

Need of the Market Information in the B2B Packaging Industry

Insights into the Milk Formula Market in the Asia-Pacific Region at
A&R Carton AB

HOYEON PARK

MASTER'S THESIS

Packaging Logistics
Lund University



FIPDes

Food Innovation & Product Design

This Master's thesis has been done within the Erasmus Mundus Master Course FIPDes, Food Innovation and Product Design.

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Abstract

- Title:** Need of the Market Information in the B2B Packaging Industry - Insights into the Milk Formula Market in the Asia-Pacific Region at A&R Carton AB
- Author:** Hoyeon Park
- Division:** Packaging Logistics, Department of Design Sciences, Faculty of Engineering, Lund University
- Supervisor:** Annika Olsson, Professor at Packaging Logistics, Department of Design Sciences, Faculty of Engineering, Lund University
- Issue of study:** As the ultimate demand of packaging is derived from the end-consumer, the packaging industry needs to have comprehensive end-user market knowledge to acquire new customers. The importance of the market information is further emphasized when the potential customer is in the unfamiliar geographical region. Milk formula is a food product that the recent growth comes from the Asia-Pacific; therefore it is advantageous for a packaging company with a strong base in the European market to conduct a market research before entering the new geographical area.
- Purpose:** The purpose of this thesis is to investigate the nature of packaging industry to understand the need of market and consumer information in the business-to-business settings. Another purpose of this research is to identify the trends and prospects of the milk formula market in the Asia-Pacific region in response to the need of the market research at the case company.
- Method:** A case study approach with abductive reasoning is used to have an in-depth insight into the business surroundings of the packaging industry. The data collected through interviews and observations were handled by using the thematic analysis. A systematic international marketing research was designed to identify the Asia-Pacific market characteristics. The overall investigation followed the screening and selection method of international marketing research based on secondary data.
- Conclusion:** The case study revealed a clear need of the relevant market information in the business-to-business packaging firm to win the potential customers. The in-depth market research was beneficial for the carton-packaging industry to target the Asia-Pacific region, as it provided valuable remarks particularly for the carton packaging prospects based on the solid data. However, it was problematic for the

packaging industry to collect and update such market data in the future due to several difficulties transmitted from the business environment; therefore it leaves a further research area to facilitate the information gathering under the current business environment.

Key words: Packaging industry, business-to-business, milk formula packaging, Asia-Pacific

Executive summary

Abstract

As the ultimate demand of packaging comes from end-users, the importance of consumer and market information has risen in the packaging industry. A folding-carton packaging targets milk formula product has an opportunity in the Asia-Pacific region due to an increased demand, thus it is important for the packaging industry to understand the emerging market to expand the business. A systematic international marketing research and industry-specific indicators were designed, which revealed many valuable insights for the packaging industry. As a result, a careful consideration of consumer convenience, safety and retail distribution change is recommended to thrive in the Asia-Pacific milk formula market.

Introduction

Packaging industry is an intermediary business that often outsources materials, transforms it into packages, and then supplies it to their customer such as the food industry. The business handles both internal and external relations to win potential direct customers.

In general, the packaging industry has a business-to-business characteristic that works on the needs of their direct consumers. In addition, it is also important to know the consumer market in order to understand the direct customers. The case company, A&R Carton, has a strong base in European market that produces customized folding cartons for various consumer goods. One of the main targets is a milk formula, which the Asia-Pacific region has played an important role in recent years. Since the region is unknown market to the firm, it is crucial for them to conduct a preliminary market research to evaluate the market potential.

Objective

The two main purpose of this thesis is to:

- Investigate the nature of packaging industry to understand the need of market and consumer information in the business-to-business settings.
- Identify the trends and prospects of the milk formula market in the Asia-Pacific region in response to the need of the market research at the case company.

Method

A single case study with abductive approach was used to understand the need of market information. The case study was based on two primary data sources, which

are interviews and observations. The collected data followed a thematic analysis methodology to categorize meaningful insights.

After identifying the need, a 3-phase systematic international marketing research was structured. It was designed firstly to distinguish promising markets; secondly to conduct in-depth market research and finally to find similarities across the Asia-Pacific region. The overall research used indexing and ranking method^{1,2} as well as the thematic analysis, based on secondary data sources such as market intelligence reports and literature review.

Results

The case study showed the drivers of collecting market information in the B2B packaging industry. The biggest motivation was to have a better understanding of their direct customers. Export markets such as Asia were valued as the company is export-oriented, but the scarce market information and cultural differences in the unknown markets hindered the expansion of the business. There were certain barriers noticed in the case company, which comes from the nature of B2B settings.

Marker research: phase 1. Preliminary screening

The purpose of the first phase is to identify the market that has high attractiveness for sales potential. Evaluating the market potential according to pre-determined variables was carried out with the formula and weights below. Consequently, seven markets were prioritized while the other four markets were disregarded.

$$X'_{ij} = \left[\frac{X_{ij} - \text{min}_i}{R_i} (99) \right] + 1$$

X_{ij} : Average score of country j on dimension i

X'_{ij} : Scaled final value of country j for the dimension i

Min_i : Minimum value for dimension i

R_i : Range of dimension i

Table 1. Dimensions and measures of the Asia-Pacific market potential

Dimension	Weight	Measures
Market size	5/10	<ul style="list-style-type: none"> Retail value (MARKETVALUECUR) Total volume (MARKETVOLUMECUR)
Market growth rate	3/10	<ul style="list-style-type: none"> CAGR growth rate forecast retail value (MARKETVALUEFC) CAGR growth rate forecast total volume (MARKETVOLUMEFC)
Consumption capacity	2/10	<ul style="list-style-type: none"> Birth rate (MARKETCAP)

Table 2. Preliminary market selection result

	Score	Index	Rank
China	8.5	100	1
Indonesia	3.9	41	2
Philippines	3.1	31	3
India	2.7	26	4
Vietnam	2.7	26	5
Malaysia	2.4	23	6
Thailand	1.9	17	7
Singapore	1.1	6	8
Taiwan	0.8	2	9
Japan	0.7	1	10
South Korea	0.7	1	11

Phase 2. Individual market research

The individual market research was conducted based on relevant business intelligence reports. Indicators are developed and categorized into five main areas.

Table 3. Market indicators in the selected Asia-Pacific region

Category	Indicator
Demographics	Birth rate
	Female labor participation
	Exclusive breastfeeding rate
Market	Urban population
	Market retail value RSP
	Company share
Product	Distribution channel
	Brand share
	Packaging prevalence
Consumer	Expenditure per capita
	Attitude
Government policy	Milk formula-related

Phase 3. Multinational market research

The last phase was investigated to spot the similarities across the region. Urbanization and demographic changes have transformed the consumer life style. Parents are health-conscious and proactive to find the best alternative to breast milk when it is not an option, which increased the market value in recent years. The milk formula products are mainly distributed in the grocery stores but online retailers are steadily gaining its popularity. When it comes to the packaging, bag-in-box and tin can are the two most popular formats in the markets.

Discussion

The systematic market research revealed three remarks for folding carton to fully consider, which are consumer convenience, product safety and retail distribution channel change.

Firstly, as the consumers demand product convenience under the daily pressure in urban life, the recent packaging developments have been focused on enhancing the product usability; easy-opening/-closing feature, space design for scoop storage and emergence of single-serve packs for on-the-go use were noticed. The melamine tainted milk formula scandal upraised safety concerns around the globe, which brings the second market remark. The packaging should communicate that it can be a way of ensuring the quality maintenance throughout the shelf life. The last insight is the change in retail distribution channels. The popularity of large retailing operation brings a fierce competition on the shelves. As the packaging is a medium that draws the attention of end-consumers in the retailing operations, increased shelf space is likely to positively drive the packaging development to win the intense shelf competition.

Although the need and practicality of the market information was confirmed, certain barriers were noticed that discourages the follow-up market research initiatives, which comes from the nature of B2B settings: environment of B2B industry and organisation structure. The obstacles were similar to the problems that had been reported in the previous studies.

Conclusions

The case study revealed a clear need of the relevant market information in the business-to-business packaging firm to win the potential customers. The in-depth market research was beneficial for the carton-packaging industry to target the Asia-Pacific region, as it provided valuable remarks particularly for the carton packaging prospects based on the solid data. However, it was problematic for the packaging industry to collect and update such market data in the future due to several difficulties transmitted from the business environment; therefore it leaves a further research area to facilitate the information gathering under the current business environment.

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1 Introduction

1.1 Background

Packaging is an integral part of a product that affects the entire supply chain (Olsson & Györei, 2002) and its role in marketing communication has become increasingly important since it directly interacts with consumers in the retail store (Rundh, 2009). It is a vital part of the marketing mix, particularly in the fast moving consumer goods (FMCG) sector where a wide product variety brings a fierce competition (Olsson & Györei, 2002). Due to its importance of delivering marketing value, packaging is often referred to as the “silent salesperson” (Ditcher, 1957 cited by Vazquez *et al*, 2003) and act as a key differentiator in the retail store. To attract consumers, therefore, packaging should be designed with a careful consideration of the target consumer (Underwood, Klein, & Burke, 2001).

FMCG product packaging is produced by packaging companies and is supplied to content producers, such as food companies, and the final product continues its subsequent delivery to the consumer through the supply chain (Figure1). Even though packaging carries marketing messages to the final consumer, direct end-user communication is rare in the packaging industry; they produce packaging material upon order of FMCG producers on business-to-business (B2B) basis. Although B2B demand is derived from consumer markets, the B2B industry has a primary focus on their direct customers (Gummesson & Polese, 2009; Biemans & Brenčič, 2007).

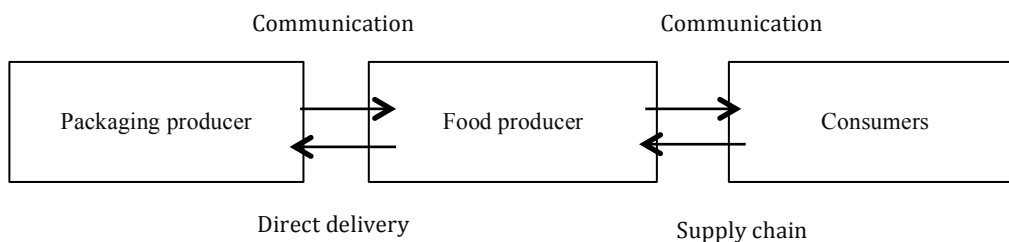


Figure 1-1. FMCG communication and production flow

Milk formula for infants and young children is one of FMCG products that follow the principle of packaging in the Figure 1. Packaging is supplied to the food producer, and then it is filled and distributed to consumers. The food producers are in charge of consumer marketing that reflects consumer needs and wants, but the marketing and packaging are strictly regulated by governmental policies and the code of World Health Organization (Gunter, Dickinson, Matthews, & Cole, 2013; World Health Organization, 1981). In terms of safety, milk formula is a demanding product that requires a packaging with high barrier properties against light, oxygen and humidity in order to prevent any degradation of quality or alteration of the components (Karatapanis, Badeka, Riganakos, Savvaïdis, & Kontominas, 2006). For these

reasons, studies in milk formula have focused on product safety and regulation compliment, but little attention has been given to the potential of the market or differentiating value of packaging in the sector.

Recently, milk formula business has become increasingly dependent on the Asia-Pacific region, since the performance of traditional markets including Europe and US have experienced a negative growth due to low birth rate and economic uncertainty (Euromonitor International, 2011a). The latest acquisitions in the baby food businesses show the attempt to obtain competitive advantage in the growing market (Euromonitor International, 2012a). On the contrary of the industry's focus, little attention has been given to academic research of these emerging markets, such as combining the market information or spotting the overall trend.

Considering the strategic movement of international producers, packaging companies should identify the newly focused markets of potential customers to win them. Recent business environment demands suppliers not merely understand the customer's own organization, but stepping forward to their end-user markets. Having an in-depth insight into market and end-user knowledge will enrich the customer's competitiveness in the market (Piercy, 2010). Moreover, recent studies show that it is advisable for packaging companies to consider the need of potential customers, which is satisfying the ultimate end-users (Normann & Ramirez, 1993; Chaneta, 2010). As packaging has a direct contact to its content, market demand of milk formula is linked to its packaging demand; therefore, collecting milk formula market data is likely to be correlated to the market potential of its packaging.

According to the preference, multinational producers introduce their milk formula products to emerging markets with different format of packaging, notably folding carton and tin can. Altering the packaging is one downstream product adaptation strategies, when companies target different geographical markets (Calantone, Cavusgil, Schmidt, & Shin, 2004). Considering this aspect, carton-packaging companies that traditionally focused on the saturated markets need to identify the consumer and market trend that influence the packaging in the emerging region, in order to win the potential customers.

Hence, the purpose and focus of this thesis is to identify the promising infant milk formula markets and research their characteristics in the Asia-Pacific region, in order for packaging companies, particularly carton packaging companies, to facilitate export market selection and entry strategy establishment in the future. Furthermore, the research will investigate the nature of the packaging industry to assess the need of market information as well as current practices to collect the insights.

1.2 Purpose of the research

The purpose of this master thesis is firstly to investigate the need of market and consumer information in B2B packaging firms through a case study and secondly to identify the milk formula market characteristics in the Asia-Pacific region to fulfill the need. The aforementioned objectives generated two research questions:

- Q1. Why should the packaging industry focus on end-user information and what practices are currently implemented?
- Q2. Which regional milk formula markets in the Asia-Pacific are forecasted to grow and what are the factors to consider in that country?

In order to fulfill the research objectives by answering the questions above, it is necessary to define a clear scope for the study, which is discussed in the following section.

1.3 Delimitations and research focus

The scope of this Master Thesis is limited to preliminary trend and prospect identification of milk formula markets in the Asia-Pacific region based on secondary sources. In-depth investigation for entry mode selection, specific strategy establishment or management decision with financial analysis for investment is beyond the scope of this initial research.

To be able to meet the objectives, the research will follow the process for international marketing research, with optimization for packaging companies. After identifying certain Asia-Pacific markets with positive growth potential, the research will investigate these markets only, considering the time frame and research scope. The chapters for case study and discussion will focus on carton packaging industry specifically targets infant milk formula products.

1.4 Target groups

This master thesis is carried out to provide an insight into emerging milk formula markets in the Asia-Pacific to academia as well as to industry. The overall approach of correlating product market information with packaging will also be of interest for practitioners in packaging industry and scholars. In addition, exploring the nature of packaging industry will provide a valuable understanding of the business to academicians.

2 Methodology

The overall research approach and design was discussed several times with supervisors prior to the start and at the initial stage of research. It was structured to cover the main purposes of the study using the methods of case study and international market research.

2.1 Case study

The first phase of the research is conducting a qualitative case study to identify the need of market information in the packaging industry. The case study method is selected to cover depth of the subject, deploying the market knowledge in specific B2B settings, carton packaging for instance. Single case is suitable to describe intensive and holistic insights, thus provide an in-depth understanding of a topic in specific settings (Yin, 2009). The overall research is based on empirical data such as interviews and observations, which are further described in the following parts.

2.1.1 Abductive reasoning approach

In order to overcome a major drawback of case study that the result is highly dependent on the context, abductive approach is chosen. (Dubois & Gadde, 2002)

“Abduction is a reasoning process invoked to explain a puzzling observation and is thinking from evidence to explanation.”

(Aliseda, 2006)

This approach has a base on data analysis that overlaps data collection (Eisenhardt, 1989), which reflects interdependencies between activities such as theoretical framework, data sources and analysis (Dubois & Gadde, 2002). By using different sources of information, it can increase the credibility of overall research as it unveils the details between one and the other. Moreover, it is a back-and-forth method that allows modifying existing theoretical structure upon latest findings during action research studies (Olsson & Olander, 2005). On account of business engagement of researcher throughout research period, it appeared to be reasonable to revise and re-construct the theories during the timeframe.

2.1.2 Thematic analysis

The data collected through interviews and observations were handled by using the thematic analysis. It is a method to discover, analyze and report the patterns (themes) within different types of qualitative data sets in both small and large-scale, such as interview transcripts (Clarke & Braun, 2013). The method is a practical tool that provides flexibility in analyzing the data set without losing the richness of it (Braun & Clarke, 2006). Between two types of analysis suggested by Braun and Clarke (2006), using a group of particular themes related to the research question was chosen rather

than providing an entire description, since the purpose was to highlight certain aspects of the data related to the research topic, “The need of the market information in the B2B packaging industry”.

