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Critical Success Factors for Refilling. An
Application to the Beauty Industry

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obtain the degree of Master in Business Administration by:**

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The Thesis:

Critical Success Factors for Refilling. An Application to the Beauty Industry

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- Oversaw the commercial mix and budget of the only mall in the city of Juliaca: Real Plaza Juliaca

Junior Commercial Executive

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ABSTRACT

Degree: Master in Business Administration

Thesis Title: Critical Success Factors for Refilling. An Application to the Beauty Industry.

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ABSTRACT:

This study examines consumer's perceptions of refilling packaging for the beauty industry. The objective will be to identify key success factors that need to be considered by firms when developing a refill option. This thesis uses information gathered for a master thesis presented to EDHEC Business School by Marta Marinho, My-Linh Thieu, Zhengbo Huang, and myself.

The investigation gathered primary and secondary sources. The primary information was gathered through consumer interviews, online questionnaires, and observation in the form of store visits. The secondary sources consisted in document research and benchmark of existing refilling systems.

The thesis will analyze the concept of refilling: what it is, its benefits, the types of refill, its characteristics, and the reasons and barriers for consumers to refill. Later, it will review different refill systems applied in North America and Europe. This will include how they have formulated their refill option and an analysis of refill pricing. And finally, the results of the interviews and questionnaires will be displayed. These 3 main parts will lead towards the final part of the thesis, where the 3 different parts will be discussed and intertwined, and the main success factor identified will be displayed.

The key success factor identified to attract consumers to refilling were: price (refilling must be cheaper), quality (product quality and brand experience cannot be affected), convenience (refilling must be a simple process, easy to transport, allow large volumes, and give consumers options), hygiene (refilling must be a clean process), communication (consumers want to be informed on various aspects of refilling), and packaging (must be practical, stylish, and durable).

CHAPTER 1: INTRODUCTION

1.1. Problem Statement

As the world's population increases and countries become more urbanized and industrialized, the impact on the environment is stronger. Climate is changing, species are disappearing, icebergs are melting, and ocean levels are rising. Projections are becoming more and more dramatic. A contributing factor towards these effects is waste, which is growing at an alarming rate. In 2016, the world's waste was estimated in 2.01 billion tons (Kaza, et al., 2018), by 2018 it rose to 2.12 billion tons (World Counts, 2019). These numbers are expected to increase 70% by 2050, when waste is expected to reach 3.40 billion tons (Kaza, et al., 2018).

With the amount of waste incrementing, its reduction is becoming a focus for many companies. Not just internally - in their processes and production - but also by proposing alternatives to consumers, who are becoming more aware of these issues, can participate in waste reduction. One of these efforts is the concept of refilling, the reuse of packaging instead of using a new one.

Offering the option to refill packaging allows companies become more sustainable and environmentally responsible. Refills would permit the company to reduce the amount of waste they contribute and offer their customers the possibility to be active in this environmentally conscious action.

This is the case of a European firm that operates in the beauty industry. This is an international cosmetics firm that is present in more than 66 countries over the world. Based on their triple bottom line mission: product, people, and planet, they are searching for ways to become a more sustainable and ethical business. Indeed, this company noticed that the beauty industry is not is not exempt from waste production, they are looking for ways to offer refills to their consumers. In 2017 this industry produced 120 billion units of packaging, of which 70% will ended up in landfill and oceans (Nouril, 2019).

This company introduced the refilling of packaging in the past; however, it was not successful enough to maintain it in long term. Less than 1% of their sales were represented by refills. Having known the hardships of refills, they are looking for relevant information to formulate alternatives that will make refilling attractive for their consumers and sustainable in the long run. Refilling can be challenging for consumers. Therefore, they must be convinced to participate in the process in order for it to be successful.

1.2. Business Idea

This study is oriented to examine the consumer's motives to refill and beliefs about the process. It aims to give an insight on the beauty industry and how refills are currently offered as well as consumer's opinions on refills and their openness to participate. This process will permit the identification of the key factors that must be taken into consideration when developing refills systems.

