products and lactose free products*

**1.3 Scope and limitation**

It should be noted that this thesis does not study the whole Vietnamese dairy industry, but *Vietnamese powdered milk market*. Other non-drinking milk products containing milk powder; for example yogurt, dessert, bakery, ice cream, etc. are not included.

As the company's expectation, *Vietnamese powdered milk market* will be analyzed based on five fields: sales volume and consumption, types of products, pricing, packaging, and manufacturers' marketing strategies. Thus, other elements will be ignored.

Concerning pricing situation, this thesis only defines and analyses the pricing levels of current main players' powdered milk products. Any pricing strategies will not be covered.



Last but not least, since the company only requires *acknowledging consumer market situation*, the thesis will not provide either any market entry plan or analysis of dairy companies in Vietnamese market specifically.

#### 1.4 Thesis structure

The structure of this study is concisely indicated as the following figure:

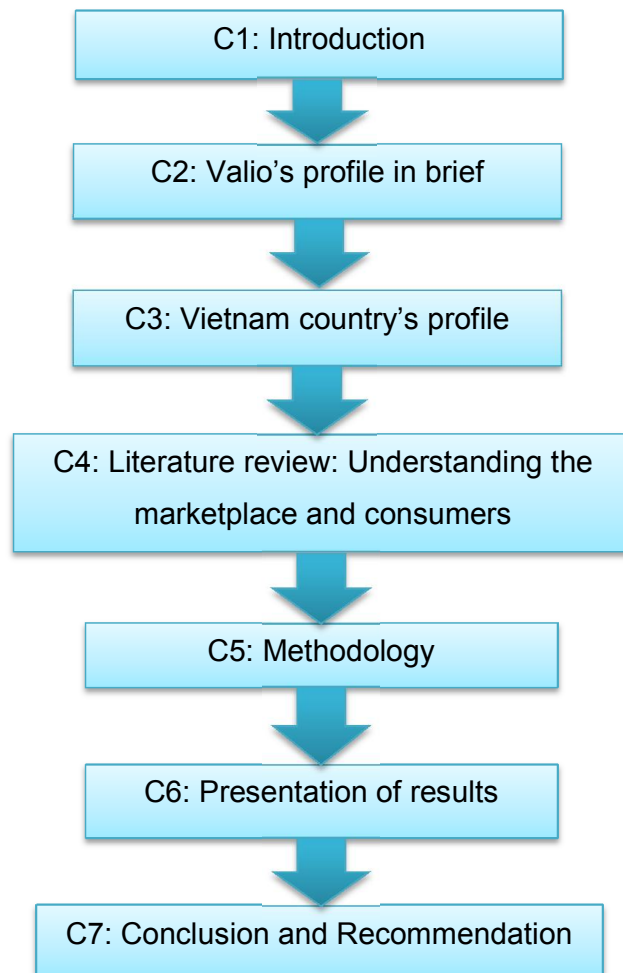


Figure 1: Thesis structure

#### Chapter 2: Company's profile

In this chapter, an overview about Valio Ltd. and its Lactose free licensing business are presented.

#### Chapter 3: Country's profile

Vietnam country portfolio is provided with a brief on macro-environment analysis (PEST).

#### **Chapter 4: Literature review**

This chapter provides an appropriate theoretical framework employed to strategically analyze the target market from general to specific. Information collected from previous studies regarding market situation, development trends and other issues relating to the topic is given as well.

#### **Chapter 5: Methodology**

The research methods applied for primary data collection and data analysis in this study are examined in chapter five.

#### **Chapter 6: Presentation of results**

In this division, the data on consumer purchasing habits and interests, collected from primary sources (survey and interviews) is presented.

#### **Chapter 7: Conclusion and recommendation**

This chapter summarizes the key findings and concludes if Vietnam is potential for the case company's expansion strategy. The authors also give recommendations for further research in order to take the plan from ground to actions.

## **2 COMPANY'S PROFILE AND VALIO EILA<sup>®</sup> LACTOSE FREE TECHNOLOGY IN BRIEF**

### **2.1 Company's profile**

Being a market leader in Finnish dairy industry, Valio has a massive product portfolio including milk drinks, cheeses, spreads, juices and other functional foods that are well-known for natural healthy taste. In 2014 the company employed around 4400 employees globally, invested 32 million euros in R&D, and earned around 2 billion EUR turnovers, as a result of its relentless efforts in R&D, consumer insight study and open culture. Valio has many successful and famous brands worldwide such as Viola spreads, Finlandia cheeses, etc. With various dairy products and innovative technologies, Valio's brands are constantly recognized all over the world (Valio Oy, 2014).

Having the presence of Valio's products in 67 countries, the firm has five subsidiaries, namely OOO Valio in Russia, Valio Sverige AB in Sweden, Valio Baltics in Estonia, Finlandia Cheese in the United States and Valio Shanghai Ltd., in China. In each country, Valio has different strategies for developing its core products. For instance, while OOO Valio focuses on importing and delivering milk drinks, yoghurt, butter, cheese, etc. to the Russian market, Valio Sverige AB in Sweden concentrates on lactose free and fresh dairy products such as yoghurt, cooking products and fermented milk (Valio Oy, 2014).

### **2.2 Valio Eila<sup>®</sup> Lactose free licensing**

Valio is famous as one of the leading innovative companies in Finland where dozens of healthy and creative products are sold. Being aware that lactose intolerance is a prevalent issue, Valio Eila<sup>®</sup> was created and has become one of the most successful brand names. This patented, award winning lactose free technology can provide free lactose drinks (less than 0.01% lactose), yet keep the taste exactly like original milk, for whom suffering from lactose intolerance. The know-how made Valio the first company in the world producing entirely lactose free milk with real fresh milk taste. Perceiving that the demand for this type

of product is remarkably high in not only Europe but also Asia and America, the company has managed to internationalize it. (Valio Oy, 2014)

Currently, Valio Eila<sup>®</sup> lactose free technology is present in many countries, Finland, Switzerland, Sweden, Spain, South Korean, Belgium, the Netherlands, Russia, Norway and Denmark. With the increasing demand for lactose free products, Valio is applying two corporate strategies to expand to other markets.

On one hand, lactose free milk powder made by spray drying pasteurized lactose free skimmed milk is exported to food manufacturers in other countries. The partners can employ this ingredient to produce various types of food such as milk chocolate, ice cream, bakery products, ready meals, soups, sauces and pet foods. On the other hand, Valio licenses lactose free milk production know-how to its partners. This licensing package provides licensees an access to the patented technology, analytical methods and expertise of the production chain. The partners are also supported with go-to-market knowledge and marketing communication experience by the licensor. Currently all together over 100 million liters of lactose free milk is produced annually with Valio's lactose free technology. (Valio Oy, 2014)

## 3 COUNTRY'S PROFILE

### 3.1 Country overview

Since the end of Vietnam War in 1975, Vietnam has unified by the Communist party (BBC News, 2013). The country experienced slow economic growth for over a decade due to the ineffective leadership policies. This resulted in a new policy called **“Doi Moi”** (can be equivalently translated as “Renovation”) enacted in 1986, since then the economy has transformed and grown remarkably. Vietnam’s main goals are to increase economic liberalization, reform economic structure, and enhance export-driven industries (CIA, 2014). Became a member of ASEAN in 1995 and APEC in 1998, chaired successfully the Annual Meetings of World Bank Group and IMF’s Boards of Governors in 2009, undertook ASEAN Chairmanship in 2010, Vietnam is demonstrating its important role in the region and the globe. ( (The WB, 2013) and (New Zealand Ministry of Foreign Affair and Trade, 2013))

The table below briefly provides updated essential figures of the nation:

Table 1: Statistics of Vietnam (CIA, 2014)

<b>Official name</b>	<b>Socialist Republic of Vietnam</b>
<b>Population</b>	93,421,835 (July 2014 est.)
<b>Population growth rate</b>	1% (2014 est.)
<b>Total area</b>	331,210 square km
<b>Capital city</b>	Hanoi
<b>Religions</b>	Buddhist 9.3%, Catholic 6.7%, Hoa Hao 1.5%, Cao Dai 1.1%, Protestant 0.5%, Muslim 0.1%, none 80.8% (1999 census)
<b>GDP official exchange rate</b>	\$170 billion (2013 est.)
<b>GDP per capita</b>	\$4000 (2013 est.)
<b>Currency</b>	Vietnam Dong (VND)

<b>Export</b>	\$128.9 billion (2013 est.)
<b>Import</b>	\$121.4 billion (2013 est.)

### 3.2 PEST analysis

According to Kotler and Armstrong (2012, p. 71), macro environment consists of 6 major factors: demography, economy, politics, nature, technology and culture. To understand this, a useful tool that can be utilized is PEST analysis, as suggested by Manktelow (2005, p. 60). This instrument includes four fundamentals, Political, Economic, Socio-cultural and Technological with the purpose to classify and realize if there are situational impacts or potential risks from the macro-environment on businesses. (Smith & Raspin, 2008, p. 64). More detail about PEST analysis theory can be found in appendix 2.

#### 3.2.1 Political factor

The Socialist Republic of Vietnam is controlled by a single-party Communist state and the Government is trying to maintain its monopoly on political power (BBC News, 2013). This regime is likely to have central economy rather than autonomy control for organizations operated in Vietnam. However, Vietnam is evaluated as a politically stable nation that attracts numerous international investors (The WSJ, 2013).

Though the country is being operated under Socialism system, it is not a completely separated nation from the rest of the world; in contrast, the system allows it to be more open and outward-looking. It resulted to form a new rule so-called “*Socialist-oriented market economy*”. This milestone has pushed commodity and financial market to a large scale where products in the market become more diversified (Socialist Republic of Vietnam, 2013). Having said that, political oppositions are repressed within the country, and opportunities for citizens to participate governance are still very low, as weighed by the World Bank (2013). Therefore, despite many open-minded economic policies, the regime is still evaluated as “dictatorship” to a certain degree.

### 3.2.2 Economic factor

Since the new policy “**Doi Moi**” (“Renovation”) was launched in 1986, Vietnam’s economy started transforming drastically. From one of the poorest countries in the world right after 1975, with the GDP per capita under \$100, it became a lower middle income nation with GDP per capita in 2013 being \$4000. Likewise, the poverty rate has declined rapidly from 58% in 1993 to 14.5% in 2008. (The WB, 2013)

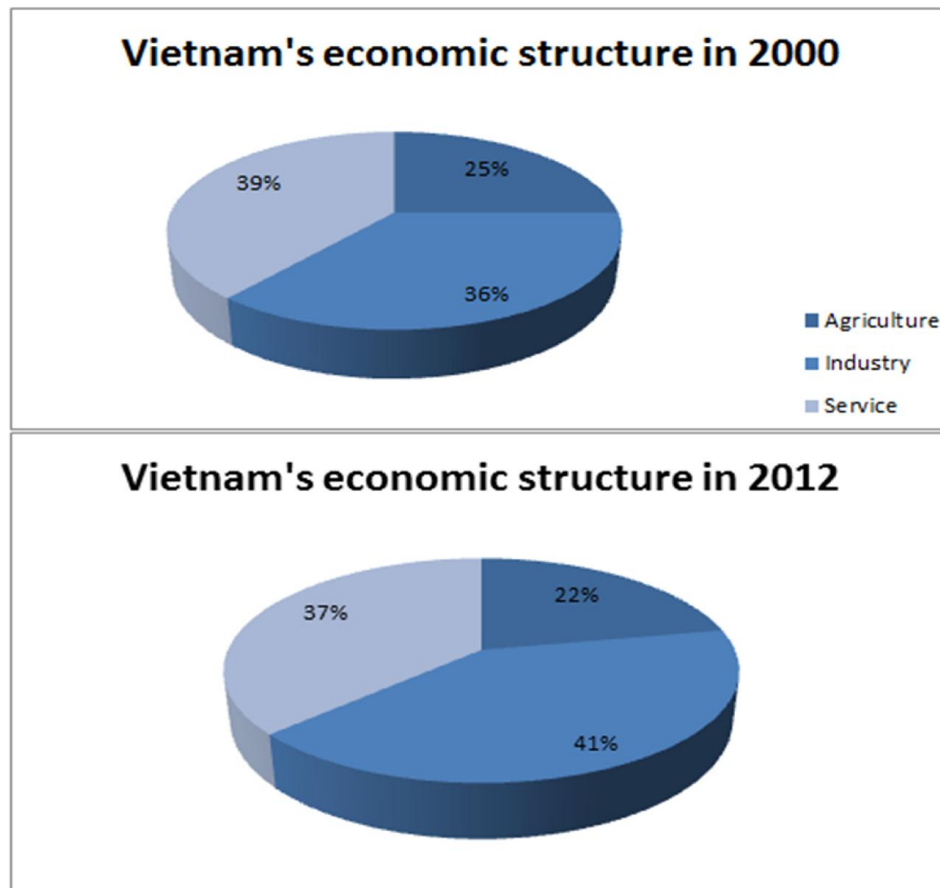


Figure 2: Vietnam’s economic structure in 2000 and in 2012 (CIA, 2014)

From 2000 to 2012, Vietnam’s economic structure was considerably converted, the industry area proportion surged from 36% to 41%, meanwhile agricultural and service areas are declined. This is one of the government’s plans aiming to an industrialized economy from the originally agricultural base (Socialist Republic of Vietnam, 2013).

Vietnam's abundant and cheap labor force is one of the attractive elements that encourage foreign investments. Its labor cost is the second lowest in Asia, after Cambodia (The WSJ, 2013). Having said that, the fast increase in labor force of more than 1 million per year causes several challenges, typically, unemployment, low living conditions, etc. (CIA, 2014). Furthermore, the government's policy to encourage FDI leads the nation to become more and more dependent on the world's economic changes and global crisis. One evident reflected is the GDP in 2012, which gained only 5%, the lowest gain since 1999 (CIA, 2014). Further obstacles are inflation, continuous currency devaluation and trade deficit that cause increase in current account deficit, fiscal deficit and public debt (The WSJ, 2013).

### **3.2.3 Socio-cultural factor**

With the population over 93 million (July 2014), Vietnam is ranked 15<sup>th</sup> most populous countries in the world (CIA, 2014). It has 59 provinces and 5 direct-controlled municipalities: Hanoi, Ho Chi Minh, Da Nang, Hai Phong and Can Tho. 54 ethnic groups live across the country, in which 86% are Kinh (Viet) (The Canadian Trade Commissioner Service, 2012). Vietnamese is the only official language and English is preferably chosen as the main foreign language. In terms of age structure, the median age (25-54 years) accounts for the highest proportion (44.4%) meanwhile 65 years old and above hold the lowest proportion in the structure, being 5.6%. (CIA, 2013)

The social issues can be summarized as follow:

- Education development is one of the most important priorities of the government's policies. However, although countless methods for improvement have been suggested, theory is still emphasized more than practice.
- Freedom of religion is respected but religious activities are still under state control.
- As a new emerging market like other developing countries, it is undeniable that social problems, such as environmental contamination, traffic congestion, or downgraded infrastructure, etc. are rising. (GSO, 2014)



### **3.2.4 Technological factor**

Technology development and its applications in Vietnamese daily life are still very low compared to other developed nations. Low labor productivity and competitive ability pose a threat of lagging behind other developing countries in the future (GSO, 2014). Hence, the Government cares about technology as a priority in economic development, along with education improvement. The key developments include biotechnology, information technology, NANO technology and automation technology (Socialist Republic of Vietnam, 2014). Vietnamese authorities also encourage universities, colleges and vocational schools to develop their IT hubs and create more opportunities for the talented. In addition, co-operations with foreign organizations are supported strongly.