The analysis used the six-phase process developed by Braun and Clarke (2006), which includes the steps as follow; familiarizing with the collected data; generating initial codes; searching for the common themes across the data; reviewing the themes; naming the themes and documenting the report. The whole process was a back-and-forth approach that included repeated reading to generate themes reflecting common ideas or attitudes among the interviewees. All interviews were transcribed prior to the analysis, and then followed the methodology described above. The emergence of similar patterns related to the research question is discussed in Chapter 4.

2.2 International marketing research

The second phase of the study includes identification of promising markets, their existing packaging format for milk formula and investigation of market characteristics. The overall investigation follows the screening and selection method of international marketing research based on secondary data.

The research will be based on archival analysis. According to Yin (2009), archival analysis is advantageous in such case when the goal is to describe the frequencies of phenomenon. Thus to see the analogy of the multinational markets, it is adequate to conduct the research based on market reports, statistics and trend reports investigated by market intelligences and literature review.

According to Cavusgil (1985), international market research needs to follow sequential phases that are interconnected to one another, which are (1) preliminary screening for markets in attractive countries (2) assessment of industry market potential and (3) company sales potential analysis. Considering the scope of the research, some modifications are made to focus on first two phases. Moreover, Ghauri and Cateora suggest that multi-country analysis should be analyzed firstly at an individual country level, and then at a multi-country level (2010). Consequently, a three-stage research is structured; initial screening, individual country market research and multinational market research.

First, certain markets in the Asia-Pacific will be eliminated. The most important concern of international market research is identifying the market that has high attractiveness for sales potential. Since reaching every geographical market is time-consuming, it is advisable to be selective based on structured screening process (Cavusgil, 1985). Preliminary screening is therefore needed to identify key markets in the Asia-Pacific region considering the scope and timeframe of this research.

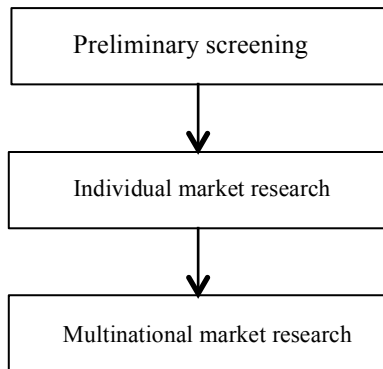


Figure 2-1 Market research structure

Subsequent to the initial elimination of less attractive markets, the second part of market research at individual level will be carried out to understand market-related factors. In this phase, industry specific issues in each country must be identified to see the general trend in the following phase at multi-country level (Ghauri & Cateora, 2010). Understanding the situation in different markets will bring empathy for potential customers of packaging industry as well as holistic view on overall Asia-Pacific region in the last step. The key question to be answered at this phase is as follows (adopted from Cavusgil, 1985):

What are the related factors that influence the industry in each market?

The influential indicators to be investigated at this stage are market access, product potential, local distribution and production (Cavusgil, 1985). Since optimized factors for specific industry is desirable, the equivalent indicators for selected markets are designed to reveal their individual characteristics.

The last phase is multinational market research. Related to the approach suggested by Ghauri & Cateora (2010), the main purpose of this stage is investigating the similarities and differences of the markets in the Asia-Pacific region. In order to find the similarities, the data acquired in the previous phase was reviewed and coded following the thematic analysis method described earlier (Braun & Clarke, 2006). It revealed the patterns in the selected secondary data (e.g., market reports) that the scope of the thematic analysis covers (Clarke & Braun, 2013).

2.3 Data collection

2.3.1 Different types of data

Data for this thesis was collected from various sources. In the abductive case, it provides uncovering different aspects of the research (Dubois & Gadde, 2002).

The data was mainly divided into two types, which are primary and secondary. Primary source of information in this research included the insights from interviews

and observations, while secondary data for this research referred to empirical data from previous business cases in the company, researches conducted by market intelligence firms, literature reviews and online retailer checks.

2.3.1.1 *Primary data*

- Interviews

Six face-to-face, semi-structured qualitative interviews were carried out to identify the current practice in B2B firms. According to Arksey and Knight (1999), interviewing is one of the two most common research method in the social science research that is widespread in various fields. Semi-structured interviews are used to generate qualitative data within relevant topic areas, which allows the researcher to pose follow-up questions or further clarification to develop the overall discussion during the interviews (Arksey & Knight, 1999). The informants for the semi-structured interviews were carefully chosen considering their engagement in the case company; their positions in the companies were as follows and the interview details are described in the Appendix 1.

Managing Director, A&R Packaging Lund
Segment Sales Director (Performance Packaging), A&R Packaging Group
Group Marketing Manager, A&R Packaging Group
Sales Manager (Performance Packaging – Machinery Systems), A&R Carton
Sales Manager, Flextrus
Business Development Manager, Flextrus

A&R Packaging Group includes two subsidiaries, A&R Carton and Flextrus. All informants were employees of the abovementioned packaging companies at managerial level in sales or marketing department, who had been engaged in the business for different time periods. Their area of expertise and company differed from one another, but were closely connected to the business process, notably sales and marketing; therefore, it was possible to fulfill the objective of the interview with the chosen interviewees, to gain an in-depth insight into the need of market information in B2B surroundings and current marketing practices.

- Observations and documentation

While attending several meetings, conducting the interviews or holding a conversation with different employees, observations had been carried out and documented. It is acknowledged as one type of data that brings new perspective to the research circumstance itself (Dubois & Gadde, 2002). Together with the interview transcripts, the observations were used for the thematic analysis.

2.3.1.2 *Secondary data*

Archival analysis used secondary data as a major source of information, which included empirical data from the company, industry market report database such as market intelligence, literature review of previous studies and online milk formula retailer checks.

Company archive

Internal document and market report accumulated by A&R Packaging, primarily related to the milk formula were chosen to identify previous process and current target markets. These former cases were analyzed and used for secondary source, as well as background information for interviews.

Market report database

Reports from external market intelligence firms were reviewed firstly to have an initial overview of milk formula market in the Asia-Pacific, and then secondly to identify indicators of market potential investigation to research the characteristics of the selected markets. Annual market trend reports, company performance reports and their recent marketing focus in selected regions were analyzed. In addition, newspaper articles and short reports related to the chosen areas were also used as an up-to-date information source.

Online retailer checks

Packaging of each brand in selected countries was identified through local online retailers. The market intelligence report provided the existing products in each country, which was the starting point of the online checks. Official brand webpages in each country were the primary source of packaging information, but some products were not displayed on screen due to the regulation (World Health Organization, 1981). In this respect, the online retail outlets were selected as a complimentary source of data; although some products were not present in the online-retailing channel, the research gathered the majority of the packaging information, which provided a valuable input to analyze. Country-by-country research gathered currently available packaging formats of each brand (references shown in the Appendix). During the initial stage of data collection, it was noticed that most brands had two pack sizes for a product. The general sizes varied from one country to another, but mainly fell into the category of 200-650g for smaller packs and 700g-1.5kg for bigger ones. To reflect the uniqueness of each market, collected data was classified as smaller and bigger packs. The smaller size sometimes had more than one format of packaging; in such case, both were considered since the purpose is to see the popularity of the packaging material.

3 Theoretical framework

This chapter presents three main theories and sub-related studies that are relevant for the research purpose. The first field is studying the nature of the packaging industry in business-to-business settings, which provide a deeper understanding of phenomena described in the case study. The characteristics of milk constitute theory that investigates the decision drivers of the milk formula used to link with the market research. The third research area is international market research for export market selection to see the value of end-user market research by discovering a correlation with the packaging and product.

3.1 Nature of packaging industry

3.1.1 B2B settings

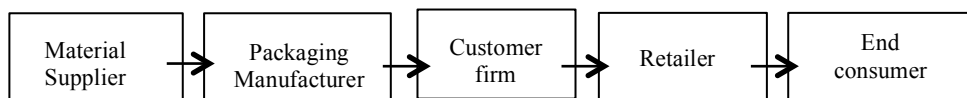


Figure 3-1 Material flow in the packaging industry (Adopted from Svensson, 2013)

Business-to-business (B2B) is a self-explanatory term that describes its business nature and surrounding environment. The business advertises its service or products to other businesses whereas business-to-consumer (B2C) does so, but further to consumers (American Marketing Association, 2013). As a result, transactions in B2B market take place between companies, business takings and other type of organizations. B2B business typically involves supplier, manufacturing and distribution firms (Svensson, 2013).

The packaging industry shares the B2B characteristics as they bridge raw material suppliers and consumer goods producers. B2B packaging business relies on the demand of B2C companies such as FMCG producers who supply the product to the retailers and ultimately to the end-users. In order to meet the demand of direct consumer, the structure of packaging business forms around the core business functions. The contracts are created and managed on behalf of both parties' interest at organizational level. During the transactional process, different departments of the packaging business are engaged to close the deal and interact internally as well as externally (Gawek, van der Pauw, & Wijgerse, 2007; Gummesson & Polese, 2009; Zahay, 2008).

3.1.2 Internal and external relations

3.1.2.1 *Internal: Interaction between core departments*

Different departments are interconnected to operate the packaging industry around the core function, which often are product development, production and sales. The product development department designs a packaging upon a customer request or

innovates the existing product to appeal potential customers while the sales department continuously brings new customers to the firm. During the product development, various departments are engaged in the process. Namely engineering, accounting, safety, legal and purchasing teams are involved to reflect the interest from outside (Gawek, van der Pauw, & Wijgerse, 2007).

When the salespeople communicate with potential purchasers, they market the product through face-to-face interaction. It is defined as a personal selling, one of the promotional mix in B2B marketing communications (Rowley, 1998). Due to this supportive role in the sales process, marketing is often integrated with the responsibility of sales department in B2B industry.

3.1.2.2 *External: Customer relationship*

Model of communication process

Rowley identifies the evolvement of customer communication in three stages (1998). It starts with (1) cognitive stage when the potential clients notice the products. Potential customers are exposed to the product and they become aware of the offers from other parties. The proceeding is (2) affective stage when customers form their attitude towards the products. AIDA (Attention – Interest – Desire – Action), one of the best-known communication process models explains it as *Desire* stage where the sense of wanting the product develops (Strong, 1925 cited by Rowley, 1998). Based on the first two stages, the final action of customer takes place in the subsequent (3) behavior stage, which is often related to a purchase.

Successful management of the three stages above brings a new business to the firm, often with a modification of the product. Buyers who represent business act on behalf of their involved organizations, which demand further development or alteration of the supplying product according to the specification of the relative product (Gummesson & Polese, 2009) or in a relevant geographical market requirement. Customer relationship management (CRM) or customer information system (CIS) is commonly used in B2B settings to manage this relationship and to track up the needs in history (Zahay, 2008).

3.1.3 Why packaging industry should focus on customer's customer?

Packaging business is an intermediary business that often outsources the material, transform it into packages, and then supply it to their customer such as the food industry. Although there is no direct interaction with end consumers, the need for packaging is ultimately derived from end-user demand (Gummesson & Polese, 2009; Svensson, 2013). Packaging helps the food products to stand out from their competitors in a retail store. It boosts the sales, which returns to the packaging industry with increased volume of orders, thus forms a virtuous circle in consequence. In order to maintain the cycle, it is advisable for B2B firms to conduct market research to understand consumer needs.

Investigation on the consumer requirements and trends is likely to pay off with new or improved customer relationship. Market insight is useful to manage external

relations with customers as it provides a deeper understanding of the situation that the customer faces. Industrial customers tend to value the knowledge of a salesperson in packaging industry and professional advices contribute to a better communication (Hohenschwert, 2012). In addition, market information will provide complementary component (Biemans & Brenčič, 2007), hence will enrich the interaction between the two parties by supporting the advice with solid data.

Furthermore, the market information helps to establish a strategic direction of the B2B firms. Managing customer information is important to retain existing customer as well as to win new clients, and tangible assets such as customer and market database is important for companies to achieve superior performance (Zahay, 2008).

3.2 Milk formula

3.2.1 Product and packaging characteristics

Definitions

According to the definition of Codex International Food Standards, milk formula is divided into two different categories, depending on its intended use for a specific age of persons: infant milk formula for persons of less than 6 months of age and follow-up formula for infants and young children aged over 6 months (CODEX, 2011a; CODEX, 2011b) Milk formula producers further specified the latter by adding toddler milk category, which represents a product that is suitable for children of more than 1 year old (Berry, 2010).

Although their anticipated use varies, all formula products are based on milk of animal or plant origin that are available either in liquid or powdered form. Under one brand name, follow-up and toddler milk formula share the brand identity with its infant milk formula counterpart (Berry, 2010).

In this thesis, “milk formula” is used as a general terminology to cover infant, follow-up and toddler milk formula in powdered form unless otherwise specified. Infant formula is also known as “standard formula” in industry reports, and “follow-on formula” is interchangeably used with “follow-up formula”.

Intended use

Both of them have different definitions and requirements; infant formula is a breast-milk substitute specifically manufactured to satisfy the nutritional requirements of infants by itself, while follow-up formula is considered as a food to replace a liquid part of the weaning diet. Codex clearly determines the content of energy and nutrients of milk formulas indicating their minimum and maximum levels (CODEX, 2011a; CODEX, 2011b)

Packaging

World Health Organization defines the packaging of milk formula product as a “container” with the following scope:

Any form of packaging of products for sales as a normal retail unit, including wrappers.

(World Health Organization, 1981)

Food packaging regulation addresses three main areas, which are safety, labeling and environmental impact of packaging (Greenberg, 1996; Simmons, 1997; White and Tice, 1997; Curtis, 2005, which are cited by Krochta, 2006). Milk formula packaging pays more attention to the first two. In compliance with the standard of Codex Alimentarius Commission, milk formula packaging should be made only of substances, which are safe and suitable for their intended use (CODEX, 2011a; CODEX, 2011b). In order to prevent any degradation of quality or alteration of the components during the indicated shelf life, milk formula products require a package with high-barrier properties against light and oxygen (Karatapanis, Badeka, Riganakos, Savvaidis, & Kontominas, 2006). It is compulsory for packaging to safeguard the hygienic and other qualities of the content.

In addition to ensuring product safety, branded milk formulas share packaging design such as size and shape to establish brand identity (Berry, 2010). Packaging graphics and product labeling play an important role in the milk formula, which will be discussed in the following chapter of Marketing and policy.

3.2.2 Decision drivers of milk formula use

The World Health Organization (WHO) and United Nations Children's Fund (UNICEF) have led the promotion to emphasize the importance of breastfeeding practice (World Health Organization, 1981). Breast-milk is acknowledged as the best option for infants to satisfy their nutritional needs for growth and the benefits of breastfeeding is encouraged by national governments (Gunter, Dickinson, Matthews, & Cole, 2013). Scientific evidences such as health benefits for babies as well as for mothers support the governmental promotion with legislative actions to facilitate breast-feeding (World Health Organization, 1981).

Despite the heavy campaigns, the popularity of breastfeeding is low whereas the use of breast-milk substitute, specifically milk formula, is widespread. Some mothers are not able to breastfeed their babies or decide not to. A variety of factors are related to this phenomenon that drives the demand of milk formula products. Apart from necessary use due to health-related issues, market reports primarily find the drivers of milk formula use in demographic changes, increased income and consumer exposure to marketing practices (Euromonitor International, 2011a).

Growing population in urban area together with increased number of women going to work have brought a change in lifestyle. First, urbanization played an important role in the growth of overall dairy consumption (milk, milk powder and yogurt) due to increased income, food consumption pattern modification and market accessibility (Wang, Parsons, & Zhang, 2010). In China, dairy markets showed a rapid growth jointly with the urbanization (Custance, Walley, & Jiang, 2012). Second, under the pressure of busy life, parents suffering from lack of time give rise to the popularity of products with great convenience; milk formula is the product that seemingly suits this need. Working mothers experience difficulties with feeding their babies with breast-

milk in hectic life in spite of the support from government, which stimulates the consumption of milk formula (Euromonitor International, 2011a). Third, prevalent nuclear family derived from low birth rate but rising disposable income also encourages the value of milk formula, as parents are willing to afford the best alternative to breast-milk. It contributes not only the consumption of milk formula, but also the overall growth of market value since the parents choose high quality product for their children (Euromonitor International, 2011a).