Research question: What do companies have to consider in order to launch a successful refills program?

1.3. Objective

Formulate the primary success factors that must be taken into account to implement a refill system in the beauty industry.

This objective includes:

- Understand the concept of refilling and its general characteristics.
- Examine the current refill models available in the market.
- Identify consumer's rationale for participating in refilling packaging.
- Identify potential barriers that could demotivate consumers refilling packaging.

1.4. Scope

- Exploration of refill programs in all industries; what types to refilling methods exist and what conclusions can be drawn from them.

- Investigation of consumer insights on refilling based on primary and secondary sources, critical factors that are relevant when offering refills.
- Examination of beauty firms that offer refills, to understand what is currently being done and how this could contribute towards their success.

1.5. Limitations

- The document will be oriented towards the beauty industry, even though research other industries will be examined.
- This study considered information from North and South America, Europe, and Asia.
- For the collection of primary data, only woman between the ages of 20-35 years old will be considered. This because they are they are the most important consumers of the beauty firm.

1.6. Main Conclusions

- Refilling is a way that companies can contribute towards waste reduction. Companies in different industries are starting to apply refilling to some of their products. There are four common types of refilling methods: soft plastic refill pack, self-dispenser or bulk, deposit system, and light-weight self-contained refill. Based on the firm's business model, their customers, and operational capabilities the firm chooses the form that fits them best.
- Firms must have a clear strategy when applying their refill option to consumers. This strategy should take into account the critical success factors mentioned in the following paragraph to know what consumers are looking for in a refill system and apply it in a way that is attractive to them.
- The critical success factors found for the beauty industry when applying a refill option are the following: price (refilling must be cheaper than the alternative option), quality (product quality and brand experience cannot be affected), convenience (refilling must be a simple process, easy to transport, allow large volumes, and give consumers options), hygiene (refilling must be a clean process),

communication (consumers want to be informed on various aspects of refilling), and packaging (must be practical, stylish, and durable).

CHAPTER 2: METHODOLOGY

Methodology refers to the way a problem or question is approached (Taylor, et al., 2015). There are 2 ways researchers can move towards answering their questions:

- Qualitative research: it is “the process of inquiry that seeks in-depth understanding of a social phenomenon. It focuses on the “why” rather than the “what” of this phenomenon and relies on the direct experiences of human beings as meaning-making agents in their everyday lives” (University of Utah, n.d.).
- Quantitative research: it is the process of obtaining information that “emphasizes objective measurements and the statistical, mathematical, or numerical analysis of data collected through polls, questionnaires, and surveys, or by manipulating pre-existing statistical data using computational techniques. Quantitative research focuses on gathering numerical data and generalizing it across groups of people or to explain a particular phenomenon” (University of Southern California, n.d.).

Given the objective of this thesis, a qualitative method is the most appropriate as it would result in descriptive data based on people’s own words and behaviors (Taylor, et al., 2015). This would be useful in understanding what consumers expect from their refill options and develop insights that are necessary to take into account when developing a refill system.

2.1. Data Sources

Based on the objective, two concepts were identified. These are the concept of refilling and consumer insights on refills. These two have been divided into the dimensions mentioned in Table 1. This table establishes the method, as well as the corresponding data source.

The main data sources used were:

- Online sources: these will either be studies, articles, or company webpages.

- Store visits: stores that offer refills will be randomly chosen to visit. This data source will be based on the observation of how refills are offered and how consumers interact with them.
- Consumers: they will be asked questions that allow us to understand their perceptions and habits in relation to refills. As mentioned, the target participant will be woman between 20 to 35 years old.