## 4 LITERATURE REVIEW: UNDERSTANDING THE MARKETPLACE AND CONSUMERS

### 4.1 Market attractiveness:

There are various methods to analyze a particular market for investment decisions and one of the most effective ways is suggested by Boston Consulting Group (BCG). This model comprises two key aspects: **market attractiveness** and **competitive strength of the company** as indicated in the following table.

Table 2: Dimension of market attractiveness and competitive strength (Ghuri & Cateora, 2006, s. 272)

Market attractiveness	Competitive strength of the company
<b>Market size (total and segments)</b>	<i>Market share</i>
<b>Market growth (total and segments)</b>	<i>Marketing capacity</i>
<b>Competitive conditions</b>	<i>Product and positioning fit</i>
<b>Market uncontrollable (cultural, legal and political environment)</b>	<i>Quality and distribution services</i>

The idea behind this model is that, during the process of country selection, market attractiveness should be analyzed first as a fundamental to assess the company's competitive strength. For instance, in accordance with market size, the company should explore its capability to gain some market share. Similarly, looking at the market growth, the company should determine whether or not its marketing capacity and resources meet the market growth, etc. (Ghuri & Cateora, 2006, p. 272)

Based on Valio's requirements, this research only concentrates on the former part, *market attractiveness*, while the latter will be strategically studied by the company later on. Market attractiveness includes market size, market growth, competitive conditions and market uncontrollable. Nevertheless, since PEST

analysis has summarized concisely socio-cultural and political conditions, *market uncontrollable* will, therefore, not be discussed.

Another important point in this sub-chapter is that Valio also wants to know different types of powdered milk products available in the market, their pricing levels, packaging styles, and companies' marketing strategies. To thoroughly research and analyze them, the authors will employ 3Ps (Product, Price, Promotion) of the 4 Ps framework (Product, Price, Promotion and Place) in answering the questions.

#### **4.1.1 An overview of Vietnamese dairy industry**

Sales of drinking milk in Vietnam grew rapidly during the period 2008 – 2013 (EMI, 2014, p. 3). According to a statistics of Ministry of Industry and Trade (2012, p. 1), the total milk consumption growth was approximately 9.06% annually, in which the consumption/person/year soared significantly from 0.47 kg in 1990 to 14.4 kg in 2010( (Bach, 2010, p. 49) and (MIT, 2012, p. 1)). Since then, consumption level continuously increased to around 16 kg in 2014 and is expected to reach 27-28 kg by 2020. However, Vietnamese's milk consumption is still far lower than the average volume in the region of 65 kg per person per year (Thien & Duy, 2014). As a result, the trend of Vietnamese dairy market is on its growing process and looks very promising in the upcoming time.

A number of factors push the demand of milk. Initially, the increase in citizens' average incomes make more and more people afford milk, a commodity once used to be considered expensive. Secondly, when life is improved, they pay more attention to health issues and become further aware of the milk benefits. Besides, the Government's relentless efforts to increase the citizen's height and weight, along with milk manufacturers' attempts at enhancing PR and advertising campaigns, are also important reasons that foster the consumption growth in this period (EMI, 2014, p. 2).

At the same time, competitions in Vietnam's dairy market have become fiercer for both international and domestic players. While Vinamilk remains the leader over the years, certain segments, such as malt-based hot drinks and powdered milk, are dominated by international players like Nestle Vietnam Ltd and Mead

Johnson Nutrition Vietnam (EMI, 2014, p. 5). Although local enterprises are progressively participating in the industry, making up to over 60 domestic companies with more than 300 brands, they can only meet 20-25% of the demand while the rest are imported products (Bac A Bank, 2011).

Milk products in Vietnam can be categorized into 3 large groups, Milk Formula, Drinking Milk and Other Milk Products (Yoghurt, Condensed Milk, etc.), in which Drinking Milk includes Liquid Milk, Other Powder Milk (excluding milk formula) and Soya Milk as the following figure.

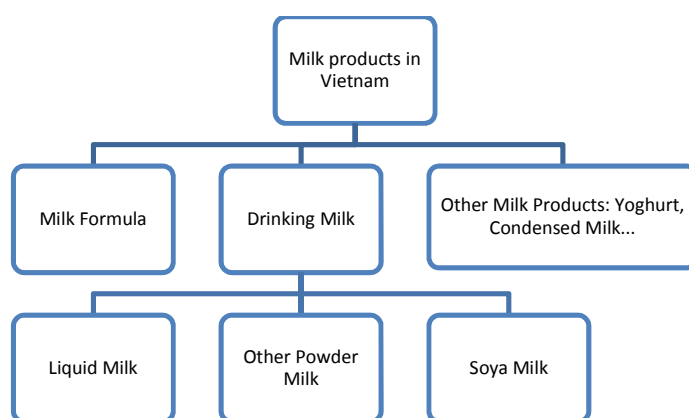


Figure 3: Vietnam dairy product categories (Habubank Securities, 2009, p. 2)

#### **4.1.2 Vietnamese powdered milk market**

Among the segments listed above, powdered milk (including milk powder formula) is the most competitive sector. In accordance with Habubank's report, the profit margin brought by high-end powdered milk products can accomplish up to 40%. Hence, it is understandable that competition in this segment is harsher than other dairy product groups due to a great number of both domestic and foreign participants. The foreign ones are currently leading local brands in term of sales value. (Habubank Securities, 2009, p. 2)

##### **4.1.2.1 Market size**

The total volume of powdered milk products sold by both domestic and foreign dairy companies in Vietnamese market was about 47,000 tons in 2007, 46,000 tons in 2008, and 49,000 tons in 2009. In 2013, this consumption was 65,000 tons, of which 30% (around 20,000 tons) were produced domestically and

45,000 tons were imported. The demand of powdered milk products is forecast to thrive to 80,000 tons in 2015, and is anticipated to reach 120,000 tons per year in 5 years period (from 2016 to 2020). (Bach, 2010, p. 47) & (Thien & Duy, 2014)

In terms of sales value, the total market value of powdered milk products in 2013 was 28,000 billion VND (1.06 billion EUR). This number is predicted to be 48,000 billion VND (1.81 billion EUR) in 2017 (PNS Research, 2014).

#### 4.1.2.2 Market growth

Powdered milk was the most rapidly growing sectors in the packaged food industry with the compound annual growth rate (CAGR) of 20.8% during 2004-2009 (Habubank Securities, 2009, p. 3). Whole milk powder consumption in 2013 was 36,800 tons and this number will continue to soar by 24.3% to 45,800 tons in 2018, as forecast by Business Monitor International 2014:

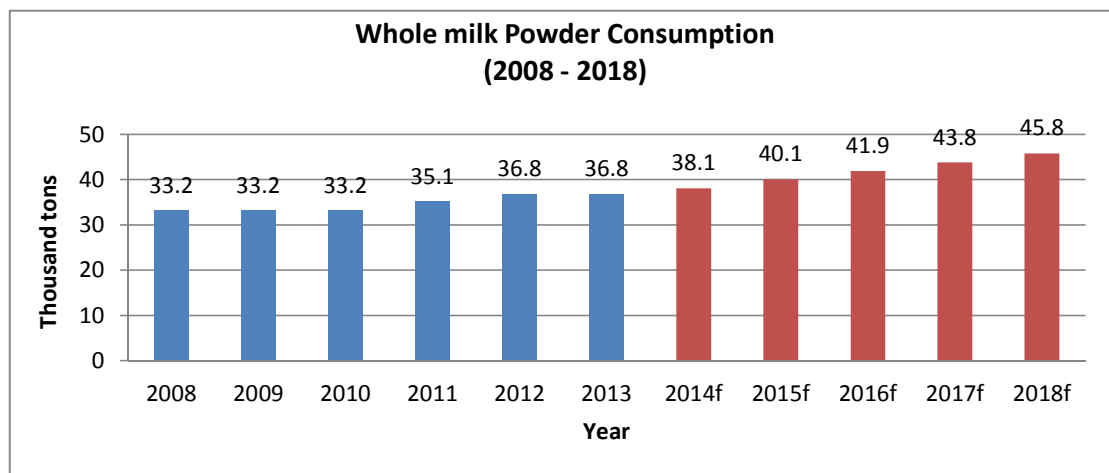


Figure 4: Whole milk powder consumption 2008-2013 and projected to 2018 (BMI, 2014, pp. 15 - 20)

In the coming period, powdered milk is expected to see the strongest constant value growth rate. Three factors boosting this development are first, the increasing awareness of health benefits from drinking milk; second, the dairy firms' attempts in promoting products' usage and benefits concerning health; and third, their attempts in offering more nutritious ingredients added to the products (EMI, 2014, p. 5).

#### 4.1.2.3 *Competitive conditions*

In this part, information about competitors' market share and the competitiveness of certain segments, being infants and seniors, is presented.

##### 4.1.2.3.1 Competition landscape

These days, the number of market players in Vietnamese powdered milk market is fairly large. It includes manufacturing enterprises, importing and distributing enterprises, enterprises doing both mentioned functions, and foreign companies that have their products sold in Vietnamese market. Currently, Vinamilk is the only national company holding a high market share, while the rest are foreign brands. (Bach, 2010, p. 50)

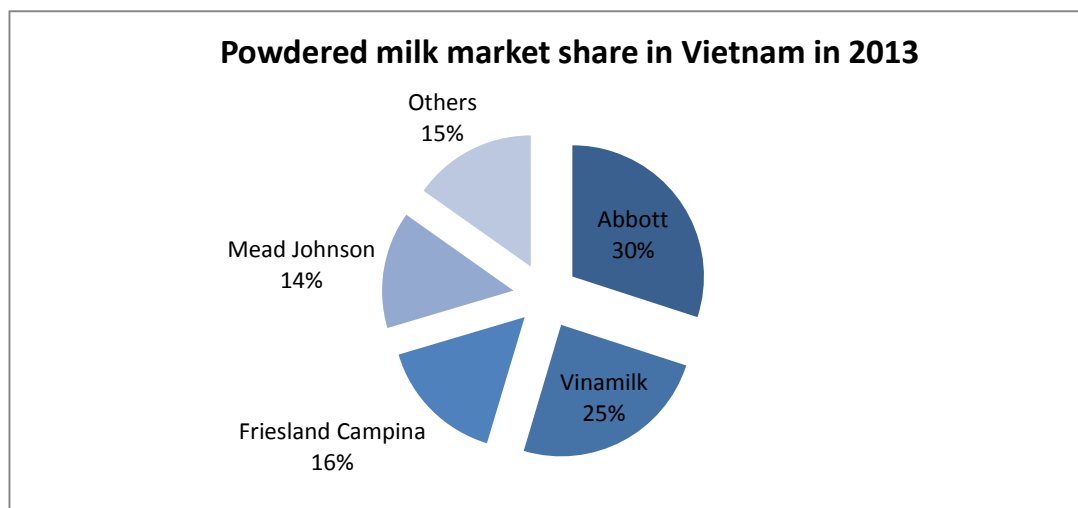


Figure 5: Powdered Milk market share in Vietnam in 2013 (DVO, 2014)

More specifically in 2013, 75% of total market share was owned by foreign companies, in which Abbott, Mead Johnson, Dutch Lady (Friesland Campina), Dumex, Nestle, etc. are the leaders. Among those, with over 120 brands existing in the market, Abbott was the largest players. Its market share was 30%, accounting for VND 3,000 – 4,000 billion (EUR 118 – 157 million) of annual revenues on average. Friesland Campina and Mead Johnson occupied 16% and 14% of the market share respectively. Nestle' percentage of powdered milk products was relatively lower than 10%. (DVO, 2014)

Beside the mentioned brands, there are many other imported powdered milk brands in the market, such as Gallia, Nutriben from France, Aptamin from UK,

Meiji from Japan and some other imported brands that do not have official distribution companies (so called “Hand-carried” goods). These products together have a present market share of 14%. (Thien & Duy, 2014).

In terms of product lines, high-end market is occupied by foreign brands with imported products, namely Gain from Abbott, Friso of FrieslandCampina –Dutch Lady Vietnam, and Enfa from Mead Johnson, etc. Though these products are twice more expensive than lower-end products with same ingredients, the foreign brands together still holds a considerable share. This means high prices do not noticeably affect purchasing power, given that buyers trust foreign producers more than domestic ones because of the reliability and the higher qualities resulted from tighter quality control conditions. On the other hand, lower-end market is mostly shared by Friesland Campina Vietnam – Dutch Lady (with products manufactured locally) and Vinamilk. With low pricing as a competitive advantage, these brands also widely penetrate rural areas thanks to their extensive distribution networks, advertising campaigns and promotion, thereby boosting the market share over the years (Habubank Securities, 2009, p. 3).

#### 4.1.2.3.2 The market for infants (under 1 year old)

Baby food sector is dominated by powdered milk formula for three main reasons. First, its prices are more affordable compared to liquid milk formula (Tran & Vigil, 2011, pp. 3-4). Another reason is about the consumer beliefs; parents believe that powdered milk has higher quality and more nutrients than normal products (Tran & Vigil, 2011, pp. 3-4). Other than that, milk manufacturers in Vietnam offer various choices of powdered milk products that follow up and concentrate on each development stage of children; this, therefore, meets the increasing and diversified local demands these days (EMI, 2014, p. 3).