The marketing practices of leading companies also promote the milk formula use. Milk formula producers advertise the importance of nutritional intake in infancy to parents. The campaign increases nutritional awareness of parents that contributes the use of milk formula as a complementary source of nutrients or replacement of the breast-milk.

3.2.3 Marketing and the policies

Implementation of International Code of Marketing Breast-milk Substitutes and its adoption for policy-making

On the grounds of the stiff decline of the breastfeeding rate and increased use of milk formula, WHO and UNICEF acknowledged this occurrence in relation to the promotional activities of milk formula. In order to encourage the breastfeeding and provide a guideline of appropriate marketing of commercial products, the WHO introduced the *International Code of Marketing Breast-milk Substitutes* in 1981 (World Health Organization, 1981). The Code that has been drawn up by the WHO specifies the parties who should take it into consideration as follows:

Governments, nongovernmental organizations, professional associations, scientists, and manufacturers of infant foods have also called for action to be taken on a world scale as one step towards improving the health of infants and young children.

(World Health Organization, 1981)

National governments use the Code for legislative actions to restrict marketing of milk formula, but the degree of restriction differs from one country to another. Although there is a disagreement on the impact of marketing practices in correlation with a consumer purchase, studies on milk formula marketing show that activities to promote milk formula consumption discourages breastfeeding practice (Berry, 2010; Perez-Escamilla, Pollitt, Lonnerdal, & Dewey, 1994)

The regulation applies to diverse practices of milk formula advertising. Traditionally, the marketing has been accompanied by offering free samples for trial use, often in hospitals (Rosenberg, Eastham, Kasehagen, & Sandoval, 2008) or upon consumer request. Pediatrician endorsement in hospitals and clinics for parents who look for professional advice, TV or press commercials, official webpages of milk formula companies and distributing free gifts (toys for children) upon product purchase are the main kinds where the Code apply for.

Graphical images and nutritional claims on milk formula packaging are also restricted. Pictures of infant or any other image that may idealize the use of milk formula is not allowed to use on either label or container. A comparative or absolute

nutrient content statement that implies superiority of milk formula to breast milk, terms such as “humanized” is forbidden to use because it clouds the consumer judgment. In addition, infant milk formula should include a statement that promotes the superiority of breastfeeding (World Health Organization, 1981). Each country has amended own regulations to restrict milk formula marketing that covers the abovementioned areas to their local extend, thus not every country has the same control over different categories of promotional practices (Euromonitor International, 2011a; Euromonitor International, 2013a; Euromonitor International, 2013b).

Moreover, product classification further complicates the regulation since milk formula has three main kinds, which are infant, follow-on and toddler. Almost every national policy targets the infant milk formula for the babies aged up to six months, but other two categories are often given less attention. Some countries limit while others have no restriction upon all three sorts.

3.3 International market research

3.3.1 Value of sequential market research

Market research is a process of systematic gathering, recording, and analyzing of data with respect to a particular market, where market refers to a specific customer group in a specific geographical area.

(American Marketing Association, 2013)

The main purpose for companies to conduct an international market research is to avoid any possible strategic mistakes in export markets. If one has better knowledge of the markets, the majority of blunders can be avoided (Ghauri & Cateora, 2010). The decisions in business often bring high risks to the organization because of a large investment in high uncertainties and complex context (Svensson, 2013).

Multinational companies prefer to enter the markets that rank high in attractiveness and low in market risk where they can enjoy competitive advantages. These markets are often categorized as emerging markets that offer growth potential through investments and sourcing opportunities (Sakarya, Eckman, & Hyllegard, 2007). To address the need for market information, a systematic export market research should be carried out that gathers information from reliable sources based on logic and objectivity, thus helps to establish marketing strategies with a minimized uncertainty (Cavusgil, 1985).

3.3.2 Correlation of market research and packaging

Almost none of processed food products can be delivered without being packed, therefore its presence is vital throughout supply chain. Packaging physically protects the product and remains with its content in the entire consumption process until disposal (Olsson & Larsson, 2010). From industry point of view, packaging and product influence each other from a product development stage. The product will

have higher competitiveness in the market if packaging is functionally combined with its content (Harckham, 1989). In some cases, packaging even drives the product development or re-launch (Klevås, Johnsson, & Jönson, 2006).

When it comes to an end-user perspective, the packaging has been perceived as an essential part of the product that forms their attitudes in the retail store (Brown, 1950). Consumers regard the product and its packaging as closely integrated, and the packaging sometimes influence the initial impression of the product quality and value; thus it may or may not bring a transaction as known as first moment of truth (Olsson & Larsson, 2010; Löfgren & Witell, 2005). Packaging design is a key differentiator in the market place that is connected to a consumer's decision-making process (Vazquez, Bruce, & Studd, 2003). Gaining market and consumer insights is also beneficial to identify unsatisfied needs that turn into a solid data to support the arguments of packaging industry, which is linked to the packaging development (Meacham, 2012).

Therefore, packaging is an influential part of the product in the marketplace that interacts with market and consumer. Business-to-Consumer (B2C) industry has focused on the communicative aspect of packaging to increase their market share. This consumer behavior and marketing trend of B2C companies (i.e. food industry) is related to the packaging industry because they will receive direct customer inquiries based on the market information.

Considering the connections above, the end-user market information is valuable for the packaging companies. Furthermore, packaging design in global arena must reflect the differences in culture and demographics (Krochta, 2006). In other words, it is important to capture what consumer needs according to the local context in different countries. Thus a well-structured international market research will deliver values to the packaging company that wishes to target unknown foreign markets.

4 Need of market information in the packaging industry

This chapter presents the need of consumer and market information in the B2B packaging industry. It describes the case company, core product and insights into business surroundings that explain the importance of understanding the market and consumer.

4.1 Company description

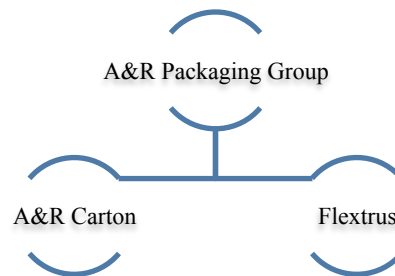


Figure 4-1 Organizational structure of A&R Carton

A&R Packaging Group is a packaging business unit that includes two subsidiaries, A&R Carton and Flextrus (described in Figure 4-1). Two companies under the Group operate as separate companies and brands (A&R Carton, 2011).

A&R Carton is one of the leading packaging companies that have a strong production and customer base in European market. The company offers customized carton packaging solutions to a broad range of customers (A&R Carton, 2013a). In addition to the strong base in Europe, the company covers Asia, Africa and the U.S. with regional sales offices (A&R Carton, 2011). Flextrus is a prominent packaging enterprise in Europe that supplies flexible packaging to food and health care business (Flextrus, 2013). Two companies of A&R Packaging Group are independent businesses, but collaborate for packaging solutions, such as supplying components to the other party. The primary interest of this case study is on a distinctive carton packaging of A&R Carton, which is a result of two companies' cooperation.

Therefore it is valuable to see both companies and their relationship to enrich the study while maintaining the attention to the focal company, A&R Carton. It operates in different locations in 8 countries across Europe, and this research solely focuses on one of business areas in Lund, Sweden, where the headquarter of Flextrus plant is also situated.

4.2 Packaging solution

Product portfolio

The area of A&R Carton's expertise is paperboard packaging with a wide range from carton packs, trays and multipacks to high quality packaging solutions. There are three main high-end products, which are Cekacan[®], Espresso[®] and Hermetet[®] (A&R Carton, 2011). Among all packaging solutions, this research focuses on Cekacan[®] that A&R Carton exclusively develops and supplies its machinery and packaging components (A&R Carton, 2013a).

Cekacan[®] is a high-profile packaging for products such as mueslis, cereals, powders and flakes. It is a preferred solution by food companies that produce sugar, coffee, flour and particularly milk formula (A&R Carton, 2013a). The milk formula is a category where the packaging shows a great sales performance by enhancing consumer satisfaction through the package (A&R Carton, 2008). Competing packages are namely tin can, bag-in-box, blow-molded plastic and bag, which are commonly used for milk formula.

USP of Cekacan[®]

The packaging solution has many features that bring competitive advantages to the product, which are referred to unique selling propositions (USP). The concept was first established by Reeves (1961, cited by Dens & De Pelsmacker, 2010) and widely accepted by practitioners to efficiently differentiate the goods or services from competing counterparts (Rowley, 1998). The USP is a distinctive benefit of the product that brings competitiveness to the customer; hence it is in the center of the message delivered through various communication channels (American Marketing Association, 2013).

A well-defined USP and delivering it with consistency result in higher recall among customers (Dens & De Pelsmacker, 2010). Cekacan[®] has two main types of USP, which are consumer convenience and producer benefit as described in Table 4-1. The consumer convenience focuses on user-friendly features and to enhance the product usage. The packaging solution also brings benefits to consumer goods producers through improved logistics and warehouse management, thus contribute to carbon footprint reduction. Simultaneously, the packaging fulfills requirements of demanding products such as coffee or milk formula (A&R Carton, 2013b; A&R Carton, 2013c).

Table 4-1 USP of Cekacan[®] (A&R Carton, 2013b; A&R Carton, 2013c)

Consumer convenience	<ul style="list-style-type: none"> • Rigid and durable package • Easy-closure • Easy-cut membrane • Tamper evidence
Producer benefit	<ul style="list-style-type: none"> • Easy disassembly and recycling • Flat delivery • Customized barrier quality • Minimal storage • Size variation with single machinery • Enhancement in sustainability through logistical improvement

4.3 Results from interviews

4.3.1 Need of market information and current market research practice

Six internal interviews were carried out to investigate the need of market information in the packaging industry by reflecting the situation in the case company. The in-depth interviews with practitioners revealed the motivation, value of the market research, cultural differences and current practices to gather the consumer market information.

Motivation: to understand the customers

Informants were aware of the importance of packaging for their direct customers to gain market share. Promoting and communicating aspect of packaging were also well acknowledged among the employees since the packaging companies work on the demands from the market, ultimately from the needs of end-user (PN, DR, RG, IL, 2013). As Sales Manager at A&R Carton explains: *“If our direct customers cannot make money, then neither we can.”* Milk formula is a product where consumer needs are well reflected, which is eventually delivered to the packaging industry.

Traditionally, A&R Carton does not directly contact end-users; in other words, direct customers’ customers. The Marketing Manager says: *“We never communicate with end consumers. Our target group is always our direct clients or retailers.”* It is because of the nature of the packaging industry that the business starts with direct customer inquiries. In order to win them, the company tries to understand the needs of current and potential direct customers. According to the Sales Manager at Flextrus, the overall sales process is based on understanding the direct customer needs (DL, 2013) They need to know the market thoroughly in order to look ahead, find prospective business areas and set up strategic directions (RG, 2013). They are also in charge of identifying potential markets outside of Scandinavia, where their business is located.

Value of the export market research

There are mainly three reasons why A&R Carton values export markets outside the Nordic (PN, IL, DL, 2013). Firstly, the Nordic market is not eager to adopt new packaging as much as other European countries are. The Marketing Manager finds the market relatively small, conservative and is not willing to be a pioneer to try different solutions. Secondly, carton is abundant in Scandinavian countries that the end consumers consider it not very different or prestigious. The packaging industry in the Nordic countries is therefore highly export-oriented that supplies their product where carton packaging is appreciated. Corporate migration is the third reason of the outward-focused characteristic of the packaging industry. Food producers in Nordic countries emigrate from their home base and settle down in Eastern Europe or wherever profitable for their business (PN, 2013). The packaging industry follows the geographic location of their direct customer and supplies the product. The Marketing

Manager notes that: *“We export 95% of what we produce in those two companies. So we can still produce here but the direct customers will be elsewhere in the world.”*

Export markets and cultural differences

Considering the export focus of A&R Carton, it is vital to know other markets. According to the Managing Director, Asia is a particular interest of the company: *“It is clear that the market is in Asia where we need to find a way to live in.”* However, A&R’s export outside of European continent is limited to certain markets such as Russia and China. *“We do not do the business globally because it’s hard to understand all the different cultures. We are not skilled enough to understand it. I’ve experienced the problem when dealing with the customers even from out of Scandinavian boundaries,”* says the Sales Manager at Flextrus. A similar opinion was noticed in A&R Carton side that the direct customers in the UK, Ireland and Germany are easier to communicate compared to the Russians (MC, 2013). The direct customers require different features to packaging based on local consumers and market characteristics. Differences come from diversity such as demographics, end consumer behavior, culture, climate, governmental policy and so on. Since it is difficult to understand the market without substantial knowledge, it sometimes changes the strategic direction of the company. Sales Manager at Flextrus explains that: *“We can’t serve them all and we see the differences when we don’t have the language, culture and geographical aspect of it. That’s the reason why we are more and more coming Northern or Western Europe, to our home basis.”* When they return their attention to retaining the direct customers in Nordic market, the focus is on strengthening the existing relationship and expanding the business with them.

However, finding potential customers is still essential for the growth of the firm. Both sales and marketing departments agreed that discovering new customers is as important as keeping the direct customers. In addition, the same importance is given to the insights into the end consumers since their needs become the argument that the packaging company can use in the meetings with direct customers (IL, 2013). The Segment Sales Director values market and end consumer insight since Cekacan[®] is not one-for-all product that is applicable for all the systems, hence the investigation on market and end consumers brings benefits for the market selection suitable for the firm.

Current market research practice: information inflow

A&R Carton has three main sources of information with a primary focus on market, direct customers and competitors while only limited attention is given to the end consumer. First, the sales force listens to the direct customer during the meeting and identifies their needs (DL, 2013). The information is later internally shared and transferred the *matrix*, an internally developed strategic decision-making aid. Business intelligence service is the second source of information. Bi-weekly newsletter is delivered to provide insights into the market, specific direct customers, competitors and key news. Both marketing and sales department find this tool very useful to keep them updated without a time commitment to an extensive information

search (JW, IL, 2013). The third source is purchasing market reports from market intelligence firms, but it rarely happens due to the fact that the reports are ready-made rather than customized, and they are generally high-priced (IL, 2013).

The collected information through different sources forms the *matrix*, which contains current and potential customers (PN, JW, 2013). It is a simplified tool of customer relationship management. The data is labeled according to its geography, product category and relationship status. Continuous market information flow is added to previous cases and managed with this database. The matrix enables the company to identify customers in specific geographical area, thus supports the establishment of strategic direction (PN, JW, 2013)

We have the matrix, we know where our system works and where doesn't.

- Managing Director

This is little bit like the bible when we decide which customer we should go for and why to do so.

-Segment Sales Director

4.3.2 Organization structure and interaction

Two subsidiaries of A&R Packaging are constructed to be separate businesses, but cooperate for certain products. A&R Carton produces Cekacan[®] with barrier material supplied by Flextrus. The product is under the business area of performance packaging, which closely connects sales, marketing, machine systems and product development.