Table 1: Data Sources

Concept	Dimension	Method	Data Sources
Refilling	Definition and characteristics	Document analysis	Online sources
	Refilling systems	Document analysis	Online sources
	Current refills offered in market	Document analysis Benchmark Store visits	Online sources Store visits
Consumer insights	Motivation to refill	Document analysis Interviews Questionnaire	Online Sources Consumers randomly chosen to participate
	Important considerations	Document analysis Interviews Questionnaire	Online Sources Consumers randomly chosen to participate
	Barriers for refilling	Document analysis Interviews Questionnaire	Online Sources Consumers randomly chosen to participate

Source: The Author

2.2. Selection Criteria

Table 2 explains the selection criteria for the data sources that will be used:

Table 2: Selection Criteria

Data Source	Selection Criteria	Number
Online sources	Worldwide information relevant to the subject.	As many as needed
Store visits	Known brands that offer refills in the French market. Don't have to be part of the beauty industry.	10
Consumers	Woman between 20-35 years old that will be randomly chosen to participate in the questionnaire and interviews.	At least 50 per data collection method

Source: The Author

2.3. Data Collection Methods

This qualitative research will use both primary and secondary data collection methods:

- Primary data: is “data which is collected for a specific research problem, using the procedures that fit the research problem best. When primary data is collected new knowledge should be added to the existing store of social knowledge” (Hox, et al., 2005).

The methods to be used to obtain primary data will be:

- o Interviews: short interviews to be conducted to understand consumers’ perceptions on refilling and what motivates them to do it. The participants would be women between 20-35 years old randomly chosen in populated commercial areas of Singapore, Boston, and Paris. The interviews lasted approximately 5 minutes and were recorded so they could be transcribed afterward. See Appendix N° 1 for the interview structure.
 - o Online questionnaire: correspond to open ended questions where send to women between 20-35 years old around the world. The target was to obtain information about consumer’s habits and interaction with refilling products, their perceptions of the concept, and what motivates or demotivates them. It has two main parts: refilling in general and refilling for the beauty industry. See Appendix N° 2 for the survey structure.
 - o Observation: this information will be obtained from store visits. The objective of these was to see and experience firsthand how refilling is offered in stores of various industries and how these companies apply the various refilling concepts. Stores were visited in Paris and Lille – France.
- Secondary data: can be defined as “the data created by other researchers made available to reuse by the general research community” (Hox, et al., 2005).

To accomplish the objective, the following secondary data collection methods will be used:

- o Document Analysis: online research on the concept of refilling, its implications, and consumer’s perceptions and habits. This information aims

to find existing insights that can either complement or contradict the primary data obtained.

- Benchmark: this part of the investigation consisted in online research about brands that currently offer refills in all or some of their products. For online benchmark, an important source will be brand webpages and articles written on refill systems.

2.4. Data Analysis

The analysis of documents will give information about current studies written on consumers' opinions of refills and general facts about the refilling industry. This information will be complemented and/or compared with that obtained from the interviews and online questionnaires. The objective is to see patterns that can arise from this analysis.

As for the document analysis, the information found will have to be coded. General categories will be used to ensure that the relevant information is considered. To start, the coding categories will be: purpose for refilling, benefits of refilling, motivation to refill, barriers to refilling, etc.

On second hand, with the approval of the participants, the interviews will be recorded so that afterwards the information can be transcribed. Once this has been done, the information obtained will be coded. To code this information general categories will be applied, for example: environmental reason, economic motives, convenience, etc. Some of the categories mentioned will be subdivided into smaller categories. This is done so that relevant information can be grouped.

On third place, the online questions will be divided using the same categories as the interview data, so that they can be compared and integrated to use for analysis. As for preparing the data, incomplete surveys will not be taken into account. The objective will be to obtain at least 100 complete surveys. In order to assure surveys are filled out correctly, they will be written in a simple and objective way. Leading questions will not be included.

Lastly, questions about age will be included. This is to guarantee that the participants from both the interviews and the questionnaires fit into the objective age group.