Sales of infant powdered milk products have witnessed a substantial growth and its prices have continuously increased. According to Euromonitor International (2014, p. 3), it reached 18.5 billion VND (EUR 707,000) in 2012 (grew 23% from 2011) and 22 billion VND (EUR 841,000) in 2013 (grew 16% from 2012). Similarly market share in this segment, like other segments, is also dominated by international brands, except Vinamilk. The graph below illustrates the infant formula market share in Vietnam 2013:

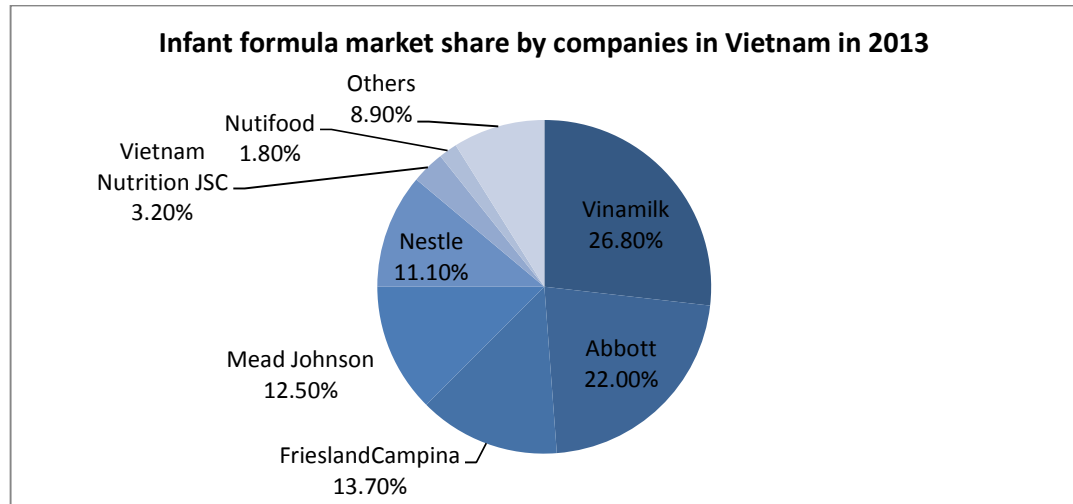


Figure 6: Infant formula's market share by companies in Vietnam in 2013 (EMI, 2014)

#### 4.1.2.3.3 The market for seniors (from 50 and above)

Among the Vietnamese population of 93 million in 2014, the number of old people (50 and above) represents 6.9% (above 6.35 million people), which is higher than the population of the case company's domestic market. Nevertheless, the dairy market of this group has yet to be explored since the amount of milk consumed by seniors is only 25kg/ person/ year. This amount is substantially low compared to Thailand, 139kg/ person/ year and much lower than Western countries 253kg/ person/ year (Hong, 2014). Meanwhile, along with the economic development, elderly people need a better healthcare; a recent survey from Nielsen Vietnam on 30,000 seniors showed that nutritious products still have not met their demands as up to 43% of them found it difficult to get satisfactory ones (Hong, 2014)

Concerning supply, the number of brands for this segment is very modest. At the present, merely few product lines are available in the market; some have accomplished certain success such as "Anlene" from Fonterra Vietnam, "Majesty XO" from South Korean brand Nam Yang and other products from local companies, typically Vinamilk (Hong, 2014). In accordance with Fonterra's annual report 2012, Anlene sales enjoyed a strong growth throughout many years (Fonterra Co-operative Group Limited, 2012); in 2009, the brand accounted for



80% of the market share (Habubank Securities, 2009, p. 4). Vinamilk, the Vietnamese leading dairy producer, also entered the market by recently launching several products including Vinamilk Sure Prevent, Vinamilk CanxiPro, Vinamilk Giam Can, Vinamilk Dinh Duong and Vinamilk Diecerna (Vietnamnet, 2014).

#### 4.1.3 Powdered milk products

Manufacturers in Vietnamese market produce a vast amount of powdered milk products. By ages, they can be classified to products for infants under 1 year old, children (1-6 years old), pregnant women, adults, and elderly people. Producers also develop special milk for ones in need of special nutrition cares such as malnourished, prematurely-born, cow-milk allergic, or lactose intolerance children (MPP 511, 2012, p. 7).

Due to the limited domestic supply volume, companies in Vietnam import milk powder ingredients and products from many countries such as New Zealand, USA, Netherlands, France, Singapore, etc. For example, Vinamilk imports mainly from New Zealand, USA and Australia. Each foreign company has its salient strengths in price, quality and nutrient contents. (H, 2014) The overview of milk powder ingredient imported is demonstrated at the below chart:

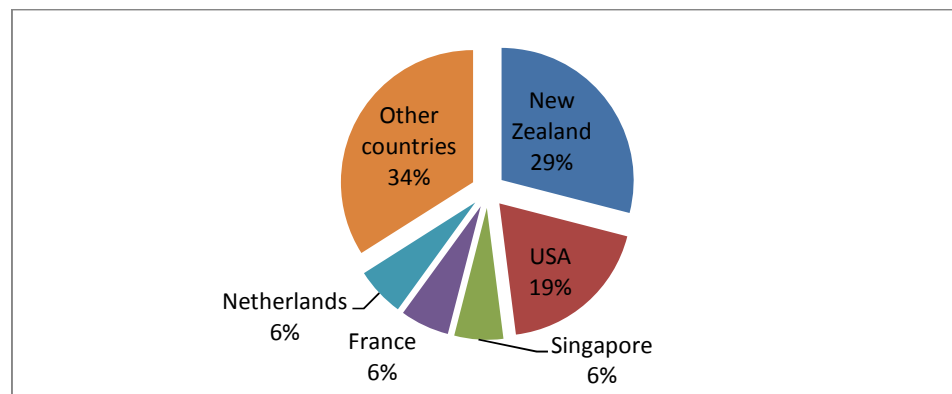


Figure 7: Main milk ingredients and products exporters to Vietnam in the first 6 months of 2013 (Dairy Vietnam Co, Ltd, 2013)

In terms of product packaging, powdered milk products are mainly packed in metal steel cans and carton packs; the former is the most prevalent type. In this category, products are classified by weights such as 360g, 400g, 800g, 850g, 900g, 1.5 kg, 1.7 kg, 1.9 kg, etc. Among them, 400g and 900g cans are pre-

dominant since they can be found in most of the retail outlets. The cans 800g or 850g instead of 900g as usual can be found in certain products especially those of Nam Yang XO and Anlene. These companies also produce 1.5kg, 1.7kg or 1.9kg for longer use. By this way, the average price per kilogram is reasonably cheaper than that of 900g or 400g packs. As for carton pack, most of the product units weigh 400g and few of them are packed 600g. Dutch Lady and Vinamilk are the typical companies that have paper packages; Mead Johnson and Nestle produce few product lines under these types. Moreover, Anlene (Fonterra) has 10 small bags stocked in a 300g carton pack which is not popular in other products.



Figure 8: Examples of product packages (1: Abbott Similac IQ for infants 0-6 months old, 2: Vinamilk Dielac Grow for children 3-10 years old, 3 and 4: Anlene Gold for elderly people 51 years old and above, can and carton pack) (Vinamilk, 2014) and (Abbott, 2014) and (Anlene, 2014))

The picture above shows some examples of product packages from Abbott, Vinamilk and Anlene. As can be seen, they are designed and colored attractively to the target customers. The first and second products are for infants and children while the third and fourth for the seniors from 50 and above. Packaging plays an important role in marketing since appropriate weights can bring convenience when in use and eye-catching designs are able to take customers' attractions.

Due to the tough competition, companies try to make their brands stand out by only targeting to certain markets. For example, while Fonterra only focuses on adults and seniors with the famous brand Anlene, Mead Johnson is more well-

known as milk for infants and children. The brand names also include suffixes linked to target consumers such as *-mama*, *-mum* or *-mom* asserts the products for pregnant women meanwhile *-gro*, *-grow* or *-growplus* means for height development. The table below provides a summary of the current popular brands collected by the authors.

Table 3: Main players and brands in Vietnamese powdered milk market (collected from companies' websites)

Company name	Country	Brands (only powdered milk)	Target customers
<b>Abbott</b>	The USA	Similac, Prosure, Ensure, Gain Plus, Isomil, etc	Infants, children, mothers, adults and seniors
<b>Vinamilk</b>	Vietnam	Dielac Mama, Dielac Optimum, Dielac Alpha, Grow, Sure Prevent, Canxi Pro, etc.	Infants, children, mothers, adults and seniors
<b>FrieslandCampina (Dutch Lady)</b>	The Netherlands	Dutch Lady Regular, Dutch Lady Mum, Dutch Lady Gold	Infants, children, mothers, adults
<b>Mead Johnson</b>	The USA	Enfa A+ (children) and Enfa Mama (mothers)	Infants, children, lactose-intolerant children and mothers
<b>Fonterra</b>	New Zealand	Anlene, Annum	Elderly, mothers
<b>Dumex</b>	France	Dumex Fruit and Vegi, Dumex Mama, Dumex Gold	Infants, children, mothers and adults
<b>Nam Yang</b>	South Korea	Star Gold, Imperial Majesty XO, Imperial Kid, I am Mother, etc.	Children, mothers, adults and seniors
<b>Nutifood</b>	Vietnam	Nuti IQ, Nuvita, Growplus+, Pedia Plus, Nutifit,	Infants, children, adults, mothers and

		Enplus, Nguyen Kem, etc.	seniors
<b>Nestle</b>	Switzerland	Nestle NAN kid, Nestle NAN Gro, Nestle MOM and Me	Children 1-3 and Mothers

#### **4.1.4 Pricing**

Despite the low incomes of Vietnamese citizens, the average milk price is still at a very high level compared to many other countries, with approximately 1.4 USD/liter compared to 1.1 USD/liter in China, 0.5 USD/liter in India or 0.5-0.9 USD/liter in the USA and in Europe (Dairy Vietnam, 2012). The prices have continuously risen for many years and remained an upwards trend to 2013 regardless of the decrease in costs of ingredients (EMI, 2014, p. 3). According to the Chamber of Commerce and Industry of Vietnam (VCCI), in the first three months of 2013, milk formula product price was raised twice. On average, each time, it increased by 7% to 10% and even by 13% to 15% for some products (EMI, 2014, p. 3).

The segmentation of powdered milk market is categorized on the basis of price into three levels: medium, high and luxury. The first group consists of Dutch Lady, Nestle, Dielac (Vinamilk) and Nutifood; the second category contains Friso, Abbott, Enfa normal (Mead Johnson), etc. and the luxury group includes Friso Gold, Dumex Gold, Enfa Gold (Mead Johnson), etc. (Dairy Vietnam, 2012). The elders market only has certain producers like Anlene (Fonterra), Namyang, Vinamilk, etc. so it will be analyzed separately. The following information is on the price levels of popular products from Abbott, Vinamilk, Dutch Lady, Mead Johnson, Namyang, Nutifood, etc., which were collected from supermarkets and online stores and summarized since October 2014. However, due to the limitation of this thesis, some products may not be mentioned and as there are many types of packages available in the market, the authors will choose 900g unit in this case.

Prices vary based on distribution channels such as supermarket, hypermarket, retail outlets, distributors, convenient stores and internet retailing. In fact, due to

a predominant quantity of traditional outlets and private stores, prices are influenced significantly by the stores' owners. The disparity among them is between 10,000 VND and 20,000 VND (0.38 – 0.75 EUR) for 900g unit. Moreover, when the outlets and supermarkets conduct product promotions, the difference will be wider. In infant under 1 year old segment, powdered milk prices fluctuate from 190,000 VND (7.17 EUR) to around 560,000 VND (21.12 EUR) per each 900g can unit; but brands of Dutch Lady and Vinamilk have much lower prices than Abbott, Friso and Mead Johnson. For instance, while a 900g can Dutch Lady Mau Lon only costs 253,000 VND (9.54 EUR), Similac Neosure of Abbott is 557,500 VND (21.03 EUR). The below table will indicate some other representatives of the typical brands in Vietnam (900g unit), collected by the authors:

Table 4: Price levels of some powdered milk products (collected from supermarkets)

Segment	Dutch Lady	Vinamilk	Friso	Abbott	Mead Johnson
<b>Infant 0-1</b>	243,500 VND (9.18 EUR) (DL Mau Lon)	190,700 VND (7.19 EUR) (Dielac Alpha)	448,000 VND (16.9 EUR) (Friso Gold)	535,500 VND (20.2 EUR) (Similac IQ)	535,100 VND (20.18 EUR) (Enfa A+1)
<b>Children 1-6</b>	239,000 VND (9.01 EUR) (DL Gold)	261,600 VND (9.87 EUR) (Dielac Alpha 2)	524,000 VND (19.76 EUR) (Friso Gold Pedia)	543,000 VND (20.48 EUR) (Similac IQ 2)	512,100 VND (19.31 EUR) (Enfa A+2)
<b>Mothers</b>	195,700 VND (7.38 EUR) (DL Mama)	185,800 VND (7 EUR) (Dielac Mama)	411,500 VND (15.52 EUR) (Friso Mum Gold)	430,000 VND (16.22 EUR) (SimilacMom IQ)	476,000 VND (17.95 EUR) (Enfa Mama A+)

In terms of elderly powdered milk, the average prices are slightly higher than other segments discussed above. For these types of products, companies such as Fonterra, Namyang and Abbott have packages of 800g or 850g steel can

instead of 900g as usual. Prices range from 310,000VND (11.69EUR) to 730,000VND (27.53EUR). Specifically, Anlene Gold 800g (Fonterra) and Enplus (Nutifood) 900g cost 314,000 VND (11.84 EUR) and 380,000 VND (14.33 EUR) respectively, while Ensure Gold 900g from Abbott is priced up to 728,000 VND (27.46 EUR). As can be seen from table 8, it is obvious to see that Vinamilk and Dutch Lady produce lower-end products while Abbott, Mead Johnson and Friso aim to high income consumers. Dutch Lady and Vinamilk do have luxury products with the suffix “–Gold” associated to the brands; however, the prices are still lower than those from Mead Johnson or Abbott. Both manufacturers and distributors regularly promote discount programs that make the prices fluctuate; however, above numbers can illustrate the overall situation of the market how the brands are classified.

#### ***4.1.5 Competitors’ marketing activities***

Dairy manufacturers conduct numerous marketing and promotion activities that make the market dynamic. International firms, who have more experience and global exposure, dominate TV channels. They also organize various scientific seminars with the presence of Vietnamese and foreign experts, professors and doctors to influence consumers and parents’ psychology. Especially, consumers are willing to pay high prices for products that help children improve height, weight, and intelligence. Local companies, in contrast, with limited budget, concentrated more on press advertisings in the early time; but they also have been more familiar on TV these days. (EMI, 2014, p. 3)

Specifically, Fonterra is spreading its brands, Anlene, Anchor, etc. (powdered milk for seniors) by launching countless advertisings on TV during prime time (usually between 7pm and 9pm) every day. Famous actresses and models represent the brands and appear in advertisements to show their experience and persuade the audiences (Hong, 2014). On the other hand, Namyang and Vinamilk, the direct competitors of Fonterra in this product category, switch to sponsoring social charity programs and organizing health seminars in order to raise health awareness among the citizens. In this form of advertising, they are able to demonstrate how useful their products can bring to the consumers; as a result, the product images are also enhanced and become more reliable. The lat-

est activity of Namyang in April 2014 was the charity walking program aiming to help disable people. With more than 12,000 participants, they funded more than 10 billion VND (377,152 EUR) sent to the handicapped people. ( (Nguyen, 2014) and (Hong, 2014))

In any kind of marketing program, the firms are asserting their positions in this very competitive market by utilizing three main strategies: positioning specific product characteristics to niche markets, giving high quality with fair prices and reinforcing customer services (Nguyen, 2014). By targeting and positioning to different markets, brands have been memorized and distinguished by the consumers. For instance, Mead Johnson mainly targets children, infants and a few to pregnant women, so it is well-known by the slogan “Gia dinh Enfa A+” (Enfa A+ Family). Vinamilk is proud of their international product quality and always remind consumers that this is the only Vietnamese dairy company exporting products to more than 10 countries, or Nutifood is known as “Vi tuong lai Viet” (meaning “for the Vietnamese future”). On the other hand, after-sales services are enhanced; as an example, some companies create health consulting clubs (Mead Johnson, Fonterra, Dutch Lady, and Abbott), operate nutrition centers (Vinamilk, Dutch Lady) and hot-line services (Dutch Lady). (Le, 2008)

By investing strongly in marketing and promotions, the companies have accomplished remarkable achievements and attracted a large quantity of loyal customers. However, the abundant advertisements may cause many negative impacts because they push the price much higher and as the result, the consumers are the victims for this. Furthermore, full of products being advertised does not necessarily mean that consumers will have more options to choose; instead, they may become confused.