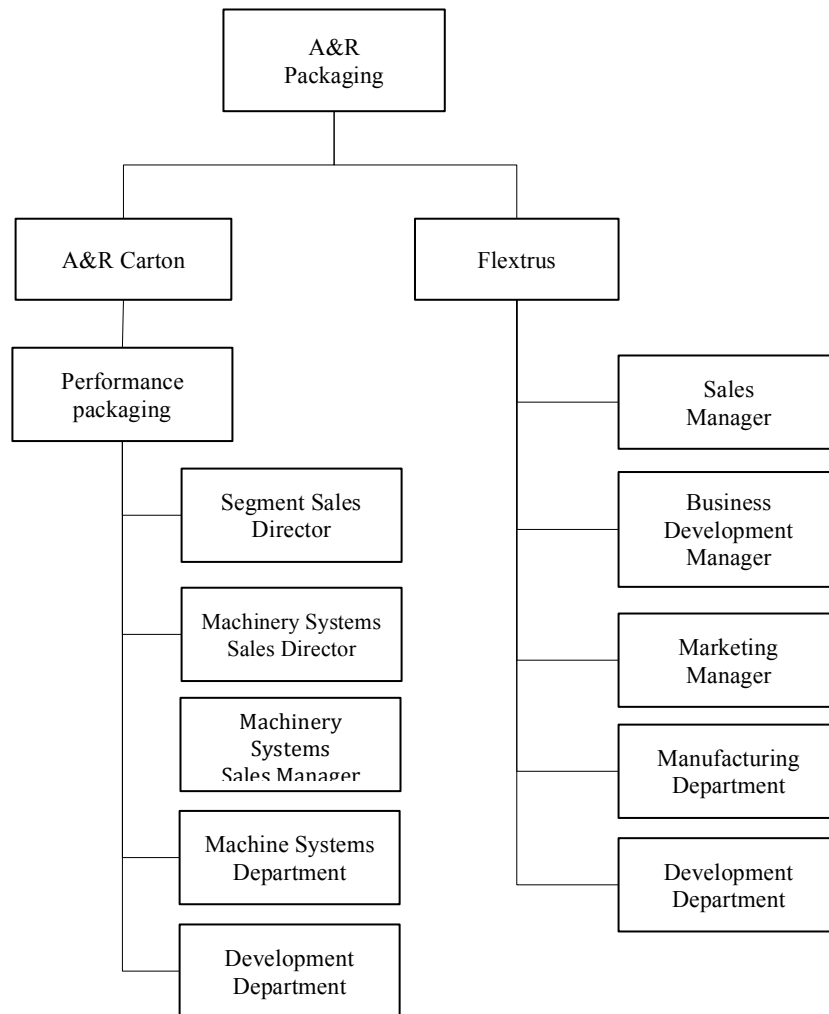


Figure 4-2 Organizational structure of A&R Packaging for Cekacan® sales

Sales

The responsibility and role of the sales department is managing projects by coordinating all the activities cross development, planning and production. The development of sales process with direct customer is illustrated in Figure 4-3. The Sales Director (Performance Packaging – Machinery) and Managing Director sign the contract with customer after 2 years of negotiation in average. Direct customer acquisition is generated through two different channels, which are inquiries from customers and initiatives by the sales force. In most cases, it is the clients who approach the packaging company rather than the other way around, since it is easier for packaging industry to win direct customers. When the agreement is in place, the process evolves to the next phase whereof the Segment Sales Director is in charge. Material supply chain is established at this level, and then Machine Systems Department takes over to assemble the machinery and ensures the production efficiency. The project advances to the subsequent stage with a close collaboration of three departments (JW, 2013).

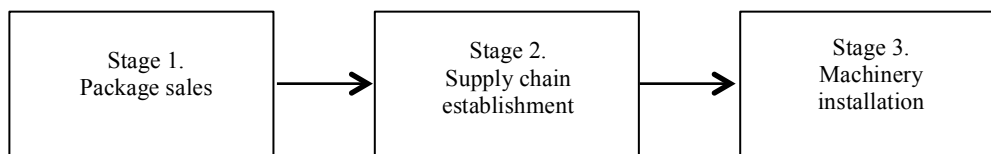


Figure 4-3 Cekacan® sales development stage

Segment Sales Director is responsible for geographical market and product category selection based on the information collected through different sources. Marketing department supports the marketing material and the way to promote the system, but identifying market and strategic movement decision relies on the Segment Sales Director.

Marketing

The marketing department in Flextrus is also involved in marketing practices for A&R Carton, in result of the organizational change towards lean structure. Marketing supports such as presentation for customer meeting, webpage, emailing, newsletters and exhibitions are planned for A&R Carton by Marketing Manager, but the interaction is restricted to the surroundings rather than deeper engagement in sales process. On the other hand, the Marketing Manager is more actively involved in the business of Flextrus.

Limited interaction between marketing and sales department

The employees perceive that the interface of the departments in the separate companies is not fully developed. Marketing and sales interface, and product development departments in both firms are commonly discussed for further improvements (PN, DL, 2013). Sales Director at Flextrus reflects: *“Have we fully benefited from each other for knowledge and skills? No. I think it should be develop further; there should be a model for sharing the values of each company.”*

5 Asia-Pacific milk formula market research

This chapter investigates the Asia-Pacific milk formula markets to reflect the need of information in the packaging industry. A sequential market research design provides an in-depth insight into the market in each country, as well as general trends in the overall region.

5.1 Asia-Pacific overview

Asia-Pacific is a geographical region near the Western Pacific Ocean where has played an important role in the global economy in recent decades (Tong & Li, 2008). It attracts multinational companies with its rapid economic development and high growth opportunities. (Mathews, 2006). The Asia-Pacific Economic Cooperation (APEC) includes 21 economically dynamic countries in Pacific Rim region, notably East Asia and South East Asia (APEC, 2013). In the baby food sector where milk formula leads global sales growth, Asia-Pacific is a key region that accounted 46.9% of retail value in 2012; its 11 key markets are identified in Table 5-1, based on retail value and birth rate (Euromonitor International, 2011a; Euromonitor International, 2013c)

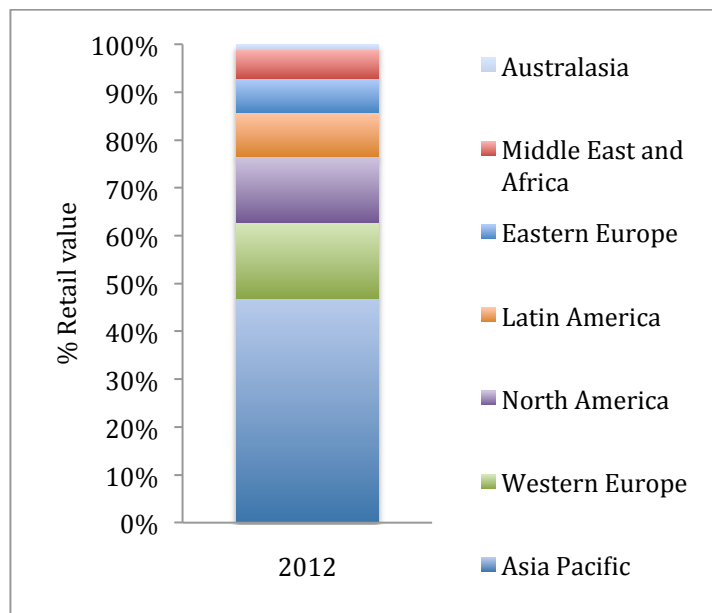


Figure 5-1 Regional retail value in the global baby food market

Multinational baby food companies identify the countries in Table 5-1 as main markets in the Asia-Pacific region with respective market share within the region (Euromonitor, 2011a). They are the members of APEC (except India), which drive

the regional market growth with different market sizes and level of growths. Therefore, initial screening process will investigate these countries to select markets for more in-depth market research in the subsequent phase.

Table 5-1 Key markets in the Asia-Pacific

	Market share % (2012)
China	60.0
India	11.1
Indonesia	6.0
Japan	3.9
Malaysia	3.5
Philippines	3.3
Singapore	2.2
South Korea	2.1
Taiwan	1.9
Thailand	1.9
Vietnam	0.6

5.2 Phase 1: Preliminary screening

The overall structure of the first screening followed the index and ranking method suggested by Cavusgil with a modified index (Cavusgil, Kiyak, & Yeniyurt, 2004; Cavusgil, 1997). It is a practical tool to investigate the market attractiveness with numerical order according to their aggregate market potential.

The initial screening variables in Table 5-2 were chosen with a basis of Indexing Method with consideration of long-term market potential (Cavusgil, 1997; Sakarya, Eckman, & Hyllegard, 2007). All variables were industry-specific macroeconomic indicators since it is advantageous for specific sector analysis. Applying traditional approach that relies on general macroeconomic values such as gross domestic product per capita (GDP) has a risk of not accounting market influential factors within the regional market. The variables were identified through literature review (Cavusgil, 1997; Cavusgil, Kiyak, & Yeniyurt, 2004) and the industry market report (Euromonitor International, 2011a).

Table 5-2 Variables and sources of data used in analysis

Variable	Description	Units	Year	Source
MARKETVALUECUR	Retail value RSP	€Million	2012	Euromonitor GMID database
MARKETVOLUMECUR	Total volume	Ton	2012	Euromonitor GMID database
MARKETVALUEFC	Retail value RSP	€Million	2012-2017	Euromonitor GMID database
MARKETVOLUMEFC	Total volume	Ton	2012-2017	Euromonitor GMID database
MARKETCAP	Birth rate	Per thousand people	2011	World Bank Development Indicators, Department of Statistics (Republic of China)

Based on the variables, three dimensions were chosen to reveal overall market potential. Table 5-4 shows each dimension with individual index and rank computed by the following formula (Cavusgil, Kiyak, & Yeniyurt, 2004).

$$X'_{ij} = \left[\frac{X_{ij} - \min_i}{R_i} (99) \right] + 1$$

X_{ij} : Average score of country j on dimension i

X'_{ij} : Scaled final value of country j for the dimension i

\min_i : Minimum value for dimension i

R_i : Range of dimension i

The final value of a country (j) is determined based on the score of X_{ij} , where the country of best performance in ideal year would score 100 and that of worst would score 0. This conversion of value provides better interpretation of the index and useful to rank each market's value for specific dimension (Cavusgil, Kiyak, & Yeniyurt, 2004)

When the market value for each factor is calculated, it is then turned into a 10-point scale described in the Table 5-3. It is a complementary factor for overall ranking by giving different weights for each dimension. (Cavusgil, Kiyak, & Yeniyurt, 2004)

Table 5-3 Dimensions and measures of the Asia-Pacific market potential

Dimension	Weight	Measures
Market size	5/10	<ul style="list-style-type: none"> • Retail value (MARKETVALUECUR) • Total volume (MARKETVOLUMECUR)
Market growth rate	3/10	<ul style="list-style-type: none"> • CAGR growth rate forecast retail value (MARKETVALUEFC) • CAGR growth rate forecast total volume (MARKETVOLUMEFC)
Consumption capacity	2/10	<ul style="list-style-type: none"> • Birth rate (MARKETCAP)

Table 5-5 lists the overall rank of 11 main markets in the Asia-Pacific based on their scores. Industry and product-related measures revealed the best possible markets where an in-depth attention is needed and where it should be less prioritized. For instance, Japan has a high value in terms of current market size but is predicted to have a lowest growth and birth rate. On the other hand, the current market value of India is one of the lowest, but ranked in the second place for overall potential due to its increasing consumption capacity. The literature suggests that incorporating market prospects is advisable to overcome downsides of international market research (Sakarya, Eckman, & Hyllegard, 2007).

Table 5-4 Preliminary market potential indicators and overall market attractiveness index

	Market size						Market growth rate						Consumption capacity	
	Current market value		Current market volume		Overall market size		Forecasted market value		Forecasted market volume		Overall market growth rate		Birth rate	
	Index	Rank	Index	Rank	Index	Rank	Index	Rank	Index	Rank	Index	Rank	Index	Rank
China	100	1	100	1	100	1	100	1	100	1	100	1	24	6
India	2	10	2	10	2	10	38	5	25	7	32	5	83	2
Indonesia	19	2	39	2	29	2	39	4	43	2	41	3	59	4
Japan	7	3	20	3	13	3	1	11	1	11	1	11	1	10
Malaysia	4	8	4	8	4	8	23	8	30	5	27	6	71	3
Philippines	6	6	7	6	6	6	25	7	25	6	25	8	100	1
Singapore	1	11	1	11	1	11	35	6	16	9	26	7	13	8
South Korea	4	7	4	7	4	7	12	10	5	10	9	10	13	8
Taiwan	3	9	3	9	3	9	23	9	18	8	21	9	1	10
Thailand	6	5	8	5	7	5	41	3	32	4	37	4	24	6
Vietnam	6	4	9	4	8	4	47	2	42	3	44	2	48	5

Table 5-5 Preliminary market selection

	Score	Index	Rank
China	8.5	100	1
Indonesia	3.9	41	2
Philippines	3.1	31	3
India	2.7	26	4
Vietnam	2.7	26	5
Malaysia	2.4	23	6
Thailand	1.9	17	7
Singapore	1.1	6	8
Taiwan	0.8	2	9
Japan	0.7	1	10
South Korea	0.7	1	11

Preliminary screening results

In the result of the initial market research, it was determined to exclude four markets; Singapore, Taiwan, Japan and South Korea. The four markets seem relatively less appealing for multinational companies to focus on considering the outcome of preliminary screening. They are in matured market category for their stagnated or declining market growth and birth rate (Euromonitor International, 2013g; 2013h; 2013i; 2012d). In the subsequent phase of the market research, industry-specific market potential of seven selected countries will be explored, which are China, Indonesia, Philippines, India, Vietnam, Malaysia and Thailand.

5.3 Phase 2: Individual market research

The overall individual market research was carried out based on relevant business intelligence reports (Euromonitor International, 2012b; 2012c; 2013a; 2013b; 2013d; 2013e; 2013f). Indicators in Table 5-6 are categorized into five main areas that are commonly used to describe milk formula market in industry reports (Euromonitor International, 2011a; Euromonitor International, 2012b). Packaging prevalence is added to have an insight into current milk formula pack type in each region. Demographic such as female labor participation and urban population represent lifestyle in each market and are often associated with the demand of milk formula. Breastfeeding is recognized as best solution for many countries but the need for breast milk alternative has risen due to demographical change (World Health Organization, 1981; Euromonitor International, 2013d).

Market and product category is related to the fierce competition on local market where the companies and brands show different performance. Packaging prevalence, in particular, is an important indicator to see country-by-country trend and variety of packaging format. Consumer behavior and attitude towards milk formula is diverse in the Asia-Pacific market as well as their government policy.

Table 5-6 Market indicators in the selected Asia-Pacific region

Category	Indicator	Units	Year	Source
Demographics	Birth rate	'000 people	2011	World Bank Development Indicators
	Female labor participation	% female population age 15+	2011	Department of Statistics, Republic of China
	Exclusive breastfeeding rate	% children under 6 months	2006-2011	World Bank Development Indicators
Market	Urban population	% total population	2011	World Bank Development Indicators
	Market retail value RSP	€Million	2013	Euromonitor GMID database
	Company share	% total share	2013	Euromonitor GMID database
	Distribution channel	% total market distribution	2013	Euromonitor GMID database
Product	Brand share	% total share	2013	Euromonitor GMID database
	Packaging prevalence	N/A	2013	Euromonitor GMID database
	Expenditure per capita	EUR per capita (0-36month)	2013	Relevant online retailer checks
Consumer	Attitude	N/A	2012, 2013	Euromonitor International from national statistics/UN
	Milk formula-related	N/A	2012, 2013	Euromonitor International
Government policy				Euromonitor International

5.3.1 China

Demographic

Birth rate in China recorded double-digit in the year 2012, although it had slowed down lately. Continued urbanization and increased female labor participation drove the growth of milk formula in recent years due to lacking time in hectic lifestyle.

Table 5-7 Industry-specific demographics, China (%)

Birth rate ('000 people)	12
Female labor participation	68
Exclusive breastfeeding rate	28
Urban population	51

Consumer

- Attitude towards safety issues

Safety is important in Chinese market after the major crisis in 2008 and subsequent issues in the following years, which placed the importance of purchase venue and product brand high to determine the safety (Zhang, Bai, Lohmar, & Huang, 2010). Most parents regard imported brands to be better in quality compared to domestic products. Parents associate premium milk formula with international brands while they link standard or low-priced product with domestic brands. Melamine outbreak traumatized consumers to be obsessed with quality and safety regardless of price increase.

- Lack of consumer trust

Disbelief in product quality imported to Mainland China led the consumers to travel Hong Kong to buy milk formulas. The consumers in the Mainland China consider the product in Hong Kong trustworthy compared to that in their region, and lower tariff level in Hong Kong accelerated this phenomenon. The citizens in Hong Kong experienced empty shelves, which brought a purchase unit limitation as well as a serious dispute between the municipality of Hong Kong and the Mainland citizens (Lin & Cruz, 2013).