2.5. Thesis Structure

Table 3 outlines the structure of the thesis, detailing the purpose of each chapter and the methods used.

Table 3: Thesis structure

Chapter	Title	Purpose	Data collection method
1	Introduction	Introduce the problem found and how refills could help solve it. State the objective, scope, and limitations of the thesis.	
2	Research Methods	Give a clear outline of the research methods that will be done in order to obtain the necessary information for the investigation.	
3	The Concept of Refills	Define what a refill is, what characteristics it has, and what kind of refill systems exist in the market. Also, it will give consumer insights on refilling collected from secondary sources.	Primary and secondary sources: document analysis and benchmark
4	Benchmark: Refill Systems in North America and Europe	An analysis of existing refill methods in the beauty industry, so that common factors of success can be identified.	Primary and secondary sources: document analysis and benchmark
5	Consumer Analysis	With the results of the primary investigation, conclusions will be drawn on what consumers expect from a refill system.	Primary sources: surveys and interviews
6	Discussion	As a result of the research done, there will be a discussion on the various results of the thesis.	Analysis of the information obtained throughout the investigation

Source: The Author

CHAPTER 3: THE CONCEPT OF REFILLING

In chapter 3 I will focus on an analysis of refilling systems in various industries. It will start by defining the concept and mentioning its benefits. It will identify the characteristics of refill systems and classify the various types. Lastly, it gives insight on consumers' perceptions by identifying motivation and barriers to refills.

3.1. Definition of Refilling

To refill means “to fill something up again” (Cambridge Dictionary, n.d.). It is the act of “taking an amount of some material needed to fill up again an object that has been emptied” (Cambridge Dictionary, n.d.). In general terms, any container that has been emptied can be refilled with any product the owner chooses to serve a specific purpose. For example, a car is refilled with gasoline when empty or a pool is refilled with water after cleaning. Nonetheless, for the purpose of this paper, the concept needs to be more precise.

To narrow the definition, a refill will be the option given by a firm to their customers to refill an empty container with a product offered by said company. This type of refill is not necessarily intrinsic to the product's nature (in comparison to the car example); nevertheless, its packaging can be adapted to be refilled to serve an ecological and economic purpose.

The range of products that can be refilled is vast. It can go from a pen, to cleaning supplies, makeup, wine, etc. For this reason, many industries can take part in the process of refilling. Depending on the product type, different variations of refilling systems can be applied. Some can be done at home by the consumer, others require that they take the empty bottle to the store and refill it there.

3.2. Benefits of Refilling

Refill systems present the following benefits:

- For the Firm: refilling can contribute towards accomplishing their corporate social responsibility and sustainability commitments. It has an effect on the firm's image in sustainability, as consumers notice the impact of waste. It can also help increase

customer loyalty and attract new consumers. Refill systems can have a long term financial impact on the company, as packaging costs could be reduced (Lofthouse, 2006).

- For the Customer: it can present an opportunity for economic savings as many refill options are cheaper than purchasing the original packaging. Moreover, if there is added value in the proposal for refilling, they can have better quality, more quantity and availability, etc. for a lower price. For the environmentally conscious consumer, it satisfies their demand for sustainable packaging (Lofthouse, 2006).
- For the Environment: refilling helps reduce waste. Waste is harmful as it releases substances into water, soil, and air, therefore contributing in the increase of greenhouse gases and, as a result, towards climate change. By refilling and reducing production of packaging, there is a decrease in the exploitation of finite resources. Lastly, by encouraging consumers to not dispose of their packages but to reuse them, refilling can promote sustainable behavior in consumers; they can help educate consumers about sustainability (Lofthouse, 2006).

3.3. Types of Refills

Depending on the product nature, its packaging, and its use refills vary in forms. The following are the most common refilling system found in the international market: soft-plastic refill packs, self-dispenser or bulk, deposit system, and lightweight self-contained refill (Lofthouse, 2007).