#### **4.2 Consumer analysis – understanding consumer behavior**

Contemporary marketing objective is to determine the needs, wants and demands of target market in order to provide satisfied products and services to customers. Having good knowledge about factors impacting consumer purchases will be able to increase company’s market share. Therefore, customer research is exceptionally important and in any marketing plan, understanding consumer behavior is indispensable (Naik & Reddy, 1999, p. 2).

According to Solomon, et al. (2013, p. 5), consumer behavior is defined as “a study of the processes involved when individuals or groups select, purchase, use or dispose of products, services, ideas or experiences to satisfy needs or desires”. Likewise, in another perspective of Kardes et al. (2008, pp. 8-9), it involves all consumer activities linked to purchase, usage and disposal of goods and services which incorporate mental, emotional and behavioral responses of the consumers. From both concepts, consumer behavior is understood not merely as what happens at the moment of exchanging money to goods or services from the consumers to the sellers and vice versa, but it is eventually an ongoing process consisting of before, during and after purchasing events (Solomon, et al., 2013, pp. 6-7).

#### ***4.2.1 The ABC model of attitudes and hierarchies of effects***

Solomon, et al. (1999, p. 123) argued that attitude has three constituents: affect, behavior and cognition. Affect is the way a consumer feels about an object; Behavior refers to the person’s intentions to do something regarding an attitude object and Cognition involves the consumer’s belief about an attitude.

This model is utilized to explain interrelationships between knowing, feeling and doing; and how consumers come to a product selection differently by forming their attitudes (Solomon, et al., 1999, p. 123). This thesis employs the model to analyze the target consumer market, whereby identify consumer demand later on. The three hierarchies of effects model is shown as below.



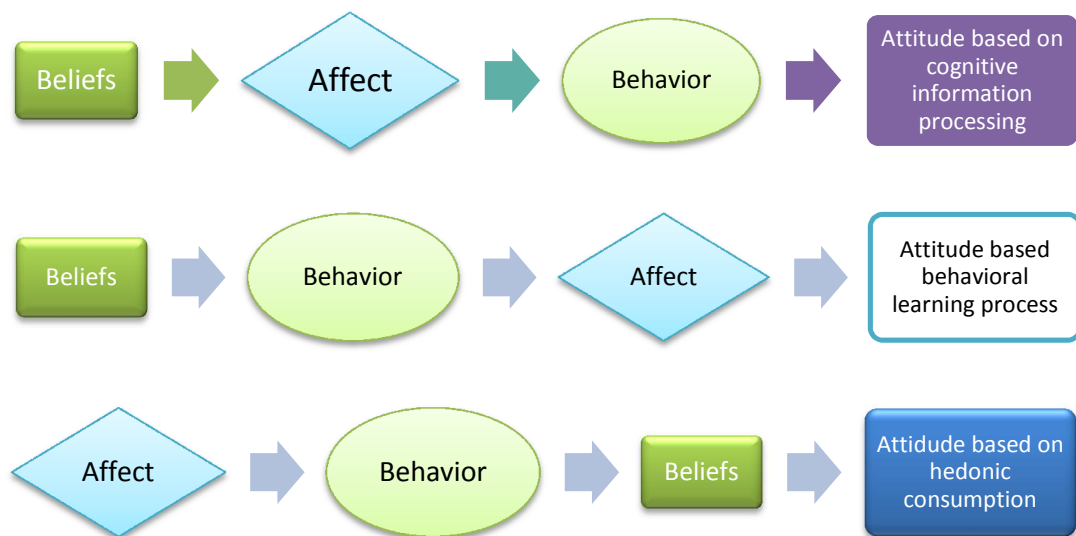


Figure 9: Three hierarchies of effects (Solomon, et al., 1999, p. 124)

Looking at the three processes, the first procedure, named “*Standard learning hierarchy*”, explains that consumer approaches a product decision by following a problem-solving process. Specifically, he forms a belief about a product by accumulating knowledge according to relevant attributes, then evaluates the belief and form a feeling about that product (affect) before engaging in a relevant behavior based on the evaluation; for instance, buying the product. This is a careful procedure that leads to brand loyalty. In other words, the buyer is motivated to search for information, consider alternatives carefully and come to a thoughtful decision.

In the second progression called “*Low-involvement hierarchy*”, there is an exchange between behavior and affect. In this case, the consumer collects a minimal amount of information before acting and only has responses after using the product. The attitude is formed based on behavioral learning processes, in which, consumer’s choice is reinforced by his experience after purchasing.

The third process, called “*Experiential hierarchy*”, explains that consumer acts on the basis of their emotional reaction (affect) and then form a belief later on. Unlike the previous procedures, the consumer neither has knowledge and experience about the product nor carefully considers alternatives before making purchase. Instead, by buying and consuming it, his attitude will be formed after. In

this progression, consumer attitudes are significantly impacted by package design, advertising stimuli, brand names, etc. (Solomon, et al., 1999, pp. 124-125)

#### **4.2.2 Information search**

When the problem recognition is adequately strong, consumers will start searching for information to buy products they need. In consumer's viewpoint, the searching process usually goes through two core stages, internal and external. Internal search involves a scanning of relevant information from memory or experience, compared and made a choice among a number of products to find the best one (Fahy & Jobber, 2012, p. 62). If the consumer has no prior knowledge about the product or their former experience does not give a satisfactory solution, the external search will begin. This comprises social surroundings typically friends, family, work colleagues, neighbors and commercials sources, for example, advertisements or sales people (Fahy & Jobber, 2012, p. 62).

In accordance with Viettrack's survey (2011), Vietnamese consumers are considerably influenced by TV advertisement and reference group. Up to 69% of respondents selected a powdered milk product based on the TV advertisements, 65% referred to their family, friends, and colleagues to decide a product. Likewise, advertisements on newspapers make a certain impact with 37% of respondents relied on it. Interestingly, although the number of people using the Internet is very high in Vietnam and more and more people join online forums, only 30% consumers decided to buy a product based on this source.

#### **4.2.3 Consumer buying criteria**

In marketer's perspective, what cues consumers utilize to refer and choose a particular product among dozens of alternatives is the pivotal matter of the pre-purchasing period. Consumer buying criteria are diverse and they are categorized into two aspects, economic and non-economic influences (Brassington & Pettitt, 2013, pp. 121-122). Economic influences relate to prices, product specification, quality consistency, customer service, etc. while the other consists of prestige, career security, friendship, social needs, etc. In this research's scope, only economic influences will be studied.

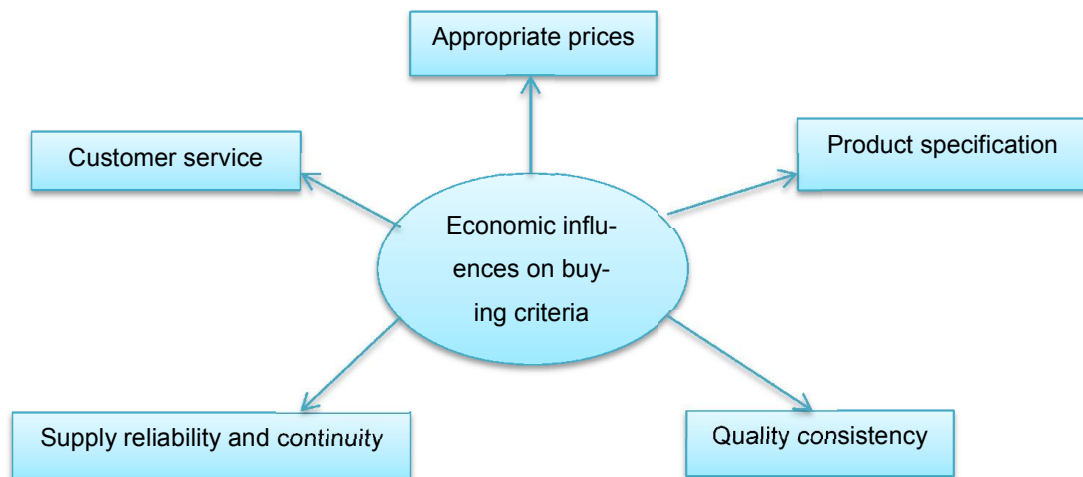


Figure 10: Economic influences on buying criteria (Brassington & Pettitt, 2013, p. 122)

According to Brassington and Pettitt (2013, p. 122), appropriate prices mean that consumers do not necessarily select products with lowest prices but they choose ones representing good value for money spent. Product specification includes finding the accurate products that meet the purchasers' needs, neither more nor less. This element makes some products stand out from the crowd and affects strongly consumers' decisions. Quality consistency is explained as sufficient quality controls from suppliers which can minimize defects and make the buyers confident when in use. Furthermore, when consumers need, the products have to be available; therefore, supply reliability and continuity is another important concern. Finally, customer service is undeniably a crucial influence in buying criteria. Purchasers need not only products themselves but also service provided by the sellers, because they need reassurance and helps in case of problems. (Brassington & Pettitt, 2013, p. 122)

In powdered milk field, all those above factors are needed. When buying a product, consumers usually consider numerous factors such as quality, milk specification and effect (height development, weight management, etc.), price, reliability, countries of origin and ingredients. In Vietnam, up to 91% of parents take nutrient contents as the most important factor when choosing powdered milk for their children, followed by milk effects (88%), price (81%), country of origin (78%) and ingredient (78%) (Viettrack, 2011, p. 12). The empirical part

will provide the updated result of current Vietnamese consumer selection for powdered milk products from a new survey in 2014.

#### ***4.2.4 The impacts of psychological and social factors on consumer behavior***

Consumer purchase decision is affected by many elements which can be divided by personal and social influences (Fahy & Jobber, 2012, p. 66). Additionally, Brown (2006) stated that psychology is also another essential factor influencing strongly the buying decision of consumers besides the two mentioned features. In this thesis, the authors will concentrate on the impacts of psychology, sociology on the purchase decision making and another significant element so-called “situational factor” suggested by Berkowitz et al. (1992).

##### ***Psychological:***

Psychology includes many aspects such as motives, perception, ability and knowledge, positions, attitudes, etc. (Brown, 2006). Among those, the four major fundamentals that should be concerned are motivation, perception, learning and memory, as stated by Kotler (2009, pp. 237-243). First of all, in terms of motivation, everyone has his own physical needs arising when being hungry or discomfort; other “psychogenic” needs include belonging, esteem or self-actualization. Those desires, when being stimulated to an adequate intensity level, will drive people to purchasing activities (Kotler, et al., 2009, p. 238). Perception is the process by which consumers select, organize and interpret information inputs into meaning (Brown, 2006) and with the same activities, they may interpret them very differently, either positive or negative. Furthermore, learning process can cause changes in attitudes and behavior of consumers. Through this process, consumers may be stimulated to purchase a product though they did not have a cue to buy it originally (Kotler, et al., 2009, pp. 240-241).

Psychology makes a remarkable impact on dairy product purchasing activities. Parents are motivated to buy milk for their children because they believe that the nutrition in milk will help the children be healthy and have a good mental and immune system. Besides, Vietnam in the past, many middle-aged people

used not to concern enough their health issues such as problems of bone when they get older. However, when seeing some examples of bone issues from advertisements on the TVs or internet, they become aware of it and stimulated to buy proper nutritious products which can add nutrition to help them prevent potential problems in the future. It is a typical example of the learning process effect and also one of the strategies used by some milk manufacturers in Vietnam.

### ***Social***

In daily life, people interact with others who directly or indirectly impact on a lot of their purchase decisions (Schiffman & Kanuk, 1991, p. 329). For many types of products especially the ones consumers do not have much knowledge or experience about, their decisions are affected more strongly by the social settings. According to Fahy and Jobber (2012, p. 66), social factors affecting purchase decision consist of culture and subculture, social class and reference group.

Culture relates to the tradition, set of values and basic attitudes of the society or circumstance individuals live in. Therefore, it defines what people eat, wear, reside, travel and even more what is acceptable or unacceptable in the society, etc. (Brown, 2006). On the other hand, social class or social status is based mostly on occupation, education, income, wealth, ethnic groups, etc., which divide the society to several levels. It leads to noteworthy impacts on what types, quality and quantity of products consumers want to purchase (Brown, 2006). Other than that, a reference group is defined as a group that serves as a point of reference or comparison for individuals' purchase decisions (Schiffman & Kanuk, 1991, p. 315). It can be family, a group of friends, a formal or informal social group, a work group, etc. In fact, the consumers often buy the products similar to their reference groups when they cannot decide what to buy because by doing so, their perceived risks can be reduced (Schiffman & Kanuk, 1991, p. 329).

In Vietnamese powdered milk market, psychology and sociology influence remarkably on consumer purchasing behavior. Aside from the natural condition that domestic production size cannot meet the high demand of milk products,

the consumers' psychology also impact on the increase in foreign milk consumption because a large number of consumers believe international brands' quality rather than local brands. In addition, consumers' psychology is also one of the reasons leading to the preference of powdered milk products rather than normal milk (EMI, 2014). In the empirical part, more detail about market facts and influences of those factors will be given.

## **5 RESEARCH DESIGN AND METHODOLOGY**

### **5.1 Research approach**

Saunders et al. (2009, p. 124) suggest two main approaches to conduct a research project: induction and deduction. In the former, data is collected and explored first to build theories subsequently as a result of data analysis; meanwhile the latter is the process of developing theories or hypothesizes, based on which, data collection is conducted to examine the theories. In other words, inductive approach moves from specific observations to wider theoretical generalizations, while deductive approach begins with theories narrowing down to certain empirical arguments and explanations (Burney, 2008, pp. 4-7).

This is an applied research by nature, where the authors aimed to provide practical value and relevant information about Vietnamese powdered milk market to satisfy the requirements of the case company. In order to do so, the authors went through literature review to build a conceptual and theoretical structure at first, then the topic-relevant information was gathered. Furthermore, a survey and some interviews were conducted to collect primary data and accompanied with that was the systematic detail of data analysis and interpretation. Also, during the research process, the authors utilized theoretical framework as a foundation for their practical observations as well as critical thinking to analyze the market situation and current trends. With the above reasons, the deductive research approach was applied.

### **5.2 Research method**

Ali (1998) emphasized the significant influence of choosing appropriate research methodology on subsequent research activities including the array of possible results and conclusions. Two most mentioned methodologies for data collection techniques and analysis procedures are quantitative and qualitative.

Qualitative research refers to any data collection technique or data analysis procedure that uses non-numerical information (Saunders, et al., 2009, p. 151). This method emphasizes the understanding and interpretation of informant's insight points of view. Some common qualitative methods used to collect data

consist of participant observation, case study, formal and informal interviewing, videotaping, action research etc. (Ali, 1998). On the other hand, quantitative research is used to collect and analyze numerical data in a systematic way. This method focuses on the matters concerning structural rather than more complex issues of the process (Ali, 1998). The popular method of collecting quantitative data is to conduct a survey or questionnaire with proper sample selection.