Market

- 1) Market value

The sales of milk formula showed an increase of 24.8% CAGR (Compound Annual Growth Rate) during 2007-2012 as a result of high demand and rise in unit price. The market expects the value to be slowed down in the following term, 2012-2017, with CAGR of 15.1%.

- 2) Company share

Mead Johnson (Guangzhou) led the Chinese milk formula market with 14.1% of share among 26 producers in 2012. Chinese market is highly fragmented where numerous

international and domestic companies compete. Nestlé is predicted to show a strong performance after the acquisition of Pfizer’s baby food division.

3) Distribution channel

Supermarket accounted the biggest segment of distribution channel in 2012. Non-grocery retailers such as specialty store for baby products were the second biggest channels followed by hypermarkets. Internet retailing remained as a niche market, but its popularity had increased among young parents who cannot shop the product regularly due to the busy life. The online channel also appeals to the suppliers in the interest of the low-maintenance cost. On the other hand, this internet-based retail operation is linked to the unregistered milk formula imports, mainly from Australia and European countries; the smuggled products are sold online to the end-consumers at a high price (Tiantian, 2013).

Table 5-8 Distribution channel, China (%)

Supermarkets	53
Hypermarkets	18
Small grocery retailers	7
Non-grocery retailers	21
Non-store retailing	2

Product

1) Product category growth

Connected to the shift to premium and high-quality product from standard product, infant milk formula is expected to grow steadily in the forecasted period. Multinational companies focus on toddler milk formula to satisfy different market niche for diverse age group of 1-7 year children.

2) Brand share

Similar to the company share, more than 30 brands have their own shares in Chinese market. Although the overall market is highly segmented, Beingmate and Dumex accounted just below 10% of total market in 2012.

3) Packaging prevalence

Milk formula products in China in bigger volumes had a clear tendency to use tin can for packaging while only one product was using paperboard. Materials for smaller packs were mainly bag-in-box, followed by bag and tin can. In terms of weight, 900g formed the majority of bigger unit with minor presence of 800g packs, 4 out of 33 packaging. Additionally, 11 packaging including Dumex (Danone) and Pro-Kido (Inner Mongolia Yili Group) had easy-opening feature with ergonomic design for better consumer convenience. Smaller ones had a net weight of 400g,

4) Expenditure per capita

During 2007-2012, China’s expenditure per capita showed a strongest growth, CAGR of more than 25%. Steady population growth and increased disposable income had a positive impact over the period and this trend is expected to continue in the following term (2012-2017) with 14.6% CAGR.

Government policy

Chinese government strictly regulates infant milk formula marketing, such as packaging and advertisement to comply with the WHO's guideline (1981). Alongside with the control, they heavily promote infant breastfeeding up to six months of age. This resulted the companies to market toddler and follow-on formulas through different channels.

5.3.2 India

Demographic

Although urban population is relatively low compared to other six Asia-Pacific countries, it has grown rapidly and changed the lifestyle of inhabitants. Increasing number of mothers engaged in workforce becoming financially independent hence they are willing to spend on premium baby food. Rate of newborn babies remains high and increased working hours in urban areas keep the growth of baby food sales. Nuclear family trend is not likely to influence the baby food market, as affluent parents tend to spend more for better quality for their children.

Table 5-9 Industry-specific demographics, India (%)

Birth rate ('000 people)	22
Female labor participation	29
Exclusive breastfeeding rate	46
Urban population	31

Consumer

With relatively high rate, breastfeeding continues to be preferred by women in both urban and rural area. However, under the pressure of urban life, the need for convenience is increasing that consumers becoming interested in ready-to-eat and quick solutions. Economic downturn has less influence on the sales of baby food in general since urban consumers alter their preference to organic whilst their counterparts in rural area switch to branded products.

Market

1) Market value

Milk formula market value in India had risen 10.8% CAGR during 2007-2012. The value growth will be decelerated in the following term of 2012-2017 with a CAGR of 4%.

2) Company share

Nestlé was in lead with 78.5% of market share in 2012. Their leading position in baby food will be further reinforced with acquisition of Pfizer's baby food division. International manufacturers such as Nestlé, Danone and Abbott dominate Indian

market. Danone entered the market by purchasing another baby food firm, Wockhardt, which allowed them to hold second leading position with 5.6% of milk formula market share in 2012.

3) Distribution channel

Small grocery retailers accounted the majority of baby food sales in 2012. Health & beauty retailers and pharmacies constituted main channels of non-grocery retailers, and the latter was particularly emerging in rural areas.

Table 5-10 Distribution channel, India (%)

Supermarkets	2
Hypermarkets	3.2
Small grocery retailers	48.7
Non-grocery retailers	45.7
Others	0.4

Product

1) Product category growth

Among the product categories, the follow-on milk formula recorded the most sales value as well as volume in 2012, followed by standard milk formula.

2) Brand share (appendix)

Around two-third of market is dominated by two Nestlé products, which were Lactogen and Nestogen with 47.6% and 26.9% share respectively. Furthermore, four out of seven products in the market were of Nestlé, which made the others hard to compete.

3) Packaging prevalence

Only limited number of products was in present in the Indian market. Notable packaging formats were tin can and bag-in-box for a smaller pack size (400g) and tin can for a larger unit (900g).

4) Expenditure per capita

Despite the market value and unit price growth, Indian consumers' expenditure of milk formula remained the lowest due to high birth rate while retail value was not able to keep up with it. In the forecasted period, the yearly expenditure per capita (0-36 month) is predicted to increase from €1.72 to €2.48. Increased unit price and economic downturn will not likely affect baby food market in general.

Government policy

There is no legislative or legal act upon marketing practice of milk formula companies in India at the moment. However, international act and guideline of marketing push multinational companies voluntarily place the superiority of breast milk for babies on the packaging.

5.3.3 Indonesia

Demographic

Birth rate in Indonesia had been falling gradually, which will influence the volume growth of baby food in forecasted period. Urbanization was in progress and female working population was increasing in 2012.

Table 5-11 Industry-specific demographics, Indonesia (%)

Birth rate ('000 people)	18
Female labor participation	51
Exclusive breastfeeding rate	32
Urban population	51

Consumer

Indonesian consumers demand baby food producers to enhance the product quality with value-added ingredients or nutrient fortification. Middle- and upper-income parents find premium or functional baby food more valuable while weaker purchasing power population prefers their babies to be breastfed. Internet access and social media drive the flow of information and it functions as a platform to compare brands and benefits of breast milk and its alternatives.

Mothers respond more toward toddler milk formula compared to infant milk formula. It is the consequence of breastfeeding promotion activities by governmental and non-profit organizations.

Market

1) Market value

Indonesian milk formula market value showed CAGR of 15.3% during previous period, 2007-2012. This rapid growth will be decelerated to 4.2% CAGR in the forecast period until 2017.

2) Company share

Multinational companies dominate the baby food market. Among nine firms, Danone led the milk formula market with 27.9% share and Nestlé was in the second place by 3% less in 2012. Considering the fact that Nestlé had the biggest share in overall baby food market, the competition with Danone will be intense in the upcoming years.

3) Distribution channel

Store-based selling was the norm in Indonesia where independent, small grocery retailers account just below 50% of share in 2012. Supermarkets and hypermarkets divided the remaining market with 21% and 24.5% retail value respectively.

Table 5-12 Distribution channel, Indonesia (%)

Supermarkets	21
Hypermarkets	24.5

Small grocery retailers	47.5
Non-grocery retailers	7

Product

1) Category growth

Powder milk formula is perceived as a norm in Indonesian market. Milk formula producers concentrate on toddler milk formula that represented almost 61% of total baby food sales in 2012. During 2007-2012, it recorded the highest CAGR value growth of 18%, and it is expected to grow 4.8% CAGR over the forecasted period between 2012 and 2017.

2) Brand share

There were 22 brands in the milk formula market in 2012. Dancow (Nestlé), SGM (Danone) and Frisian Flag (Royal Friesland Campina NV) recorded the highest market shares, 16.9%, 14.9% and 13.6% respectively. Free gifts upon product purchase were common marketing practice to increase brand share in Indonesia, which is anticipated to continue in the following period.

3) Packaging prevalence

Bag-in-box was the most popular packaging type for smaller milk formula product with mostly 400g of net weight. Milk formula product in bigger packaging used two materials, which are tin can and bag-in-box with 55% and 45% of prevalence respectively. Product weight range varied from 700g to 1kg for the aforementioned product, but the most widespread ones had 800g.

4) Expenditure per capita

In 2012, expenditure per babies (up to 36 month) reached €106.79. It showed CAGR of 17.9% over last 6 years and is expected to decline to 8.1% CAGR.

Government policy

Government regulations and non-profit organizations heavily promote breastfeeding for infants. Criticism towards the marketing practices of international companies is widespread. As a consequence, breast milk is the norm for infants and companies shift their attention to other category of milk formula.

5.3.4 Malaysia

Demographic

High degree of urbanization and female labor participation in Malaysia are main drivers of timesaving products. Working parents turn their attention to ready-to-go or on-the-go products, and increased disposable income enable them to afford premium quality products. In addition, health-conscious young generation who considers breastfeeding as a common practice is another influential factor in Malaysian market, as well as declining birth rate but higher family income.

Table 5-13 Industry-specific demographics, Malaysia (%)

Birth rate ('000 people)	20
Female labor participation	44
Exclusive breastfeeding rate	43
Urban population	73

Consumer

Consumers' focus on product quality resulted in heavy investment on R&D at milk formula producers. Parents prefer well-known brands by multinational companies to private brand names, and associate high quality with the former and low-cost with the latter.

Market

1) Market value

Milk formula market value had increased in the past period and reached €338.8 million in 2012. Compared to the review period, the growth is expected to decline in the following period.

2) Company share

Danone was leading the milk formula market with 29.7% value share. They launched "Parent Online" in collaboration with Yahoo! Malaysia, an online forum targets the parents who actively seek nutritional information online. Nestlé was in the second place and they will continue their strong position through acquiring Pfizer's baby food division.

3) Distribution channel

Grocery retailers recorded the highest distribution channel share in 2012. Small grocery stores were the dominant format, but it had declined since 2007 due to consumers who preferred to shop in major supermarkets or hypermarkets. As the popularity of big retailers grows, the competition for shelf space will be fierce to catch consumer's attention.

Table 5-14 Distribution channel, Malaysia (%)

Supermarkets	5.1
Hypermarkets	18.4
Small grocery retailers	38.3
Non-grocery retailers	38.1

Product

1) Product category grow

During the previous period in 2007-2012, toddler milk formula showed the strongest value growth of 10.6% CAGR. In the forecast term, however, it will be slowdown to 1.1% CAGR and follow-on formula is predicted to achieve the highest CAGR of 2.3%.

2) Brand share

In 2012, Dumex (Danone) accounted the highest market share of 26.2% with an increase of 8% in current value terms that secured the first place in overall baby food market. Competitive pricing strategy and increased brand awareness contributed their growth. International brands constituted the majority of value share in Malaysian market. Dutch Lady's product appealed to parents through online marketing and launching new products to cover low- to mid-price range. Sample distribution to pediatricians and doctors was another main marketing channel to attract parents in Malaysia.

3) Packaging prevalence

Bag-in-box was the most prevailing packaging type for smaller products in the Malay milk formula market, followed by tin can and bag. The net weight varied, but the majority was 600-650g. Larger packs used tin can the most, followed by bag-in-box and bag with respective share of 64%, 28% and 8%. Twelve products out of 27 were weighed over 1kg while 11 products were 900g. Five products were categorized as under 900g.

4) Expenditure per capita

Spending on milk formula reached €171 for one baby (0-36 month) in 2012. It had increased CAGR of 11.9% in the preceding term during 2007-2012, and is expected to grow gradually in the forecast period with 4.2% CAGR.

Government policy

No advertisements or promotional activities are allowed for standard milk formula, but sampling and free gifts upon purchase are not restricted in Malaysia. Toddler milk formula marketing is also limited, but governmental campaigns to boost dairy product consumption positively influence the growth of toddler milk formula. Under these circumstances, milk formula producers diversify their marketing communication channels such as online platform, sample distribution and teaming up with doctors to recommend their product to parents.

5.3.5 Philippines

Demographic

Population growth in the Philippines is expected to decelerate on account of urbanization. The majority of the population falls into the low-income segment that has difficulties to afford premium products.

Table 5-15 Industry-specific demographics, the Philippines (%)

Birth rate ('000 people)	25
Female labor participation	50
Exclusive breastfeeding rate	34
Urban population	49

Consumer

Consumers are prone to choose well-established brand names and they link the price with product quality.

Market

1) Market value

Milk formula retail value in the Philippines reached €552.8 million in 2012 with CAGR of 4.5% (2007-2012) while volume showed a minor increase, 0.1% CAGR. The growth was driven by unit price increase of milk products for babies with specific health condition. Special milk formula and toddler milk formula will lead the sales in the forecast period with 4.1% CAGR.

2) Company share

Mead Johnson was in leading position in the milk formula market with 44.5% value share. They maintained the lead as a result of early market entry and brand loyalty. Nestlé had been in the second place since 2009, but recent acquisition of Pfizer's baby food division will help them to compete with Mead Johnson in the following term.

3) Distribution channel

Non-grocery retailers accounted 42.3% of distribution channel in 2012, mainly health & beauty stores such as Mercury Drug and Watsons. Multinational companies established strong distribution channel for their products.

Table 5-16 Distribution channel, the Philippines (%)

Supermarkets	39.9
Hypermarkets	5.9
Small grocery retailers	11.9
Non-grocery retailers	42.3

Sari-sari store

A small-scaled retail operation, as known as the sari-sari store, is a distinctive distribution channel in the Philippines run on the premise of the owner's house (Consumer Goods Forecast World, 2005). It is an informal place where the customers can purchase the exact amount of product regardless of the outer packaging (Chen, 1997). The products are often re-packed since the majority of population falls into low-income category; people with low wage cannot afford the whole package that form the demand of products for a single-use. In response, commodity producers launch small-sized goods in flexible packaging to capture the niche. Considering the fact that it is not common to repack the milk formula products, the popularity of this store might drive a wide adaptation of single-serve formula packets in the future.

Product

1) Product category growth

Special milk formula and toddler milk formula recorded the highest CAGR of 9.7% and 6.8% respectively throughout 2007-2012. This tendency will continue in the following period until 2017, but the overall milk formula category will experience steep decrease. The growth will be halved, 4.1% CAGR for special milk formula and that of 2.9% for toddler milk formula. The decline may in result of severe pricing competition amongst well-known brands.

2) Brand share

Lactum (Mead Johnson) was the winner in milk formula category in 2012, with 23.1% value share among 20 products. Second leading product was Enfalac (Mead Johnson) that account 9% value share. The aforementioned two products by Mead Johnson constitute around one-third of total market. Premium brands were closely connected to pediatricians in hospitals and clinics to increase their brand share. Private-label product is not in the market because of high market entry barrier and strict government regulations.

3) Packaging prevalence

Most products in smaller volume were packaged in bag-in-box while the others were in tin can, with respective shares of 69% and 31%. Half of them were 350g in weight whilst the others were above until 400g. Bigger milk formula products mostly had 900g of product and 76% of them were packed in tin can. Bag-in-box was another format for bigger package.

4) Expenditure per capita

The amount of expenditure per capita reached €62 in 2012 with 5.5% CAGR throughout 2007-2012, and forecasted to increase to €72 with 3% CAGR growth.

Government policy

In the Philippines, it is mandatory to include the statement that breast milk is superior to milk formula at the end of the TV commercial. Additionally, baby and family pictures are not allowed to use for the printed ads. These governmental practices are to comply with international guideline by the WHO (World Health Organization, 1981).

5.3.6 Thailand

Demographic

Falling birth rate, time pressure in urban area and working mothers attempt to find best alternative to breast milk were the influential factors of milk formula market in Thailand. Although government promoted breastfeeding and maternity leave, Thai mothers found it not supportive enough under current working environment. Exclusive breastfeeding rate was low in comparison with neighboring countries, and it is not likely to rise over the subsequent period.