Tashakkori and Teddlie (2003) commented in Saunders et al. (2009, p. 153) that using mix method (combining of quantitative and qualitative data collection techniques and analysis procedures) will optimize the capabilities of answering the research questions as well as better evaluate the research findings. By this reason, in this thesis, the authors used mix methodology to address the research problems.

Specifically, as qualitative method, an interview with an expert in the industry was carried out to gain insight points of view about the powdered milk market situation in terms of product ingredients, their origins, and lactose free product demand in the current time. The interview not only provided a comparison with the prior secondary data, but also helped the authors access to some aspects of the research questions that could not be answered through published documents. Additionally, an online survey was conducted as quantitative method to get an understanding of current powdered milk consumption habits and interests of Vietnamese people.

### **5.3 Data collection**

This study requires both secondary and primary data. In the literature review section, the authors gathered relevant previous topic-related researches, existing theories and ideas to build a theoretical framework using secondary sources from books, journal, and articles, business reports, company reports, online newspaper. As for the empirical part, data was collected from primary sources; including a structured interview with industry expert, some interviews with consumers and an online structured questionnaire.



A structured interview, in which a list of questions is available beforehand to be covered (Saunders, et al., 2009, p. 320), was carried out on a one-to-one basis to gather qualitative data. The data collected from this interview, accompanied with secondary data gathered in the literature review part was used to compare and answer the research questions relating to product ingredients, their origins, and lactose free product demand situation in the current time. All of the questions were open-ended questions, in which interviewees were asked to provide their own answers to the questions. The interview consisted of 9 questions in total, the first two questions were about the interviewee's background, following with three questions on product ingredients and their origins, and the rest four questions referred to current demand situation in lactose free product.

The interview was conducted with experts from the dairy industry. However, due to the sensitivity of the questions and responsibility of employees to keep certain information confidential, only one expert agreed to give answers (see appendix 2). To improve this situation, a group of customers were also interviewed about their perspectives on consumption, purchasing habit and demand; so that the authors could compare with the expert's responses, thereby enhance the validity of the given information. These answers also supported strongly in survey design and handling.

Subsequently, an online structured survey was launched to answer the question **"How are the consumers' purchasing habits and product interests?"** There were 19 compulsory closed-ended questions in total, which provided multiple choices answers from where the respondents were instructed to choose (Saunders, et al., 2009, p. 375). Among them, six questions were about general background and the rest was designed regarding consumers' sources of information before purchasing, product choice criteria and demand for new powdered milk as well as lactose free products. The survey was opened during two weeks, from 19.10.2014 to 03.11.2014, and 242 responses were collected in total.

Most importantly, Vietnamese is chosen to be the language of the interviews and online survey, since the target of this research is on market situation and consumers in Vietnam.

All in all, the research methodology employed in this thesis is summarized as the following table:

Table 5: Research methodology

Research approach	Deductive
Research methods	Qualitative and Quantitative
Collection methods	Primary data: Interviews, surveys and observations Secondary data: Books, journals, articles and reports

#### 5.4 Sampling technique

Non-probability sampling technique was used in designing and conducting both interview and online survey, since criteria for respondents were set based on the authors' subjective judgment (Saunders, et al., 2009, p. 233). First, this thesis requires certain knowledge about drinking powdered milk sectors, so experts in the industry were selected for the interview. Besides, the survey targeted at 18 and above aged groups – the income producers of families who decide significantly on spending. Samples, as a result, cannot be chosen randomly. In other words, non-probability technique was applied.

Self-selection sampling was chosen for online survey, in which the questionnaire was publicized through appropriate media like personal Facebook wall (with private messages to potential targets), Facebook groups and Forums for mothers, housewives, and milk drinkers, so that individuals who had a feeling or opinion about the topic could answer voluntarily. These respondents were also exactly who the authors wanted.

As for the structured interview, critical case sampling from purposive sampling techniques was used, because it allowed the authors to select cases that would

have best possibility to answer the research questions (Saunders, et al., 2009, p. 237).

### **5.5 Reliability and validity**

Reliability is the degree to which one's data collection techniques or analysis procedure produce consistent findings even when the research is conducted by other researchers and in other occasions (Saunders, et al., 2009, p. 156). Firstly, the interview was sent two weeks in advance, and the survey was conducted online, so that the respondents were given "neutral time" to answer these questionnaires objectively, which prevented from the threat of subject or participant error. Secondly, all the respondents were kept anonymous and the results collected were compatible to what the authors had researched via secondary sources, so the research was safe from the threat of subject or participant bias. Both the interviews and online survey were structured, scheduled and strictly followed which prevented from observer error as well as observer bias. Summing up the above reasons, the reliability of this research is ensured.

Validity refers to the degree of whether the research results can answer the research questions, and whether the appropriate techniques have been applied to conduct the research (Saunders, et al., 2009, p. 156). Though there were some inevitable cases that the respondents did not follow till the end of the survey due to lack of time or having no suitable knowledge to answer; most of the respondents met the sample requirement, which was relevant to the objective of the research as mentioned. Moreover, the respondents were from different cities nationwide, so it was valid to represent the whole population. Besides, both the interview and online survey revealed no necessary disadvantage for the respondents. Therefore, it can be concluded that the results could answer the research questions, meaning that the validity of this research is guaranteed.

## 6 PRESENTATION OF RESULTS AND DATA ANALYSIS

### 6.1 Profile of study sample

Detailed information of interview with an industry expert, personal interviews with ten consumers and online survey is explained below. Both interviews and survey questionnaires were based on different aspects of consumer behavior and expert's perspectives on the powdered milk market.

The interview with an industry expert was conducted via Skype with Mr. H, personnel in operating milk powder drying system, production department, Vina-milk's powdered milk factory on 19.11.2014.

A total of 10 consumers were interviewed via Facebook message on 20 to 25.11.2014. All of the participants were above 20 years old, female, from either Ho Chi Minh City or Ha Noi, and income producers of either their nuclear or extended families.

242 respondents participated in the online survey. Among them, 15 respondents were aged under 18, which was not the aimed age group. Besides, 37 people did not answer till the end of the questionnaires. Thus, those 52 responses were eliminated to guarantee the accuracy of the result. In the end, 190 responses were qualified to continue further analysis.

137 survey participants were female, accounting for 72.11%, and 27.89% were male; 42.11% of the participants resided in Ho Chi Minh City, 31.05% in Ha Noi and 26.84% in other regions of the country. The survey focused principally on three crucial groups: 18 to 39, 40 to 49 and 50 and above years old because they were either the main forces in Vietnamese society who earn money and take care of their families or have certain knowledge and experience about powdered milk purchases. The group of breadwinners (aged 18 to 49), who have the strongest influence on daily purchases in general and on dairy buying power in specific, account for 90%, a large proportion of the survey participants.

In the background section, the authors also questioned whether the survey respondent has used powdered milk or not, and his/her awareness of lactose intolerance. For the former issue, the participants would either continue to answer

the next question or transfer to the last page where demands for new products were queried. According to the result, 83.16% had used powdered milk, while 16.84% had not. Besides, lactose intolerance was still not pervasive among the consumers, since 55.79% did not know or had not researched on lactose-free products.

All in all, the following figure will indicate in detail the study sample's profile of the online survey.

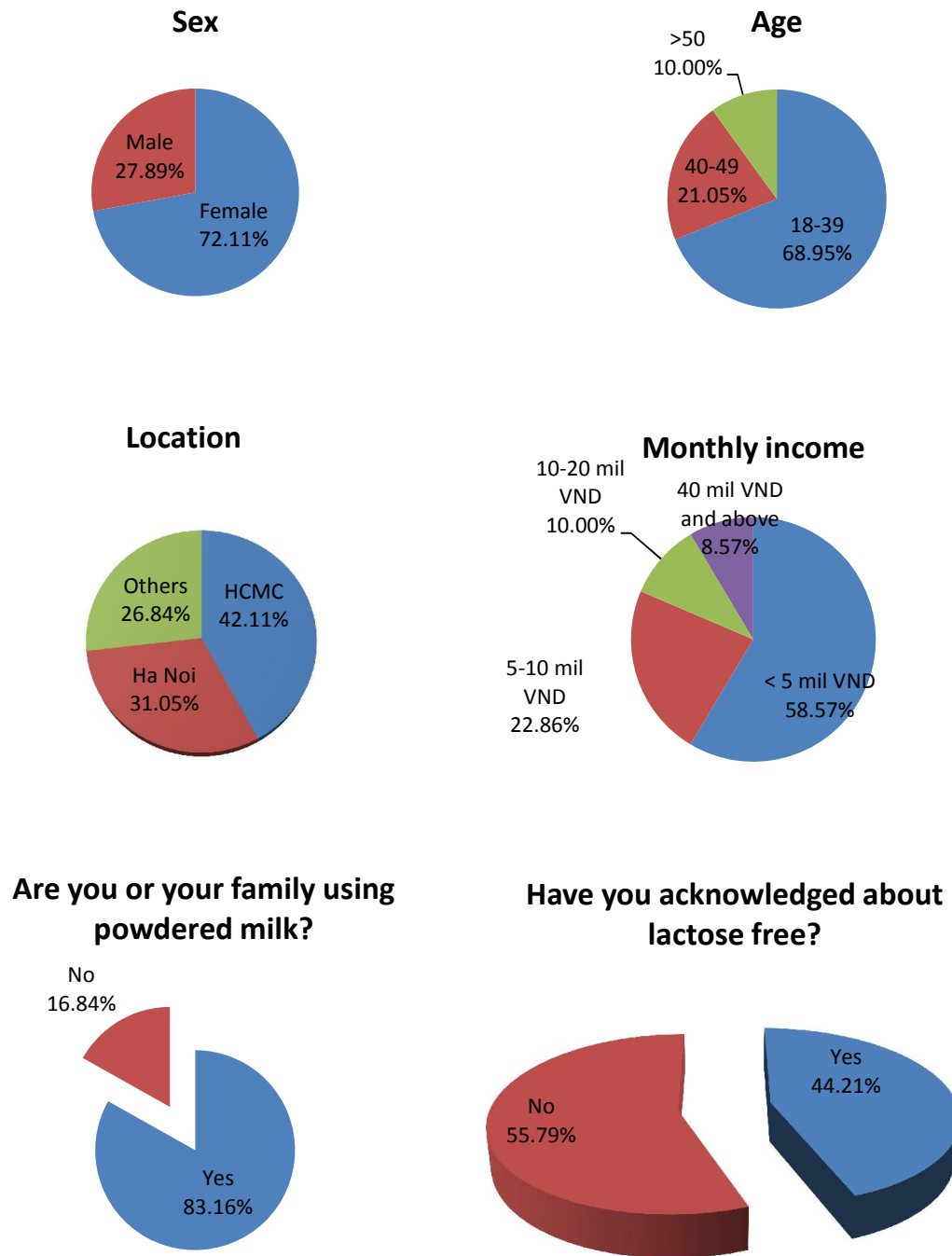


Figure 11: Profile of study sample

## 6.2 Consumer buying interests and habits

This section will discuss situation of Vietnamese consumer behavior in powdered milk market and it covers 4 aspects: consumption habits, source of information before purchasing, product choice criteria, and demand for new products including lactose free products. These findings come from the results of the online survey, the qualitative interviews with Mr. H and with some consumers as described above.

### 6.2.1 Powdered milk consumption habits

As mentioned in section 4.1.3, the Vietnamese powdered milk market is segmented by ages: infants, children, adults, pregnant women and elderly people; and by special purposes such as sporting activities, patients, etc. The amounts of people consuming these types of products are illustrated at the below graph.

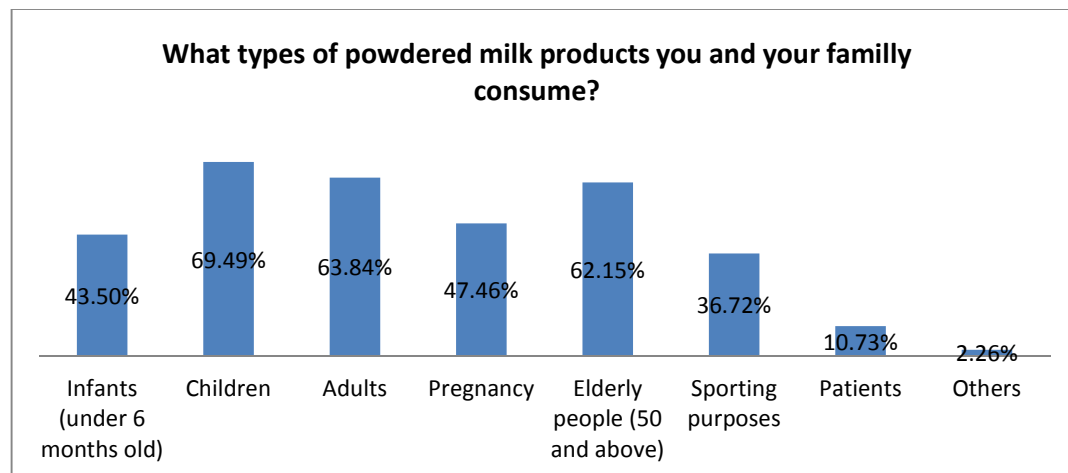


Figure 12: Powdered milk consumption situation by categories

Among 190 responses, children, adult and elderly milk products were consumed highest with 69.49% of the respondents had drunk or bought children milk, 63.84% had drunk/bought adult milk and 62.15% had drunk/bought senior milk. Pregnancy milk and baby milk were consumed slightly lower but they still occupy considerable proportions (47.46% and 43.5% respectively). Meanwhile, powdered milk for patient cares only took a very low rate (10.73%).

Various types of powdered drinking milk in the market serve different purposes. The common ones are to supplement nutrients, increase height, manage weight, replace normal meals, etc. This following chart indicates how the respondents were aware of those purposes.

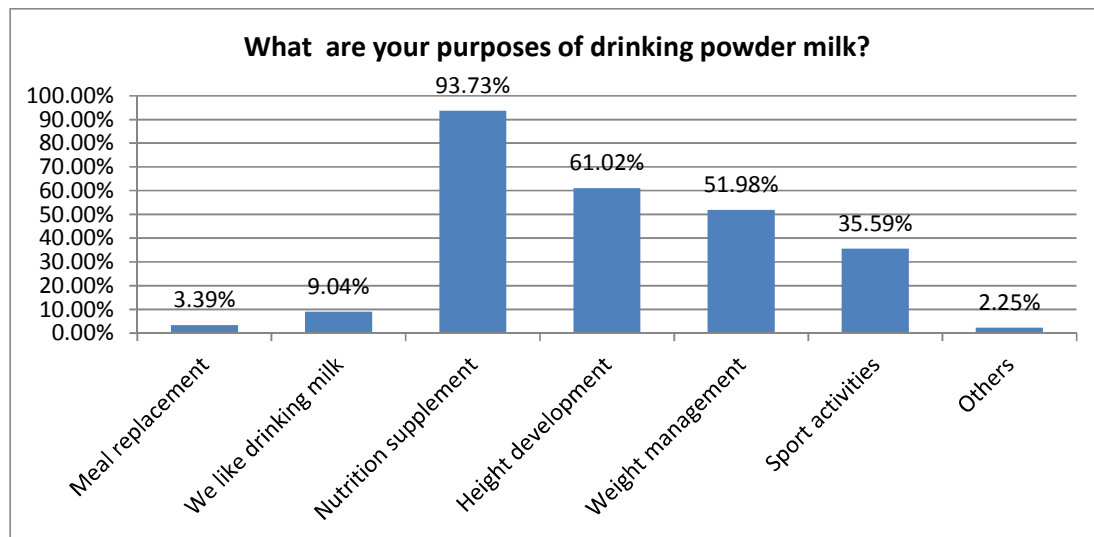


Figure 13: Purposes of drinking powdered milk of Vietnamese consumers

Nutrition supplement was the most important reason of drinking milk and up to 93.73% consumers used milk for this purpose. The next common reason was for height development and weight management that seized 61.02% and 51.98%, respectively. They considered drinking milk for sport activities relatively less importantly so this category only represented 35.59%. Other than that, few of them used milk to either replace their normal meals or serve their favorite of drinking milk.

When asked the importance of daily drinking powdered milk by ages, the respondents evaluated it differently. With the scale from 1 to 5, 1 being “not important at all” and 5 stood for “very important”, the result was collected in figure 14.



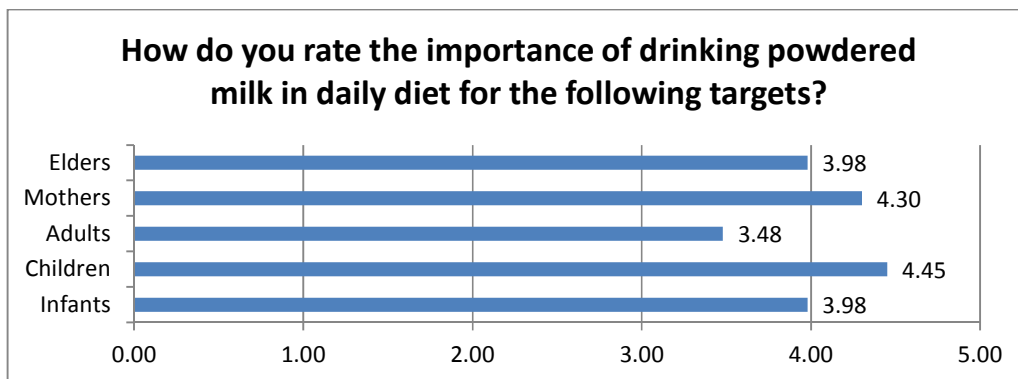


Figure 14: The importance of daily drinking powdered milk by ages

As can be seen from the above chart, Vietnamese consumers believe that it is necessary for children and mothers to drink powdered milk daily as they were rated more than 4 out of 5; meanwhile the least important target was adults. However, in general all of the 5 subjects above were graded at least 3.5; thus, the consumers evaluated drinking powdered milk as essential for everyone. Taking children and infants into consideration, the reason why the grade of children was higher than infants (approximate 4.5 and 4) was because infants under 1 year old, who can take breast milk, do not need to consider any other replaced milk, according data gathered from interviewing some consumers.

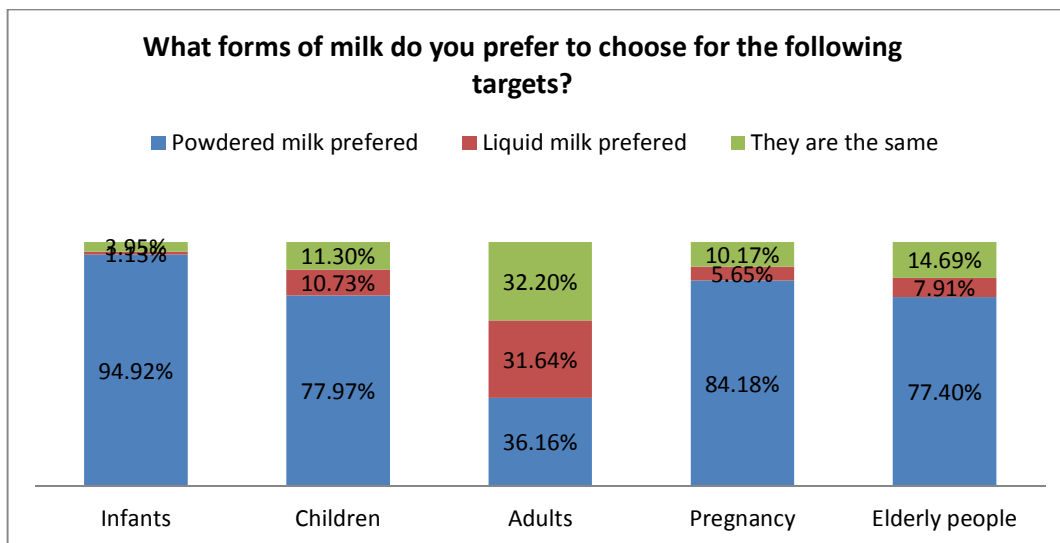


Figure 15: Consumers' preference of powdered milk and normal milk when comparing quality and nutrition

The questionnaire also surveyed how Vietnamese consumers compared between powdered milk and liquid milk based on the aged segmentation being discussed (figure 16). Powdered milk seems to play a crucial role in Vietnamese market because up to 94.92% of the consumers believed that powdered milk has higher quality and nutrition than normal milk for infants and for other segments, the figures were in turn 77.97%, 36.16%, 84.18% and 77.40% for children, adults, pregnancy and elderly people.

### 6.2.2 Sources of product information

The survey questioned where consumers search product information before their purchases. The result is summarized in the following figure.

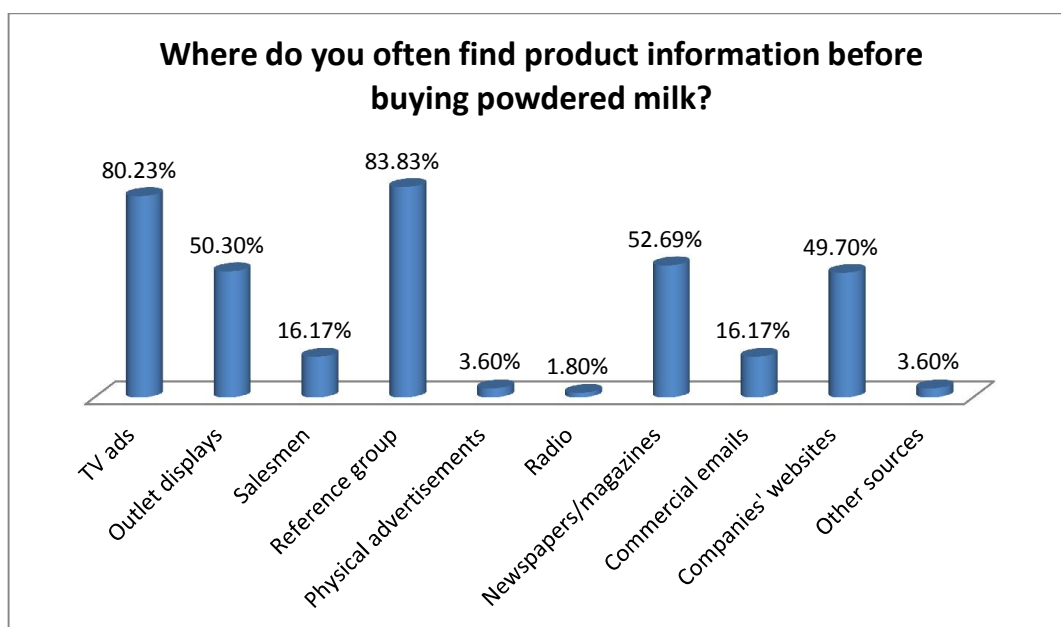


Figure 16: Sources of information consumers use to buy a powdered milk product

Reference group had the most significant impact on consumer purchasing decisions as up to 83.83% of the survey participants listened to opinions of their families, friends, colleagues, etc. before purchasing a powdered milk product. Subsequently, TV ads, magazine, newspapers, companies' websites were the sources that the buyers regularly search for functions, effects, prices, etc. of the products. These marketing channels held 80.23%, 52.69% and 49.70% respec-

tively. Others elements including retail outlets' product stands, salesmen, street advertisements, doctors' advice, internet forum, etc. also made certain influences but less than the abovementioned factors.

The same analysis was run for three separate areas (Ho Chi Minh City, Ha Noi and other regions). The result is indicated as the chart below.

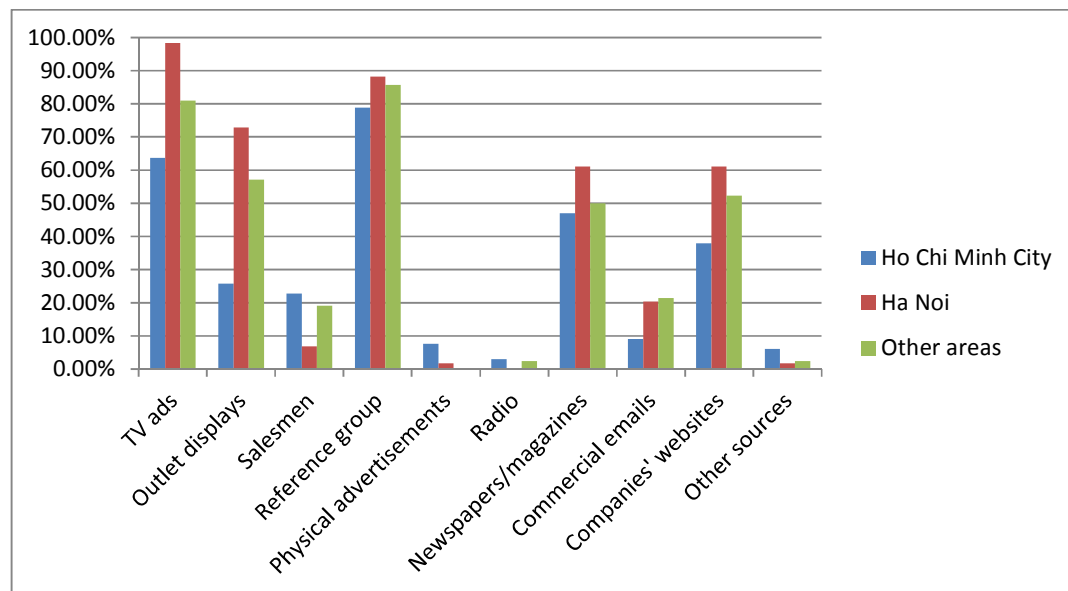


Figure 17: Elements affecting on purchasing behavior by cities in Vietnam

There were dissimilarities between the cities. First, reference group was a pivotal source consumers search for information before they decide to buy powdered milk products in every area and it occupied at least 80%. This was the most essential information source of consumers in Ho Chi Minh city; however, TV ads was the most important factor in Ha Noi as about 98% of people there base on it when deciding to buy milk products. Besides, with more than 70% of the respondents' choice, store displays was another significant factor for Ha Noi respondents while only approximately 25% of the participants in Ho Chi Minh City and 56% in other areas saw it an important factor. Physical advertisement, salesmen and radio only accounted very low proportions.

The reason why the reference group played an essential role in consumers' decisions was that milk producers offer an abundant of different products and they release so many advertisements. Each company has its strengths and differ-

ences. The consumers become anxious since they do not know which one is appropriate to buy, especially when considering for their children. Consequently, their family, friends, colleagues, etc. are very important for opinion advice, as explained by the interviewed consumers.

Regarding where consumers often bought powdered milk products, the respondents preferred to buy them from dairy distributors (stores selling only dairy products), supermarket, and grocery outlets rather than convenient stores or hypermarkets. In total 167 responses to this question, up to 70.06% consumers would select dairy distributors, followed by 68.26% would choose supermarket. With 44.31%, convenient stores were selected as the lowest channel.

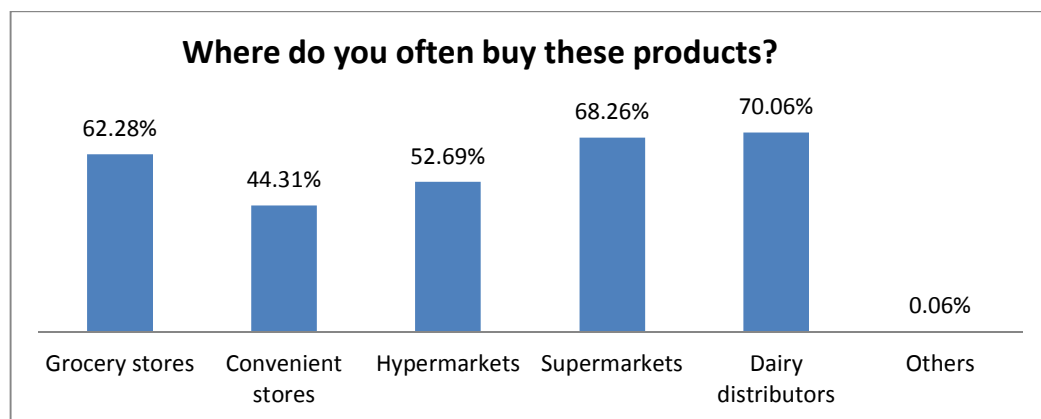


Figure 18: Consumers' distribution channels preference

Grocery stores still play an important role among the popular channels in Vietnam that accounts for 62.28%, even though the trend of choosing these traditional grocery outlets had decreased slightly within 6 years prior to 2014 (figure 20). Nonetheless, supermarkets and hypermarkets tend to rise as popular channels due to the increase in consumers' consciousness about the quality guarantee. Some interviewed consumers revealed that since there were too many products sold by private stores with different prices, they did not feel secure about the quality of those products. Hence, they would rather choose supermarket or hypermarket where the prices are a little higher but the quality is guaranteed.