Table 5-17 Industry-specific demographics, Thailand (%)

Birth rate ('000 people)	12
Female labor participation	64

Exclusive breastfeeding rate	15
Urban population	34

Consumer

Consumers desire to select the best solution and careful about allergic prevention. Parents are proactive when searching baby food-related information through electronic devices. The importance of webpages and social media had increased and this will take a vital role in brand communication. The online channel is also used for better understanding of baby food such as nutritional information or product usage instructions.

Market

1) Market value

During 2007-2012, milk formula market reached €571.7 million with CAGR of 6.3%. Toddler and special milk formula led the growth, with 7.6% and 7.3% CAGR respectively. Unit price increase in response to raw material price rise contributed the market value growth. According to the forecast, the growth rate of milk formula market value will decrease in the following term to 4.5% CAGR.

2) Company share

Multinational companies dominate the milk formula market in Thailand. Nestlé had been in the leading position during 2007-2012 periods with over 40% share, followed by Danone and Mead Johnson with 27.2% and 22% respective share. Although Nestlé is predicted to secure their top share in combination with Pfizer's part, new product launches and aggressive marketing stimulate the competition amongst the companies.

3) Distribution channel

During 2007-2012 periods, hypermarket accounted the majority of distribution channel, followed by small grocers and supermarkets. Parents were prone to buy big volume in the hypermarkets while shop smaller pack size in nearby pharmacies, convenience store and hospitals. Brand owners use diverse channels for distribution to cover maximum geographical area.

Table 5-18 Distribution channel, Thailand (%)

Supermarkets	12.3
Hypermarkets	53.2
Small grocery retailers	30.1
Non-grocery retailers	2.9
Non-store retailing	1.5

Product

1) Product category growth

Toddler milk formula showed the strongest value growth in 2007-2012 period, 7.6% CAGR, followed by special baby milk formula value CAGR of 7.3%. Goat milk

formula was introduced in the market and positioned in premium product category, reflecting the demand for high quality products.

2) Brand share

Bear Brand (Nestlé) and Dumex (Danone) were two big brands in Thai milk formula market, with 28.6% and 27.2% respective brand share in 2012. Nestlé tried to boost the sales of overall Bear Brand across baby food sector through different marketing channels including TV commercials and workshops, particularly in toddler milk formula sector.

3) Packaging prevalence

Folding cartons and tin cans were witnessed to be the most typical packaging in Thai milk formula market. Six products in smaller size used bag-in-box format while other four were packed in tin can. Sixty percent of them were 400g or below. The carton preference was shown in bigger packages as well with 71% of material use, followed by tin can of 21%. Flexible packaging such as folding cartons gained popularity to occupy more shelf space.

4) Expenditure per capita

In 2012, the expenditure per babies up to 36 month reached €177.7 with the value growth of 11.9% CAGR since 2007. Parents are opt to choose best quality products while having less children, and it will bring a continuous growth of 11.8% CAGR in the following term, 2012-2017.

Government policy

Government restricts any advertisements or promotional campaigns for milk formula intended for infants and up to 2-year-old babies.

5.3.7 Vietnam

Demographic

Number of newborn babies had decreased partly by reason of government's initiative to control population growth. Moreover, rapidly increasing urban population and their hectic lifestyle restricted the growth of birth rate. Parents in urban area were prone to pay more for high quality products.

Table 5-19 Industry-specific demographics, Vietnam (%)

Birth rate ('000 people)	16
Female labor participation	73
Exclusive breastfeeding rate	17
Urban population	31

Consumer

Consumers positively response towards marketing claims of helping growth and immune system, rather than emphasizing the similarity to breast milk. They link multinational companies with higher quality and are willing to pay more for value.

Market

1) Market value

Vietnamese milk formula market was in its infancy in 2012 with retail value of €573.3 million. During 2007-2012, the market had grown 19% CAGR. In the forecast period, the rapid market development will be reduced with the growth of 5.5% CAGR.

2) Company share

Abbott was in the lead in 2012 with 28.9% market value share. Since local supply was not able to meet the demand, the consumption relied on imported companies. Royal Friesland Campina NV, Mead Johnson Nutrition Co and Vietnam Dairy Products JSC (Vinamilk) recorded similar shares in the same period: 16.7%, 16.3% and 15.8% respectively. International companies marketed them through TV commercial and advertisements on press whereas local brands mainly gained awareness via press.

3) Distribution channel

Two main key distribution channels were small grocery stores and health & beauty retailers as a result of their accessibility and convenience. The popularity of their bigger counterparts such as supermarkets and hypermarkets had increased in recent years since 2007.

Table 5-20 Distribution channel, Vietnam (%)

Supermarkets	11.5
Hypermarkets	7
Small grocery retailers	41.1
Non-grocery retailers	40.5

Product

1) Product category growth

Standard milk formula recorded the highest value growth in the past six years, 20.9% CAGR. Other categories also showed solid growth in the same period. Milk formula for special health conditions was not yet in the mainstream of the market. In the forecast period, standard milk formula will continue its strong value growth, with 11.1% CAGR.

2) Brand share

Dielac (Vietnam Dairy Products JSC (Vinamilk)) was in the leading position in 2012 with 15.8% brand share. Gain (Abbott Laboratories Inc) was in the second place with 14.9% share, followed by 11.9% share of Dutch Lady (Royal Friesland Campina NV). No private label was available in Vietnamese market since consumers select well-established brands.

3) Packaging prevalence

Overall, tin can was the most common packaging for milk formula in Vietnam regardless of the product size. Net weight for product was fairly standardized that 400g for smaller ones and 900g for bigger units accounted the majority. Bag-in-box was another but less popular packaging that had 14% and 7% for two abovementioned pack sizes, respectively.

4) Expenditure per capita

In 2012, the yearly expenditure per baby (0-36month) recorded €100, showing the growth of 14.7% CAGR in 2007-2012. The forecast predicts slower growth in following years (2012-2017) with expenditure growth of r 9.8% CAGR.

Government policy

Governmental campaign to lower the birth rate has been initiated and it is expected to decline in the following years. Vietnamese government faces difficulties to stabilize the baby food price as the majority of the product is supplied from overseas.

5.4 Phase 3: Asia-Pacific regional market

5.4.1 Market trend

Demographic

Urbanization and demographics changes in the Asia-Pacific have transformed the consumer lifestyle. Growing rates of female labor participation positively influences the baby food sales with the rise in purchasing power. Birth rate in this region has declined yet still high compared to the West. Furthermore, fewer children per household appeared to have minimal impact on the overall value sales of milk formula market, as the parents are willing to spend more for high quality milk formula upon their decision of substituting breast-milk.

However, it should be stressed that some countries such as India or the Philippines has some less appealing aspects of milk formula market; the former has less females who are engaged in industry while the majority of population in the latter falls in the low-income category who cannot afford the milk formula products.

Consumer

Health-conscious consumers are increasingly aware of nutritional information and find the milk formula as a complimentary source of nutritional intake. Although mothers in most countries agreed that breastfeeding is best for their babies, its implementation is rather challenging under current circumstances. Across the geographical market, it was commonly noticed that the consumer attention was on product quality, which is often associated with well-established multinational brands. Parents in some countries such as China, Indonesia and Malaysia proactively research online to seek information for product selection.

Market

The value of milk formula market had increased in recent years and is expected to continue its growth in the following period. However, the rapid market expansion in the review period will be slowdown in all markets. Multinational companies such as Mead Johnson, Danone, Nestlé and Abbott account the majority in the market with high value share.

Distribution channel

The overall milk formula product distribution in the Asia-Pacific is described in Figure 5-2. The products are mainly distributed through two main channels (1) grocery retailers (e.g., super/hypermarkets and small grocery retailers), and (2) non-grocery retailers such as health & beauty retailers. Small grocery retailers constituted a big share in most countries except China and the Philippines, but the strong growth of bigger retail channels such as supermarket and hypermarket was observed in the past years. Health & beauty retailers were another main distributor of milk formula, whose share was particularly large in India, Malaysia, the Philippines and Vietnam. Thai and Chinese consumers use online retail stores (non-store retailing) to buy milk formula. Although the retail value delivered through non-store retailers was minor, this platform steadily gained popularity among young parents in urban area and is forecasted to show a growth in the future.

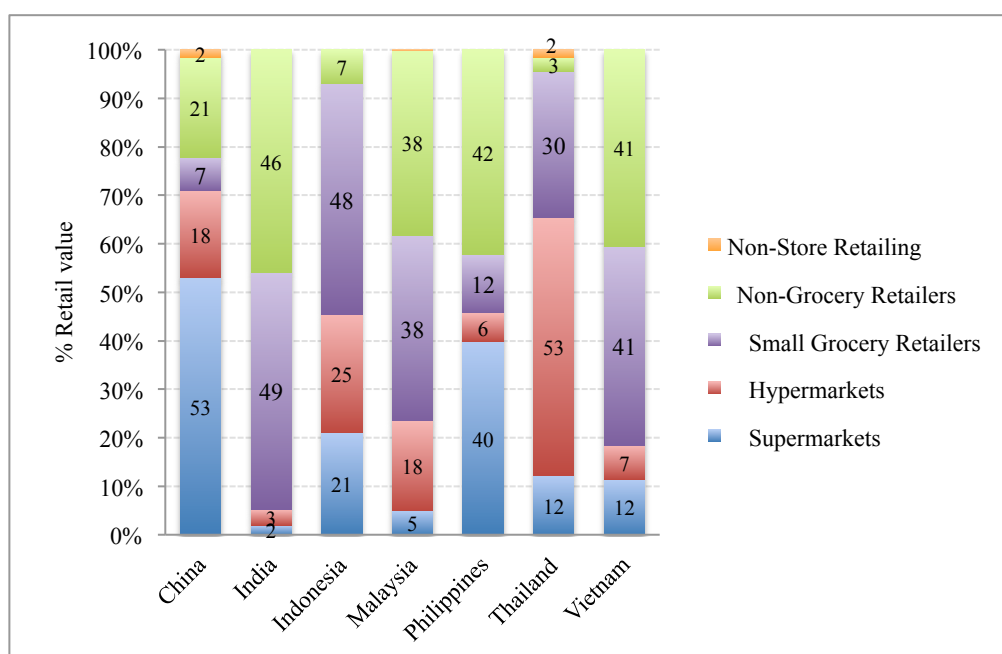


Figure 5-2 Distribution channel comparison in the Asia-Pacific market

Government policy

National governments follow the Code drawn by the WHO and took legislative actions against milk formula marketing, except India (Euromonitor International, 2013d). In most cases the restriction heavily applies to infant milk formula but the degree of limitation varies country-by-country. The producers in the Asia-Pacific comply with the regulations (or voluntarily in Indian market) when they market their product. Malaysia, the Philippines and Thailand seemingly have stricter limitations, but it was possible to maintain the connection with pediatricians in the Malaysia and the Philippines. No marketing activities were allowed in Thai market for the products intended for babies up to 2 years of age.

5.4.2 Packaging

The milk formula packaging in seven Asia-Pacific markets share the similarities across the region. Each brand had two different sizes, of which mostly 400g and 900g

in net weight. The Chinese and Vietnamese markets followed the aforementioned trend the most, while the other markets had a variety in product sizes.

Four packaging formats are prevalent for milk formula packaging. In descending order of frequency, bag-in-box, tin can and bag were used for smaller size as shown in Figure 5-3. On the other hand, products in bigger volume used tin can the most, followed by bag-in-box, bag and Cekacan®, which Figure 5-4 describes. The figures illustrate the percentage of material use while showing the number of products using the specific format in the data labels.

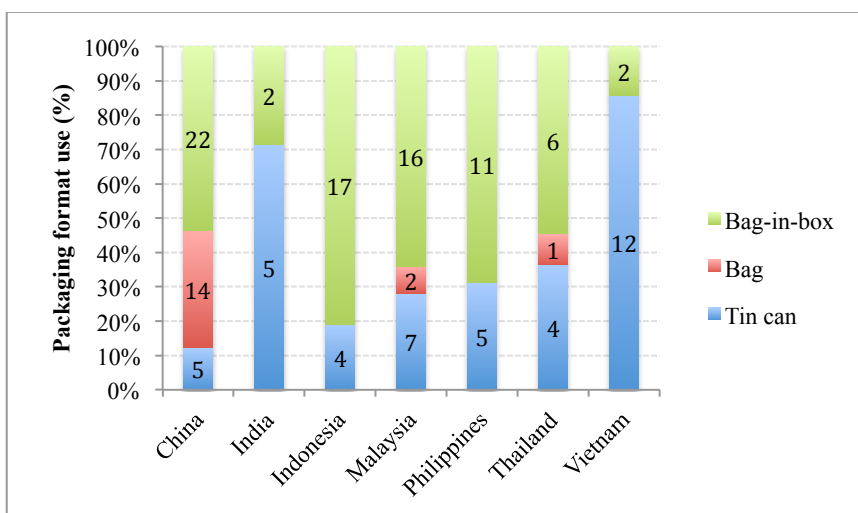


Figure 5-3 Prevalence of different packaging formats in the Asia-Pacific, smaller pack size

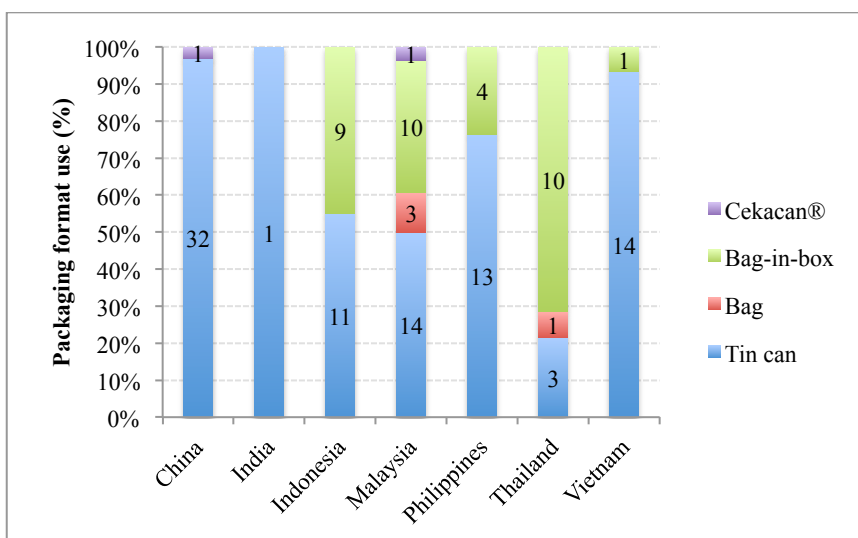


Figure 5-4 Prevalence of different packaging formats in the Asia-Pacific, bigger pack size

International brands localized their packaging in compliance with the legislations in each country while maintaining the brand identity. Packaging element alteration and retention is further described in Table 5-21. The use of local language and replacement of graphical elements were most common modification across the

markets. Nevertheless, overall product design was maintained to keep the uniqueness of the brand. Packaging in Chinese market placed supplementary brand and corporate name for consumers to easily identify and recall their brand. The additional names are commonly used to refer equivalent product in other markets and contribute the management of brand reputation.

Table 5-21 Product packaging adaptation in the Asia-Pacific market

Modified element	Retained element
<ul style="list-style-type: none"> • Packaging material • Layout • Language • Size • Shape • Additional BI in local language (China, Thailand) • Additional CI in local language (China) 	<ul style="list-style-type: none"> • Color • Graphical images • Brand identity (BI) • Corporate identity (CI) • Font style • Overall product design

6 Discussion and analysis

With the reflection of the theoretical framework, A&R Carton's case is discussed to confirm the market information need, and then analyzed to investigate the barriers of the market research practice in the B2B surroundings. In response to the need, the market research described in the previous chapter lists the remarks and further develops the findings to be optimized for the carton packaging industry. Finally, the discussion and analysis finishes the section with a chapter summary.

6.1 Market information needs, obstacles and identified gaps to capture the consumer needs in the B2B settings

The in-depth interviews allowed the researcher to identify the need of market and consumer insight. The case company primarily has an export market focus where it can find better acceptance and opportunities. Although the company currently has no contacts with end consumers, the practitioners acknowledge that the end users form the ultimate demand, in accordance with what Gummesson & Polese (2009) identified. However, several gaps were noticed to fully implement the market and consumer research in practice, they are: business nature, downsizing trend in the organizational structure, reduced responsibility of the marketing department and absence of consumer information collection.

As a B2B packaging firm, A&R Carton has characteristic that receives inquiries from the companies who produce consumer goods. The industry primarily focuses on direct consumers rather than actively seeks potential customers (Hohenschwert, 2012). This characteristic discourages conducting the market research and might limit a geographical expansion of the business, which was noted during the interview (DL, 2013). Insufficient understanding of different culture and market set the boundary and brought the focus back to the home country, to avoid the potential risks of geographical expansion that Ghauri & Cateora (2010) suggested. On the other hand, this new focus on the familiar market deters the export market research.

Moreover, a clear trend in the global corporate arena to redesign the organization also obstructs a substantial market research. Following the trend, the packaging industry changes their firm towards a lean structure. The business grows with fewer people, projects are prioritized according to the value they will bring, and more functions are outsourced. Since only necessary people run the company, the market research, which is often laborious, appears to have low priority. The minimized workforce also resulted an integration of business functions such as marketing and sales since the two department share similarities.

Both departments primarily focus on connecting the customers' need to the product; the marketing manager oversees the potential of the product in a particular market whilst the sales department promotes a purchase of a product by satisfying the customer needs in the market (American Marketing Association, 2013). Within the

mutual goal, the responsibility is turned into specific activities for each department. The marketing department is in charge of a trend discovery and strategy development for a strong sales performance. The people in the sales department cooperate with the marketing department to fulfill buyer's need through activities such as presentation, negotiation and delivery (Oliva, 2006; American Marketing Association, 2013). When it comes to the B2B surroundings, however, defining the respective roles of aforementioned departments is difficult (American Marketing Association, 2013).

In the case of A&R Carton, the sales department represents both areas, despite of what the organization structure describes. The interviews suggest that the main role of the marketing department is integrated under the sales department. The salespeople carry out planning and decision-making with top management levels because it is hard to separate in the B2B firms (Biemans & Brenčič, 2007). Under this circumstance, the marketing merely refers to promotional material supports rather than active engagement in the target market discovery or strategic decision-making. Literature suggests that it is common for the sales and marketing departments in the B2B firms to have blurry responsibilities due to the reduced role of the marketing (Biemans & Brenčič, 2007; Oliva, 2006; Matthyssens & Johnston, 2006). The marketing department generally carries out a comprehensive market and consumer research as well as a trend spotting. It is necessary to achieve successful market penetration but such practice is not valued in the B2B companies if it is not directly linked to increased revenue (Biemans & Brenčič, 2007; Matthyssens & Johnston, 2006). The source of information also fades the need for the marketing department since a plentiful amount of market insights comes from the sales department during the direct customer meetings (Matthyssens & Johnston, 2006). Lack of information exchange between the two departments also supports self-sustaining aspect of the sales department. However, the literature suggests that the sales department uncaringly handles the market information and conducts the research without a careful consideration.

As a supportive channel for market information, a bi-weekly market monitoring is delivered to A&R Carton. It saves time for the sales department to conduct the market research, but it restrains the firm to go beyond the boundaries of current customer. The service usually includes pre-determined markets or companies only so that hinders finding new opportunities outside of their area. Moreover, the reports do not cover the consumer perspective. It provides the information on A&R Carton's direct customers, competitors and markets but not end-user's perspective. Considering the fact that consumer insight brings better understanding of the direct customers, the scope of business intelligence should cover a broader area.

The previous studies proposed mainly two types of solutions for the B2B firms to improve the dysfunctional interface and implement the market research in practice. The most recommended solution is to clearly define the responsibilities while working in a multifunctional team (Biemans & Brenčič, 2007; Oliva, 2006; Matthyssens & Johnston, 2006). The marketing department should be able to sense a market development through a comprehensive market research to provide up-to-date information for the sales. The sales department should share the information acquired during the customer meeting and set strategy together with the people in charge of

marketing (Biemans & Brenčič, 2007). When the interface is in practice, it is important to share the common language to avoid any confusion (Oliva, 2006).

An implementation of customer relationship management (CRM) platform such as Six Sigma is another suggestion by previous study (Oliva, 2006). The technology is widely used to manage a company's contact exchanges with customers, involving different departments such as sales, marketing, customer service and technical support (Shaw, 1991). However, the effect of CRM adoption is limited due to a low user involvement; only half or less of the system is used (Payton & Zahay, 2003).

Considering the current circumstances, the most feasible suggestion for A&R Carton to facilitate market research is to redesign the scope of the bi-weekly market newsletter to end-user information. Adding a new feature to an existing service is likely to be quickly incorporated into the business settings. Once it settles down, then it is recommended to gradually emphasize the function of the marketing department to foster a better interface between the marketing and sales, as shown in the previous studies.

6.2 Asia-Pacific milk formula market prospects for the carton packaging

The rapid growth of the milk formula market in the Asia-Pacific has turned the attention of international companies from traditional markets such as Europe and North America to the emerging region around Pacific Rim. As Sakarya, Eckman, & Hyllegard (2007) suggest, this trend is a result of a new geographical preference of multinational milk formula producers, since the emerging markets provide affirmative growth.

Although there are numerous countries within the region, only a handful of regional markets were repeatedly stated in the business intelligence market reports, implying that these markets had a higher importance over others. Therefore, 11 frequently reported markets were chosen and a sequential market research was designed. The initial screening was beneficial to prioritize seven markets with high attractiveness, and the subsequent phase provided a deeper understanding of the local markets. The final stage revealed similarities and differences in demographics, market characteristics, consumer preferences and distribution channel across the Asia-Pacific region, which can be interpreted in the prospects for the folding cartons.

The milk formula products across the Asia-Pacific region commonly used the folding carton, for either Cekacan[®] or bag-in-box. The region accounted more than one-third of global food packaging sales in 2010, where baby food packaging contributed to this strong share with 29% of global sales in its category over the same time period (Euromonitor International, 2011b). It is related to the rapid market growth shown in the previous chapter, which explains the high share of baby food packaging in the global market. Moreover, this phenomenon strongly supports the flow illustrated in Figure 6-1 that the packaging demand comes from the increased market value, which ultimately generated by consumers.

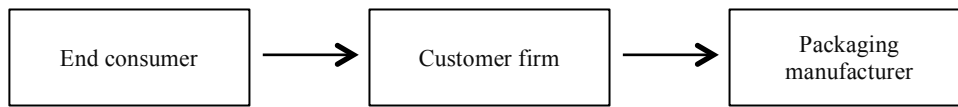


Figure 6-1 Packaging demand flow

The growing population in urban areas that generally has more disposable income raises the demand for the packaged food, and this growing consumption capacity continuously creates opportunities for market entry. This vibrant market encourages a new product launch that naturally increases the variety of packaging types (Euromonitor International, 2011a). Under this circumstance, the folding carton will likely to be a preferred solution due to its distinctive advantages such as relatively low price and enhanced shelf-impact. For example, China showed a shift in packaging material from metal tins to the folding carton for milk formula in order to lower the cost. China and Indonesia drove the market growth of the folding carton for milk formula (Euromonitor International, 2011b). It matches with the result of score-based market selection that China and Indonesia were in the first and the second place, respectively, which also support that dynamic market positively influences the carton packaging. In order to achieve a continuous growth of the carton packaging, especially Cekacan[®], there are three remarks to carefully consider.

The first characteristic to note is the consumer convenience as the recent innovation focus has given to the convenient packaging (Euromonitor International, 2011a). The demographic change in the Asia-Pacific resulted a busy lifestyle in urban area. Under the daily pressure, the consumers demand improved convenience and the baby food sector is no exception. Traditionally, such demand was reported in the saturated Western markets (Euromonitor International, 2009), but the market research on the Asia-Pacific region revealed a similar trend that the end-users also desire a consumer-friendly packaging. The theory showed that a packaging functionally combined with its content attracts the consumers (Harckham, 1989). Based on the in-depth market research, three aspects of the packaging were noticed to enhance the usability related to the packaging development. The first observed trend is a presence of easy-opening/-closing feature. The packaging prevalence research identified a user-friendly lid in certain products such as Dumex that uses Cekacan[®], in the Chinese market, which was intended to facilitate the opening compared to the traditional removable lid. The lid with the improved feature also simplifies the re-/closing as the users can reseal the packaging with a single touch. The second remark is enhancing the consumer's scooping experience through the packaging. The milk formula is a powder product that needs to be taken out with a spoon. The consumers often find the scooping bothersome because the spoon is placed on or inside the formula. Some packages including Cekacan[®] designed an optimized space for the scoop storage, and the consumers appreciated the functional integration. It was shown in a case that a milk formula producer changed its packaging from bag-in-box to Cekacan[®] experienced a significant market growth in market share on the European market (A&R Carton, 2008). The last spotted feature of packaging is the emergence of single-serve packets, which is more related to the future trend. In the developed market such as the U.S. or some markets in Asia including Japan and South Korea launched a small sized packaging for one-time use. The market reports showed prosperous trends on milk formula considering the consumer demand. The single-

serve packaging is optimized for the on-the-go use when the consumers cannot carry the big package, which can be appealing to busy and young parents. Furthermore, it might also attract the low-income population who cannot afford the whole package. Although the price is likely to be higher compared to the same volume of the product packed as a single unit, it is an alternative format for the population purchasing small amount of products on a daily basis; the packaging format has a possibility to meet the consumer demand in the Philippines as reflecting the demographics. Thus, the packaging industry should take the single-serve packaging into consideration for further innovation. Considering the three aforementioned aspects, improving consumer convenience is seemingly as advantageous as it is in the European market. The important part of the material change is to communicate with end-users so that they can fully see the benefit of it, since it is still not common compared to the bag-in-box format or the other materials.

Safety is another main issue in the milk formula category. The melamine tainted milk scandal in China upraised safety concerns around the world and resulted in disbelief in the safety of domestic Chinese brands. The milk formula brands assure the quality through increased marketing efforts, especially in China. Some consumers find imported products in the Mainland low-grade in terms of product safety, which led a formation of online consumer-to-consumer market or countless trip to Hong Kong, where is considered to be safer. Under the situation, the product packaging can ensure that it is not opened nor altered during the shipment from its origin. The producers can communicate this aspect of packaging to ease the anxiety while guaranteeing the ingredient safety. A tamper-evident folding carton packaging such as Cekacan[®] is advantageous for the milk formula producers to market their product.

The last insight to reflect is the changing environment in the retail distribution. The consumers' demand for high quality products stimulates product launch and re-launch to survive on the retail shelf. The milk formula producers attempt to differentiate the product through packaging by using various materials, sizes and formats in order to catch shopper's attention. The most common distribution channels were small grocers and health & beauty retailers, but bigger retail shops including supermarket and hypermarket are gaining popularity in recent years particularly in Thailand. Under this trend, product variety on the shelf is likely to be increased due to larger shelf space, which will bring tougher competition. The intense competition will positively influence the growth of the packaging industry as shown in the UK market where retailers actively innovate product packaging to win market share. The carton packaging has better product exposure to consumers since its square-like shape naturally occupies more shelf space than round-shape packages. In the market such as Vietnam where tin can is the dominant form, the distinctive shape and improved consumer exposure will be advantageous for product differentiation.

6.3 Summary of discussion

In response to the need in the B2B carton-packaging firm, a comprehensive market research was carried out. The prospects of the carton packaging industry are promising in the Asia-Pacific region if it carefully considers consumer convenience,

safety and distribution channel change. The market research was valuable to unveil consumer and market needs and provide insights to export-oriented company since the substantial market research is not practical for the packaging industry to conduct. Certain obstacles were found through the interviews, such as the nature and surroundings of the B2B industry as well as organisation structure. Similar problems were reported in the previous studies, but the feasibility of suggested solutions is still troublesome to implement under the given business contexts.

7 Conclusions

This chapter covers the closing summary of research findings and suggestions, followed by the value of the study to academia as well as to the industry. The chapter concludes the research with future research recommendations.

7.1 Conclusion

As noticed in the FMCG markets, a packaging is an integrated part of a product that plays a vital role to attract the end consumers. This link closely connects food and packaging industry to gain the market share in the competitive retail environment. The milk formula is one of the products that use packaging to be differentiated in the market, hence understanding the market and consumer need has been crucial for the food companies. However, the correlation between the product and its packaging suggests that it is also important for B2B packaging companies to know end consumers, since the ultimate demand comes from their needs. This flow sets a new focus on the end-consumer market and its characteristics to the packaging firms to fully understand their direct customers and be proactive. Therefore it is recommended for the B2B packaging firms to search for up-to-date consumer and market information in addition to the traditional business focus on their direct customers. The value of market research is emphasized when a packaging firm tries to win potential customers in unknown markets, such as Asia-Pacific.

The milk formula market in the Asia-Pacific has rapidly grown to the center of global sales. In accordance with the new focus, the grown demand in the region has been transmitted to the packaging industry with an increased order, especially a folding carton industry due to its common presence. A systematic market research was conducted to spot the trends and prospects in the Asia-Pacific region, and the result revealed certain affirmative characteristics for the carton packaging, despite the decelerating growth forecast. There are three market and consumer insights that need to be considered for the carton-packaging industry to prosper in the region, which are consumer convenience, product safety and the change in the product distribution channels.

The insights are valuable for the B2B carton-packaging firm that experience difficulties in conducting an extensive market research. In-depth interviews with the practitioners at A&R Carton showed that there are certain obstacles of collecting consumer information such as business nature, downsizing trend, organizational structure and absence of consumer information source. The aforementioned barriers hinder the establishment of strategic movement based on solid market information, which might lead the firms to struggle in the export markets. The previous studies recommended empowering the marketing department and utilizing a customer relationship management system for better performance of the firm; however, it is problematic to implement such solution in a short term under the current B2B context. Hence, the most feasible solution for the carton-packaging firms, specifically for A&R carton, is expanding the scope of the existing trend watching to the

consumer insights, and then steadily improving the marketing-sales interface for the business growth in a long-term.

7.2 Value of study

7.2.1 Contributions to the academy

Academic contribution of this research constitutes of a theoretical framework associating consumer market information with the B2B packaging industry. Analysis of the nature of the packaging industry and their in-/external relationship through case study provide an insight into their need of market information derived from their business setting.

7.2.2 Contributions to the industry

A comprehensive milk formula market research focused on the Asia-Pacific region provides a practical output to the carton packaging industry that plans to target emerging markets in Asia. A systematically designed three-stage market analysis brings a deeper understanding of both individual and overall market trends. In addition, the use of industry-specific indicators provides valuable market insights that can be used in future market research and strategic decision.

7.3 Future research recommendation

It is recommended to update the market information on the Asia-Pacific to see the trend in a long run. Another suggested area that can contribute market research in B2B context is to develop easy-to-use method that can facilitate the information gathering under the current business environment.