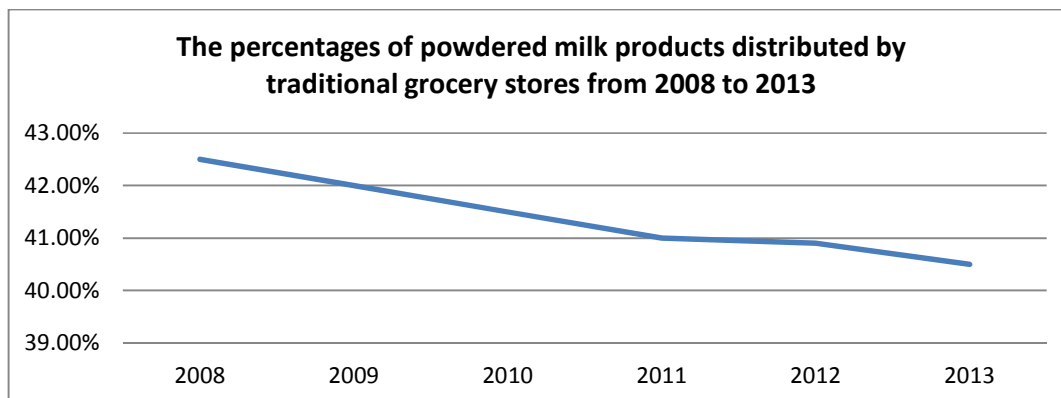


Figure 19: The percentages of powdered milk products distributed by traditional grocery stores from 2008 to 2013 (EMI, 2014, p. 9)

### 6.2.3 Powdered milk product choice criteria

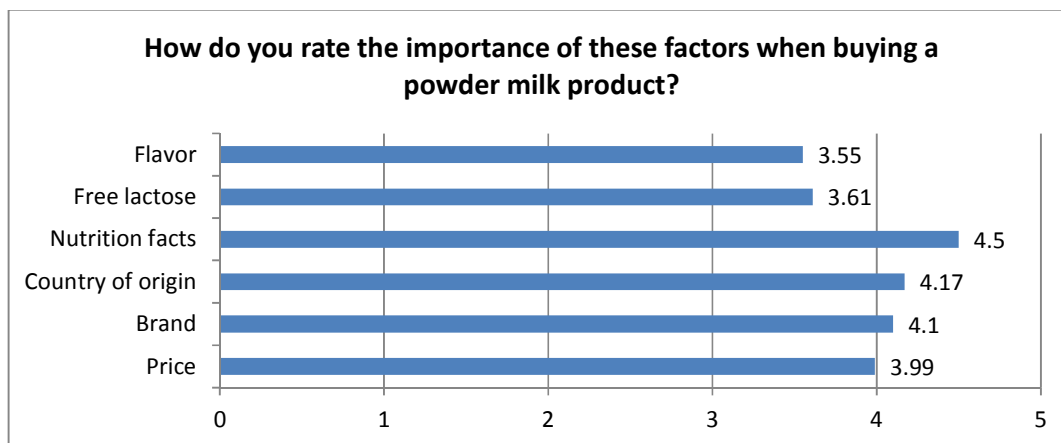


Figure 20: Powdered milk product choice criteria in Vietnam

In the question of powdered milk product choices, the authors gave 6 main elements for the respondents to rank from 1 to 5 in descending order of their considerations: price, brand, country of origin, nutrition facts, free lactose, and flavor. Among them, nutrition facts were the most significant factor that was graded 4.5 out of 5, followed by country of origin (4.17) and brand (4.1). The least important influence above was flavor which was only graded 3.55 (figure 21).

This result is also confirms the survey conducted by the USA Marketing Research Association in 2011. Most parents particularly concern quality and effect as the two most important criteria; followed by price, origin and ingredient (Viettrack, 2011). It is noticeable that price is always one of the important fac-

tors; however, as many consumers explained, they can pay a higher price if the products' quality is guaranteed.

For more knowledge of nutrition facts, Mr. H provided information in terms of ingredients. Generally, all powdered milk products include skimmed powdered milk, whey protein, oil, butter, maltose, glucose, lactose, malt dextrin and other trace elements such as minerals, vitamins, DHA, chlorine, etc. The components are virtually similar in each single product and what makes them different from the others are the ingredients' proportions and several special components but with very low amounts. For instance, milk for height development will have a higher amount of calcium and the ratio of calcium and phosphorus is adjusted accordingly, while infant milk has higher fat content, more vitamins and antibodies.

In terms of country of origin, the survey participants were questioned their preference of foreign or domestic brands and up to 67.26% consumers preferred the former, only 11.31% chose domestic while 21.43% saw it as neutral. The international brands are generally more expensive so the authors analysed this issue along with consumers' income levels.

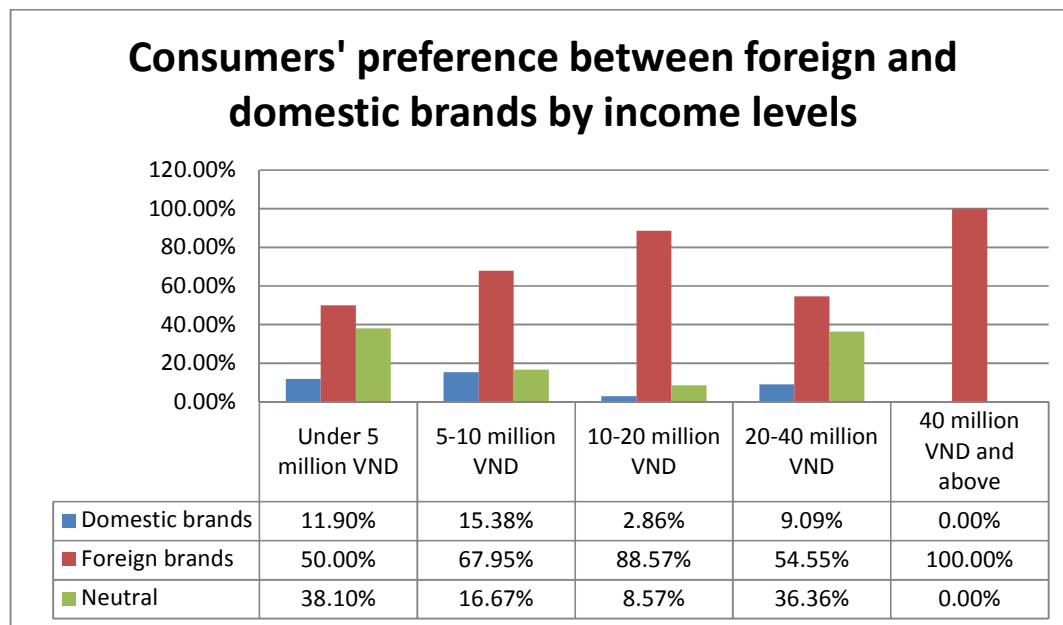


Figure 21: Consumers' preference between foreign and domestic brands by income levels

In accordance with the graph, people preferred to choose international brands regardless of their incomes and this ratio is higher when the income increases. Nevertheless, it is surprising that the consumers in the fourth group (salary of 20 to 40 million VND) tend to see brands as neutral between local and imported products. In the last group, 100% consumers would select imported brands; however, as mentioned in the study sample, this group held a very low percentage of total respondents. Thus, to understand more thoroughly Vietnamese upper class consumers, the authors suggest conducting further research. In this survey, it is understood that when the consumers' incomes surge, their preference of international brands is higher.

The last question in this part was packaging, the respondents were asked if they preferred powdered milk products packed in either instant small film packs, carton pack of 400g and above, metal can of 400g and above, or packaging as not an important factor at all. According to the survey's results, up to 69.15% of respondents liked metal can from 400g and above, which is also the most prevalent in the market. The other kinds of packages such as one-time used bundle or paper bag only occupied low ratios, being 6.91% and 10.11%. Finally, there were 12.77% consumers considering packaging as not an important factor.

As mentioned in section 4.1.2.3.1, Abbott and Vinamilk are the two largest firms that take highest market shares in the Vietnamese powdered milk market. The other milk producers are Dutch Lady, Mead Johnson, Fonterra, Nestle, Nuti-food, etc. Because these companies target different niche markets, it cannot be concluded that Abbott is totally leading other brands. Take Fonterra as an example; although this brand does not have a high market share, it is one of the leading trademarks in elderly segmentation with many successful products like Anlene, Anchor, etc.

The following part analyses the brands' familiarity to consumers and how the consumers evaluated them.

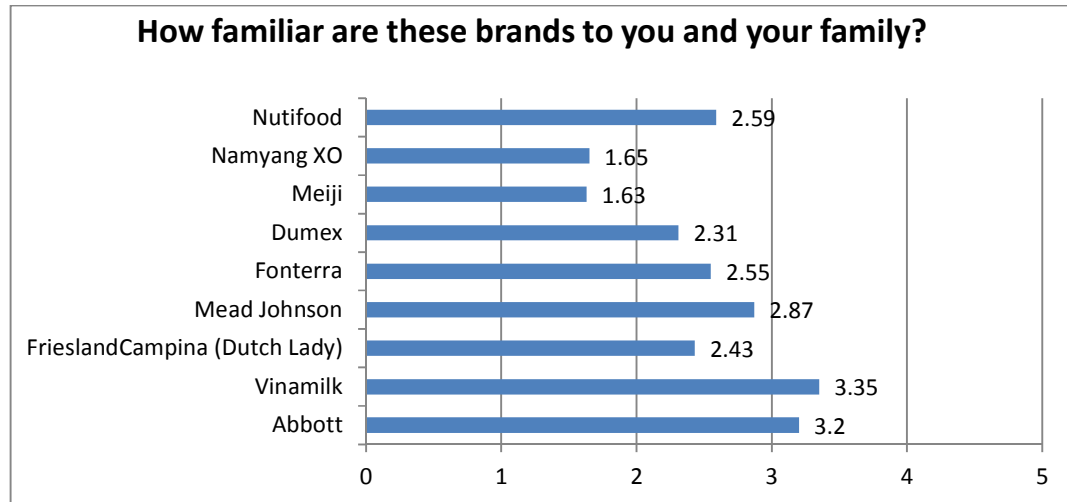


Figure 22: The popularity of powdered milk brands in Vietnam (1: I have never used/bought it, 2: I stopped using it, 3: I sometime use/buy it, 4: I usually use/buy it, 5: I always use/buy it)

From the graph, Vinamilk was the most prevalent brand among the survey participants, followed by Abbott, Mead Johnson and Nutifood. The least popular brands were Meiji and Namyang XO. In general, the average ranks of every brand was not high (no brand at rate 4 or 5) which could indicate a low in customer loyalty. Namyang and Fonterra were the two successful brands in the market for seniors but the rate of Fonterra was higher (2.55 compared to 1.63). One of the reasons is because of their marketing strategies as discussed in the previous chapter (4.1.5). Fonterra releases dozens of TV advertisements every day, while Namyang concentrate only on social activities, and with a high number of people watching televisions in Vietnam daily, this number is explainable.

#### ***6.2.4 The demands for new powdered milk products and lactose free products***

##### ***6.2.4.1 Powdered milk products***

Despite countless powdered milk products in the current market, consumers still demand for new ones. Added by Mr. H on market trend, powdered milk consumption is still rising in 5-10 years because consumers' incomes are increasing and milk prices are becoming stable and reasonable (H, 2014).



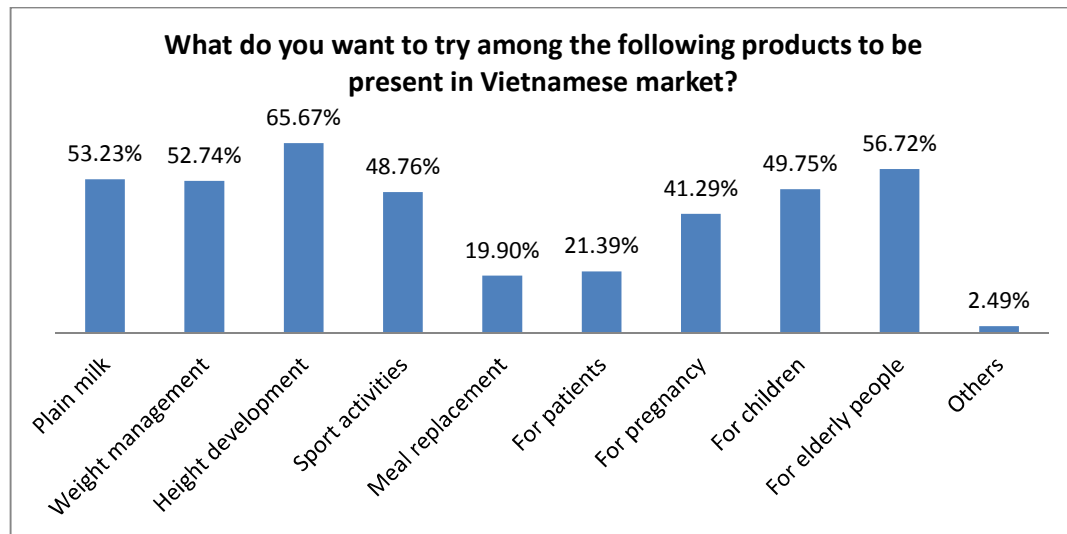


Figure 23: Consumer demands for new powdered milk products

When asked what kinds of powdered milk the survey respondents want to try, the highest demand was products for height development as 65.67% of them chose this category. Afterwards, powdered milk products for elderly people, weight adjustment, for children and for sporting activities also seized high proportions, 56.72%, 52.74%, 49.75% and 48.76%, respectively. Interestingly, plain powdered milk still played an important role because 53.23% of the respondents wanted to taste new products in the upcoming time. Concerning this issue, the reason provided by interviewed consumers was that products for special effects, which contain extra ingredients, taste much different from the original ones, and they sometimes expected to taste exactly the original flavor.

#### 6.2.4.2 Lactose free products

In the sample description, more than 50% of the survey participants were not aware of lactose intolerance because this term is still not so familiar. However, when they were explained this feature, up to 65.17% wants to try it.

Indeed, according to Mr. H (2014) from Vinamilk, lactose free products were still not prevalent in Vietnam; yet, it would be one of the main development trends for dairy manufacturers in the upcoming time and several producers had begun developing this product. Moreover, several Vietnamese consumers from all ages do suffer from lactose intolerance, so lactose free products would significantly expand the dairy market in at least 5 years. Currently, said Mr. H, Vinamilk as

well as some other producers were attempting to popularize lactose intolerance issues to consumers so that new products would be adapted more quickly.

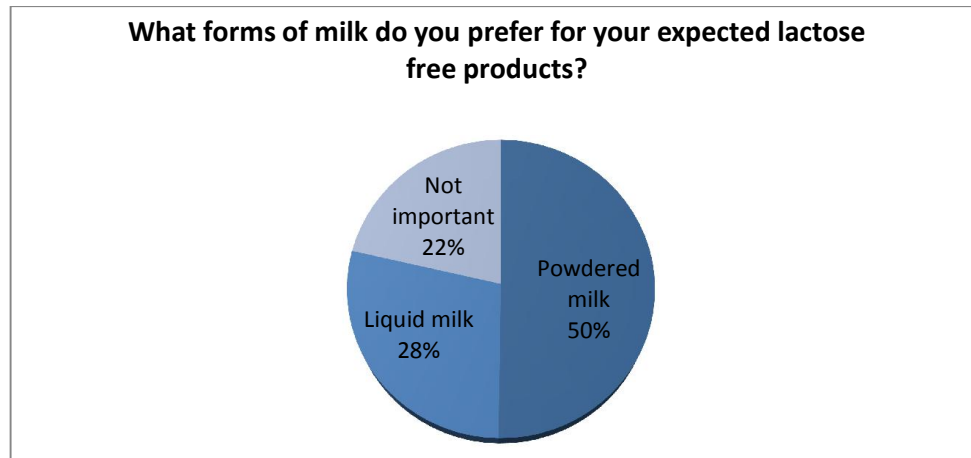


Figure 24: New product preference

In addition, for new product preference, the survey participants were asked whether they will choose powdered milk or liquid milk for a new type of product without lactose. Up to 50.25% consumers prefer powdered milk, 28.36% prefer milk in liquid and 21.39% see no difference. The reason is probably because of the consumers' habit; they have been familiar with using powdered milk for a long time, relying on powdered milk quality and its better effects than normal milk.

## 7 CONCLUSION AND RECOMMENDATION

### 7.1 Vietnamese powdered milk market

Turning back to the first research objective, the question ***“How is the powdered milk market in Vietnam?”*** has been answered by identifying each of the following individual aspects.

Firstly, *“How is the sale volume and the consumption growth?”*. Vietnamese powdered milk market is emerging. The current consumption level is lower than the world average consumption level; therefore, it is predicted to increase enormously in the coming time. The sales volume, as reported, is aggregating in every single segment; however, the competition in the market is very fierce and highly challenging to both local and foreign dairy manufacturers.

Secondly, *“What types of powdered milk products are available in the market and how are they packaged?”* It can be seen that the market has a diversity of products targeting different consumers of all ages. By age segmentation, it is categorized to infants under 1 year old, children (1-6 years old), adults, mothers, and the elderly. In addition, milk producers also offer various product lines specialized to patients, sport activities and other purposes. The ingredient contents in those products are generally similar yet the ratio of ingredients is different depending on using purposes. Milk powder ingredients are imported from many countries, in which each exporting partners have different strengths on prices, quality, nutrient contents, etc. Among them, the USA, New Zealand, Singapore, the Netherlands, and France are the main exporting countries. In terms of packaging, powdered milk products are packaged in metal cans and carton packs; metal cans weighted 400g and 900g are predominant in the market.”

Thirdly, *“How is the pricing situation of those products?”* Producers target different potential customers, in which, Dutch Lady, Vinamilk or Nutifood aims to low-end products for low income customers, meanwhile American players like Abbott or Mead Johnson target to high income consumers with the prices being approximate double the others. The range of price widely spreads from low to high, but it is still expensive for most of Vietnamese citizens in general. Moreo-

ver, different distribution channels also push the prices higher and become unstable.

Afterward, *“How are powdered milk products marketed?”* Due to a very tough competition, the players have either attempted to launch many different campaigns or aimed a niche market to affirm their positions in the marketplace. Though TV advertisement is one of the main marketing channels, several manufacturers confidently conduct other programs with humanitarian aid like sporting activities for the disables, charity walking, etc. and receive plentiful positive effects. Although the manufacturers use different marketing strategies, they commonly follow three key rules, being positioning specific product characteristics, positioning products' value and prices, and enhancing customer services.

The second research objective, ***“How are the consumers' purchasing habits and product interests?”*** is also analyzed by answering different elemental questions.

First, *“How is the powdered milk consumption habit?”* Everyone in Vietnam drinks powdered milk, and children, adults, seniors and pregnant women are main consumers. Powdered milk drinking habit has been perceived more and more important for all ages with the purposes of not only nutrient supplement, but also height development, weight management, and fitness. Consumers also prefer drinking powdered milk rather than liquid milk, as they believe the former has higher quality and nutrients.

*“What sources of information are used before purchasing and what are the common chosen distribution channels?”* About purchasing habits, consumers are sturdily affected by their reference groups when purchasing milk products. They are typically their families, friends, colleagues, neighbors, etc. Besides, TV, newspapers, companies' websites and outlet displays also make certain impacts to their choices; while commercial emails and salesmen do not. Dairy distributors, supermarkets and grocery stores are the most chosen distribution channels.

Second, *“What are the product choice criteria?”* Although price is a very important element when making a purchase, it is not the first priority. In fact, nutri-

ent contents play the most essential role in consumer choice criteria, followed by country of origin, brand and price. Free lactose and flavor are not the current most concerned factors, yet they still make certain impacts on purchasing decisions.

Finally, *“How are the demands for new products and lactose free products?”* Despite the abundant amount of powdered milk product in the current market, consumers still have more demand for height development, elderly people, weight adjustment, and sporting activities. Most noticeably, plain milk, which has original flavor, is under fairly high demand. On the other hand, it is undeniable that “lactose free” is still a new term for many Vietnamese consumers; however, by acknowledging the benefits of lactose free milk, most of them demand to try this type of milk in the future. It is not surprising that consumers still prefer powdered milk rather than liquid milk because as analysed earlier, powdered milk has become a main type of drinking milk of the consumers. Besides, milk producers in Vietnam are convinced that lactose free milk market will be growing rapidly within at least in 5 to 10 years. Therefore, they are trying to exploit the market in order to step-by-step launch lactose free milk soon.

All in all, with the large market size, the increasing consumption level, and the high demand of consumers, ***Vietnam is a very promising market for Valio’s products***. Vietnamese consumers still demand for more powdered milk products despite the various quantities of current ones; lactose free products, likewise, are also expected to be a new development trend. Hence, the authors positively recommend Valio to penetrate to this market in the near future.

## **7.2 Implication on further research**

This research is completed based on the questions provided by the case company; however, due to the thesis limitation and data limitation some information could not be given. This thesis is to give main characteristics of the target market, Vietnam, to Valio based on the country situation, a picture of the powdered milk industry and the consumer choices and expectations. In order to certainly make a decision of internationalization, the company will need to conduct further research.

Because of the current competition, milk producers must keep their business strategies confidential. Therefore, information about partner companies who supply ingredients cannot be exposed. As a result, Valio would need to perform further professional researches or work with the local companies to know their demand and whether or not they would need Valio's ingredients or technology.

Last but not least, financial analysis, marketing strategies, legal procedures, etc. will also need to be studied on. This thesis is found as the first research of the Vietnamese powdered milk market for Valio; thus, other researchers are allowed to employ results found here for other studies to move from ground to actions.

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**APPENDIX 1: Features in PEST analysis, based on (Manktelow, 2005, pp. 61-62)**

<p><b>Political</b></p> <ul style="list-style-type: none"> <li>- Government type and stability</li> <li>- Regulation or deregulation trends</li> <li>- Tax policy, trade and tariff controls</li> <li>- Environmental and consumer protection legislation</li> <li>- Potential changes in the political environment</li> </ul>	<p><b>Economic</b></p> <ul style="list-style-type: none"> <li>- Current economic growth</li> <li>- Inflation and interest rate</li> <li>- Employment, labour supply, and labour costs</li> <li>- Level of disposable income</li> <li>- Effects of globalization</li> <li>- Likely changes in economic environment</li> </ul>
<p><b>Socio-cultural</b></p> <ul style="list-style-type: none"> <li>- Demography in general</li> <li>- Population health, education and social mobility</li> <li>- Job market freedom and attitudes to work</li> <li>- Lifestyle choices and attitudes to social problems</li> </ul>	<p><b>Technological</b></p> <ul style="list-style-type: none"> <li>- Technology development</li> <li>- Infrastructure conditions and the impact on work pattern</li> <li>- Growth of technological hubs</li> <li>- Areas that the Government and institutions focus on their research</li> </ul>



## **APPENDIX 2: CURRENCY EXCHANGE RATE**

All the currency exchange (from VND to EUR) used in this thesis are from the website <http://www.oanda.com/>

1 EUR = 26 514.5 VND (26.10.2014)

### APPENDIX 3: INTERVIEW GUIDELINE (translated from Vietnamese)

*Hello, we are Trinh Chau and Quang Pham, bachelor students of International Business from Turku University of Applied Sciences, Finland. At the moment, we are conducting a cooperative thesis with the topic "A STRATEGIC MARKET RESEARCH FOR VALIO COMPANY: VIETNAMESE DAIRY MARKET ANALYSIS". Valio Ltd is the largest Finnish dairy manufacturer and also one of the world's innovative dairy companies. It is aiming to Vietnam as its next promising destination.*

*Our target is to provide a picture of Vietnamese powdered milk market and consumer demand for free-lactose powdered milk. We chose this thesis with an expectation of introducing Vietnamese market to foreign countries, strengthening cooperation between 2 countries, and most importantly, improving quality and pricing situation of powdered milk market in Vietnam in the upcoming time. During the interview, you can interrupt or refuse to answer any question you are not comfortable with. The interview will take approximately 30 minutes.*

*Now, let's get started.*

**Question 1:** Could you please tell us about your job title and department you are working in?

*Position: Personnel in operating milk powder drying system, production department, Vinamilk's powdered milk factory.*

**Question 2:** How many years are you in this position?

*Approximately 2 years.*

**Question 3:** What are the main ingredients used in producing powdered milk for:

1. Infants
2. Kids
3. pregnancy
4. adults
5. seniors
6. Special nutritional addition like height growth, weight management, etc

*All of them have the following ingredients: protein, fat, lactose, maltodextrin, glucose and micronutrients like minerals, vitamin, DHA, choline, etc.*

*Powdered milk for different targets will be different in nutritional composition. For example, height development powdered milk contains more calcium and the ratio of calcium and phosphor is adjusted. Infant powdered milk contains high fat, more vitamins and antibodies.*

**Question 4:** How is the difference between kinds of milk powder used in producing those products?

*Milk powder comprises skim milk powder, whey protein, oil, butter, maltose, glucose, lactose, etc. There is virtually no difference in milk powder used in producing those products because only the ratio between ingredients is changed. One small difference is the micronutrients with very low amount.*

**Question 5:** From which brands/companies does your company import milk powder?

*In general, dairy companies in Vietnam often import milk powder from USA, New Zealand, France, Netherlands, Singapore, etc. Each supplier has different strengths about price, quality, and content of nutrients. Our partners are from the USA, Australia and New Zealand; however, I cannot specify our partners as well as our cooperative business because the company information is needed to keep in confidential.*

**Question 6:** How is the current consumption of free lactose milk?

*Not that many free-lactose powdered milk products are in the market currently, but the production of those types of products starts to be studied and employed.*

**Question 7:** What do you think about the trend lactose and free-lactose powdered milk consumption in 5 years?

*The consumption of powdered milk in general will increase dramatically in 5-10 years due to the rise of consumers' income, the stability and more affordability of milk prices, and increasing enhancement of quality.*

*Lactose-free products in particular will meet the demand of customers that have not drunk milk for a long time, which causes lack in intestinal micro flora and in enzyme lactase for lactose digestion. The appearance of those products will also help expand the milk market to all aged consumers. In other words, the market is very open for lactose free product in 5 years.*

**Question 8:** How is the demand for free-lactose powdered milk of the dairy companies' side?

*Currently the demand is rare but I'm sure it will become a trend in the future for milk manufacturers. When this happens the current non-milk drinkers will be soon accustomed to using free-lactose milk products.*

**Question 9:** Does your company have any demand for free-lactose milk powder or for licensing free-lactose technology at the moment?

*Yes as mentioned we have started to do R&D in free-lactose milk production, yet we currently can only produce lactose product. We may need to import free-lactose milk powder.*

**APPENDIX 4: SURVEY QUESTIONS (translated from Vietnamese)****SURVEY ON POWDERED MILK CONSUMPTION HABITS IN VIETNAM 2014**

*Dear Sir/Madam,*

*We are Quang Pham and Trinh Chau, last year students from Turku University of Applied Sciences. We are doing a cooperative thesis with the topic "A STRATEGIC MARKET RESEARCH FOR VALIO LTD: VIETNAMESE DAIRY MARKET ANALYSIS".*

*This is the survey on Vietnamese powdered milk market in 2014, which will take you 3-5 minutes. Please choose the answers until the end of this questionnaire, and then click "Submit" to finish the survey. This survey includes 19 questions.*

*All the information you give us is kept anonymous. We sincerely thank you for your precious time.*

*Best regards,*

*Quang & Trinh.*

**1. Your gender**

Male

Female

**2. Your age**

Under 18

From 40 to 49

From 18 to 39

50 or above

**3. You are living in**

Ho Chi Minh City

Ha Noi

Other cities/provinces

**4. Your family income**

Under 5 million VND

20 to 40 million VND

5 to 10 million VND

40 million VND and above

10 to 20 million VND

**5. Do you and your family consume any types of powdered milk?**

Yes

No (Skip to Qs.20)

**6. Do you use or have some knowledge about lactose-free powdered milk products?**

Yes

No

**7. What types of powdered milk products that you and your family consume?**

Infant formula (0-6 months old)

Powdered milk for seniors (51 years old and above)

Powdered milk for kids

Powdered milk for sport activities

Powdered milk for adults

Powdered milk for pregnant women

Convalescence products

Others

**8. What are the main purposes for you and your family to consume powdered milk?**

Meal replacement

Gain/Lose weight

We like drinking milk

Sport activities

Nutrient supplement

Others

Height development

**9. How do you rate the importance of drinking powdered milk in daily diet for:**

	Totally unimportant	Somehow important	Neutral	Important	Very important
<b>Infants</b>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<b>Kids</b>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<b>Adults</b>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<b>Maternal women</b>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<b>Elderly</b>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

**10. Based on quality and nutrition conditions to compare between liquid and powdered milk, what types of milk do you prefer to choose for the following targets?**

	Liquid milk	Powdered milk	They are the same
<b>Infants</b>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<b>Kids</b>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<b>Adults</b>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<b>Maternal women</b>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<b>Elderly</b>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

**11. How do you rate the importance of these factors when buying a powdered milk product?**

	Totally unimportant	Somehow important	Neutral	Important	Very important
<b>Price</b>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<b>Brand</b>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<b>Origin</b>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<b>Nutrient Information</b>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<b>Free lactose</b>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<b>Flavors</b>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

**12. What is your brand choice of powdered milk products?**

- Domestic brands       Foreign brands       Not important

**13. How familiar are these brands to you and your family?**

	Never used/bought it	Stopped using it	Sometimes use it	Usually use it	Always use it
<b>Abbott</b>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<b>Vinamilk</b>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<b>Friesland Campina (Dutch Lady, Friso)</b>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<b>Mead Johnson (Enfa)</b>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<b>Fonterra (Anlene, Anchor)</b>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<b>Dumex</b>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<b>Meiji</b>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<b>Namyang XO</b>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<b>Nutifood</b>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

**14. What kind of packaging do you prefer?**

- Instant (one time) small film pack       Not important  
 Carton pack (400g and over)       Others  
 Metal steel can (400g and over)

**15. Where do you often find the product information before buying powdered milk?**

- TV advertisement       Radio's advertisement  
 Stores' exhibition       Newspapers, magazines  
 Recommendation from salespersons       Email marketing  
 Friends/Relative recommendation       Companies' websites  
 Banners and posters on the street (bus station, vehicles, etc.)       Others

**16. Where do you often buy these products?**

- |                                             |                                             |
|---------------------------------------------|---------------------------------------------|
| <input type="checkbox"/> Groceries          | <input type="checkbox"/> Supermarkets       |
| <input type="checkbox"/> Convenience stores | <input type="checkbox"/> Dairy distributors |
| <input type="checkbox"/> Hypermarkets       | <input type="checkbox"/> Others             |

**17. What do you want to try among the following new products to be present in Vietnamese market?**

- |                                                                |                                                      |
|----------------------------------------------------------------|------------------------------------------------------|
| <input type="checkbox"/> Plain milk, no additional ingredients | <input type="checkbox"/> Maternal powdered milk      |
| <input type="checkbox"/> Powdered milk for weight adjustment   | <input type="checkbox"/> Convalescence powdered milk |
| <input type="checkbox"/> Powdered milk for height development  | <input type="checkbox"/> Powdered milk for children  |
| <input type="checkbox"/> Powdered milk for sport activities    | <input type="checkbox"/> Powdered milk for elderly   |
| <input type="checkbox"/> Powdered milk for meal replacement    | <input type="checkbox"/> Others                      |

**18. Do you demand for free lactose milk?**

- Yes  No

**19. What forms of milk do you prefer for your expected products?**

- Powdered milk
- Liquid milk
- Not important