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9 Appendix

9.1 Appendix 1. Interview details

Table 9-1 Interview details

Interviewee	Position	Company	Interview date
PN	Managing Director	A&R Packaging Group	April 9, 2013
JW	Segment Sales Director (Performance Packaging)	A&R Packaging Group	April 10, 2013
IL	Group Marketing Manager	A&R Packaging Group	April 8, 2013
MC	Sales Manager (Performance Packaging – Machinery Systems)	A&R Carton Lund	March 15, 2013
DR	Sales Manager	Flextrus	March 22, 2013
RG	Business Development Manager	Flextrus	March 22, 2013

9.2 Appendix 2. Asia-Pacific market value

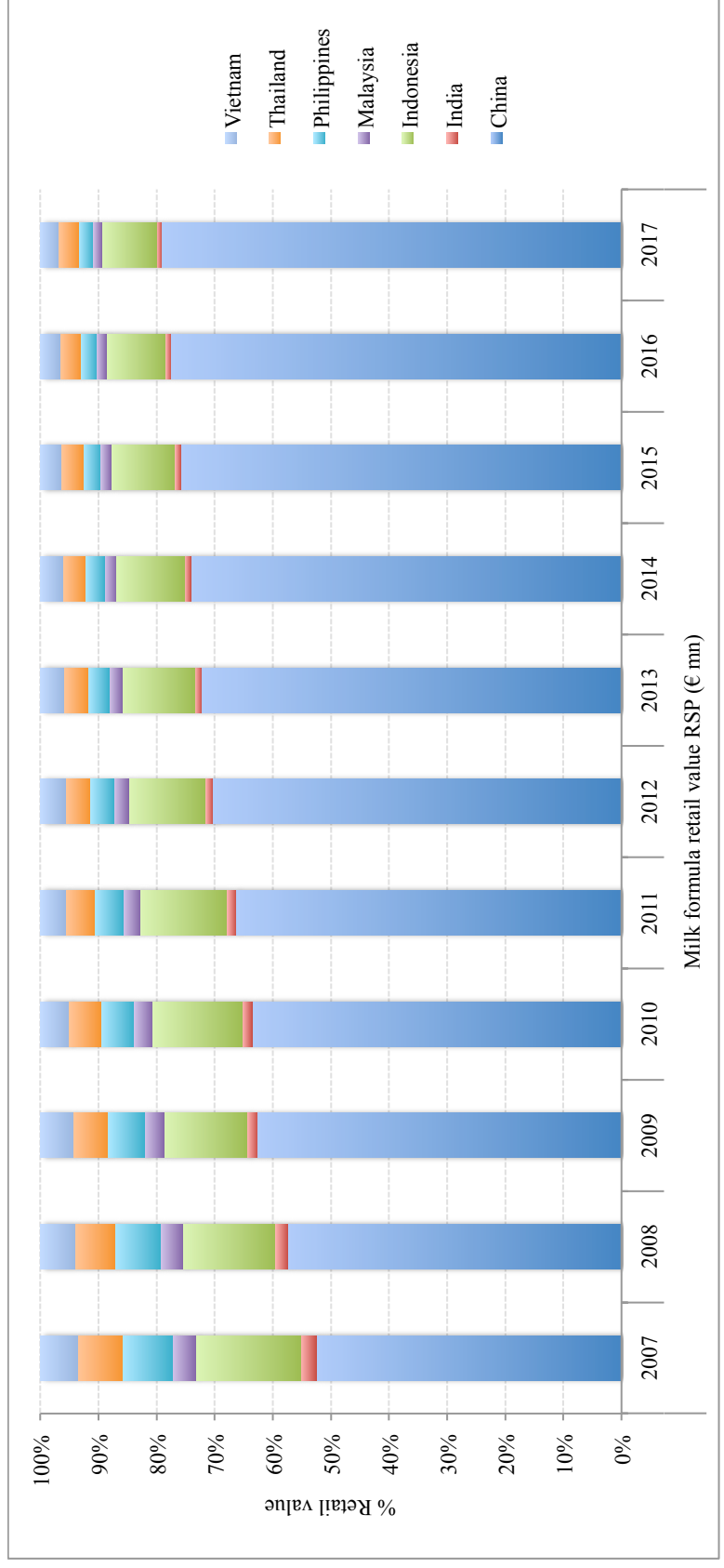


Figure 9-1 Asia Pacific milk formula market value prospects, 2007-2017

9.3 Appendix 3. Asia-Pacific milk formula expenditure per capita

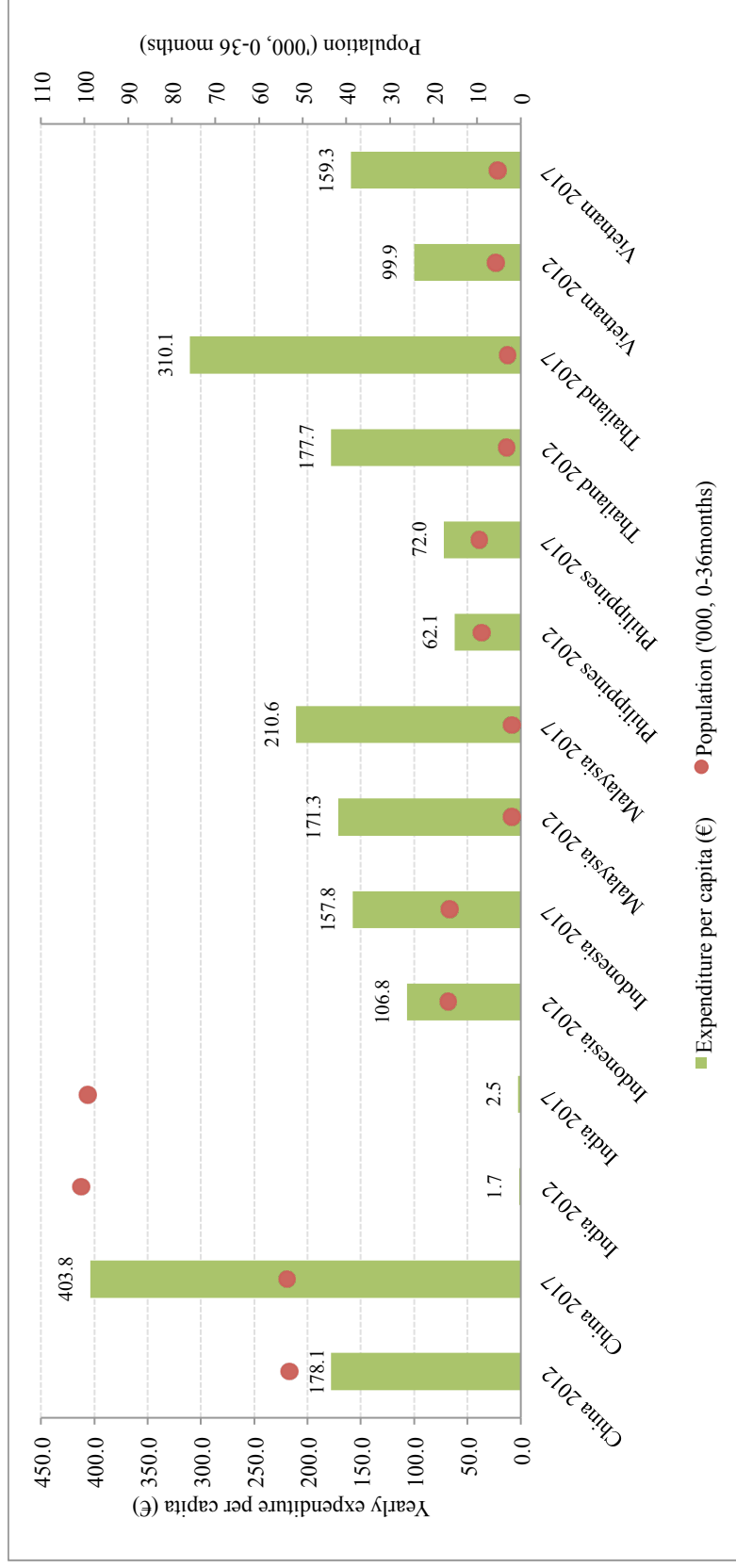


Figure 9-2 Asia-Pacific milk formula market expenditure per capita (0-36months) prospects, 2012/2017

9.4 Appendix 4. Online retailer checks

Appendix 4-1. Milk formula brands in the Asia Pacific market (Euromonitor International, 2013m)

Table 9-2 Milk formula brands in the Asia-Pacific countries

	China	India	Indonesia	Malaysia	Philippines	Thailand	Vietnam
1	Beingmate (Hangzhou Beingmate Group Co Ltd)	Lactogen (Nestlé SA)	Dancow (Nestlé SA)	Dumex (Danone, Groupe)	Lactum (Mead Johnson Nutrition Co)	Bear Brand (Nestlé SA)	Dielac (Vietnam Dairy Products JSC (Vinamilk)) Gain (Abbott Laboratories Inc)
2	Dumex (Danone, Groupe)	Nestogen (Nestlé SA)	SGM (Danone, Groupe)	Dutch Lady/Bella Holandesa (Royal FrieslandCampina NV)	Enfalac (Mead Johnson Nutrition Co)	Dumex (Danone, Groupe)	
3	Yili (Inner Mongolia Yili Industrial Group Co Ltd)	Dexolac (Danone, Groupe)	Frisian Flag (Royal FrieslandCampina NV)	Lactogen (Nestlé SA)	Bonna (Pfizer Inc)	Carnation (Nestlé SA)	Dutch Lady/Bella Holandesa (Royal FrieslandCampina NV)
4	S-26 (Pfizer Inc)	Lactodex (Bombay Oxygen Corp Ltd)	Nutrilon (Danone, Groupe)	Enfagrow (Mead Johnson Nutrition Co)	Nido (Nestlé SA)	Enfagrow (Mead Johnson Nutrition Co)	PediaSure (Abbott Laboratories Inc)
5	Enfamil (Mead Johnson Nutrition Co)	PediaSure (Abbott Laboratories Inc)	Lactogen (Nestlé SA)	Nespray (Nestlé SA)	Nan (Nestlé SA)	Alacta (Mead Johnson Nutrition Co)	Enfagrow (Mead Johnson Nutrition Co)
6	Bioslime (Bioslime International Holdings Ltd)	Nan (Nestlé SA)	Bebelac (Danone, Groupe)	Neslac (Nestlé SA)	Promil (Pfizer Inc)	Enfalac (Mead Johnson Nutrition Co)	Nan (Nestlé SA)
7	Enfagrow (Mead Johnson Nutrition Co)	Growing up Milk (Nestlé SA)	PediaSure (Abbott Laboratories Inc)	Enfakid (Mead Johnson Nutrition Co)	Nestogen (Nestlé SA)	Nan (Nestlé SA)	Nestlé Gau (Nestlé SA)
8	Yashili (Yashili International Holdings Ltd)		Morinaga (Morinaga & Co Ltd)	PediaSure (Abbott Laboratories Inc)	Alacta (Mead Johnson Nutrition Co)	Enfapro (Mead Johnson Nutrition Co)	Dumex (Danone, Groupe)
9	Shengyuan (Synutra Inc)		Chil Kid (Morinaga & Co Ltd)	Annum (Fonterra Co-operative Group)	S-26 (Pfizer Inc)	S-26 (Pfizer Inc)	Mead Johnson (Mead Johnson)

10	Emilon (Global Dairy Holdings Ltd)	Chil School (Mornaga & Co Ltd)	Gain (Abbott Laboratories Inc)	Progress (Pfizer Inc)	Snow Brand (Megmilk Snow Brand Co Ltd)	Nutrition Co) Grow (Abbott Laboratories Inc)
11	Enfapro (Mead Johnson Nutrition Co)	Procal (Pfizer Inc)	Grow (Abbott Laboratories Inc)	Gain (Abbott Laboratories Inc)	Similac (Abbott Laboratories Inc)	Enfapro (Mead Johnson Nutrition Co)
12	Firmus (American Dairy Inc)	Sustagen (Mead Johnson Nutrition Co)	Enfalac (Mead Johnson Nutrition Co)	Enfagrow (Mead Johnson Nutrition Co)	Promil (Pfizer Inc)	Friso (Royal FrieslandCampina NV)
13	Wissun (Wissun Group)	Enfagrow (Mead Johnson Nutrition Co)	Snow Brand (Megmilk Snow Brand Co Ltd)	Enfakid (Mead Johnson Nutrition Co)	Gain (Abbott Laboratories Inc)	Similac (Abbott Laboratories Inc)
14	Gain (Abbott Laboratories Inc)	Annum (Fonterra Co-operative Group)	Nan (Nestlé SA)	Grow (Abbott Laboratories Inc)	Lactogen (Nestlé SA)	Frisolac (Royal FrieslandCampina NV)
15	Wonder Sun (Wonder Sun Dairy Co Ltd)	Enfapro (Mead Johnson Nutrition Co)	Similac (Abbott Laboratories Inc)	Anchor (Fonterra Co-operative Group)	Isomil (Abbott Laboratories Inc)	Meiji (Meiji Holdings Co Ltd)
16	Similac (Abbott Laboratories Inc)	Enfalac (Mead Johnson Nutrition Co)	Enfapro (Mead Johnson Nutrition Co)	Enfapro (Mead Johnson Nutrition Co)		Enfalac (Mead Johnson Nutrition Co)
17	Ausnutria (Australia Ausnutria Dairy Pty Ltd)	S-26 (Pfizer Inc)	Progress (Pfizer Inc)	Sustagen (Mead Johnson Nutrition Co)		Lactogen (Nestlé SA)
18	Nanshan (Hunan Yahua Seeds Co Ltd)	Enfamil (Mead Johnson Nutrition Co)	Promise (Pfizer Inc)	Frisolac (Royal FrieslandCampina NV)		
19	Scient (Yashili International Holdings Ltd)	Nan (Nestlé SA)	Mamex (Danone, Groupe)	Similac (Abbott Laboratories Inc)		
20	Lactogen (Nestlé SA)	Promil (Pfizer Inc)	Mamil Gold (Danone, Groupe)	Frisomel (Royal FrieslandCampina NV)		
21	Yaolan (Heilongjiang Yaolan Dairy Co Ltd)	Nestlé NAN (Nestlé SA)	Sustagen (Mead Johnson Nutrition Co)			

22	Frisolac (Royal FrieslandCampina NV)	Bonakid (Pfizer Inc)	S-26 (Pfizer Inc)
23	Neslac (Nestlé SA)		Promil (Pfizer Inc)
24	Frisogrow (Royal FrieslandCampina NV)		Frisolac (Royal FrieslandCampina NV)
25	Bright (Bright Food (Group) Co Ltd)		Ferntleaf (Fonterra Co-operative Group)
26	Wei Chuan (Wei Chuan (BVI))		Isomil (Abbott Laboratories Inc)
27	Nan (Nestlé SA)		Bebelac (Danone, Groupe)
28	Qinyong (China Dairy Group Ltd)		
29	Edison (Hangzhou Wahaha Group)		
30	Frisomel (Royal FrieslandCampina NV)		
31	Mengniu (China Mengniu Dairy Co Ltd)		
32	Natrapure (Healtheries of New Zealand Ltd)		
33	Jin Xing (Heilongjiang Dairy Group)		

Appendix 4-2. Online retailer check references

Table 9-3 Online retailer check references

	Data source	Accessed date
China	http://english.beingmate.com	May 8, 2013
	http://www.tmall.com	May 8, 2013
	http://www.meadjohnson.com.cn	May 8, 2013
	http://www.biostime.com	May 8, 2013
	http://yaolandairy.en.ecplaza.net	May 8, 2013
India	http://www.pediasure.in	May 9, 2013
	http://www.momandmeshop.in/	May 9, 2013
	http://www.babyoye.com	May 9, 2013
	http://dir.indiamart.com	May 9, 2013
	http://grocery.ebest.in	May 9, 2013
Indonesia	http://shop.carrefour.co.id	May 9, 2013
	http://www.meadjohnson.co.id	May 9, 2013
	http://www.komoditiharian.com	May 9, 2013
	https://www.wyethindonesia.com	May 9, 2013
Malaysia	http://www.yubeli.com	May 10, 2013
Philippines	http://www.meadjohnson.com.ph	May 10, 2013
	http://www.philippinegroceries.com	May 10, 2013
	http://philippines-store.com	May 10, 2013
	http://www.wyeth.com.ph	May 10, 2013
	http://www.abbott.com.ph	May 10, 2013
Thailand	http://www.nestle.co.th	May 10, 2013
	http://shoppingonline.bigc.co.th	May 10, 2013
	http://www.gourmetmarketthailand.com	May 10, 2013
	http://www.enfababy.com	May 10, 2013
	http://www.meadjohnson.com	May 10, 2013
	http://www.ibuyathome.com	May 10, 2013
	http://www.childrenhouse.co.th	May 10, 2013
Vietnam	http://www.vinamilk.com.vn	May 11, 2013
	http://abbottnutrition.com.vn	May 11, 2013
	http://minhkietmilk.vn	May 11, 2013
	http://gtmart.vn	May 11, 2013
	http://bibikids.vn	May 11, 2013
	http://ticmart.vn	May 11, 2013
	http://beyeu.com	May 11, 2013
	http://chodientu.vn	May 11, 2013
	http://www.i-mart.vn	May 11, 2013
	http://chodientu.vn	May 11, 2013
http://gianhangvn.com	May 11, 2013	