3.3.1. Soft Plastic Refill Pack

For this form of refilling, the consumer must purchase the product in its regular container. Once it has finished he can refill the main package with more product that is contained within a soft plastic bag (WRAP, 2008). This type of refill does not eliminate the use of more packaging altogether, but it reduces the amount of plastic used.

This type of packaging presents benefits for the consumer as it has a lower price than the regular pack and is lighter. It allows consumers to buy the refill in advance and store it at home in order to never run out of product. Nonetheless, consumers can find this option

difficult to use if the packaging does not facilitate the transfer from the refill pack to the main package. Also, this type of refill package can be perceived as having lower quality (WRAP, 2008).

These are some companies that are using this system (see Appendix N° 3 for pictures):

- Yves Rocher: soft plastic bags are available for refilling “The Gentle Shower Gel” and “The Gentle Hand Gel”. The refill pack uses 77% less plastic than the original bottle and presents a price reduction for consumers, reducing the price from £6.80 to £5.20.
- L’Occitane: consumers can refill shower oils, shower gels, shampoos, conditioners, liquid soaps, hand washers, and cleansing foams. Refills save up to 90% of plastic compared to the standard bottle. There is also a price benefit for consumers, for example, the “Verbena” Shower Gel 250ml original bottle costs £16.00 vs. the refill duo (250ml original bottle + Refill 500ml container) at £35.00.
- Jacques Briochin: offers refill packs for their dishwashing liquid. It uses less plastic and offers a discount from €3.45 to €2.95 for consumers.

3.3.2. Self-Dispenser or Bulk

Self-Dispenser or Bulk are refilling systems that are done within a store. A customer brings an empty container or bag and refills it from a dispense machine that can have a pump or an outlet that allows access to its content (Bitner, et al., 2002). This type of refill is usually charged by weight or amount of product served, and in many cases allows the consumer to choose how much product they want or need.

This offers the possibility of price reduction, as the packaging is not included in the price. Some firms that use this refill system give the consumers the option to use any package, these don’t necessarily have to be acquired in the store. Also, it has the benefit that consumers can change the product smell or flavor when refilling, there is no need to purchase the exact same one.

However, it can bring challenges to the company as it is prone to product waste due to consumer spillage and it can be difficult to engage customers, as they don't find it convenient (WRAP, 2008). It doesn't offer a time save for the consumers since it requires that they make a special trip to get their refill (WRAP, 2008).

Some companies that offer this system of refills are (see Appendix N° 4 for pictures):

- Biocoop: it is a French supermarket that sells organic products in bulk or in a dispenser for liquids. In bulk it offers products such as grains, nuts, crackers, spices, etc. In the liquid dispenser it has the option for vinegar, oil, rum, and wine. Consumers can either bring their own packaging or buy them in store, to later reuse again. The price is set by weight or ml served.
- Equivalenza: this is a beauty company that offers perfume worldwide. Consumers refill in store where there are containers with pumps. They have 2 options in terms of the size of the product. They must use store bought bottles. On the first purchase, the full price is paid (as the cost of the bottle is included), and in subsequent purchases there is a discount, as the bottle is refilled. The price can go from €25.95 in the first purchase to €23 in the refill.
- Robuust: it is a zero waste shop in Antwerp, Belgium. They sell products such as muesli, grains, dried fruit, nuts, coffee beans, loose tea, oils, nut pastes, etc. Customers have no need to buy packaging, they bring their own (reusable) packaging from home. All products are stored in large silos or scoops. When they enter the store they can weigh their own containers and then they get a sticker. At the checkout, the weight of the packaging is taken into account, as customers will only pay the content. They can also buy reusable jars or bottles in the store.
- Starbucks: this cafeteria offers the possibility of buying reusable cups and refilling them to their regular customers. The cost of the cup is \$1. When the consumer uses it they receive a \$0.10 discount. In 10 uses they have saved the amount invested in the reusable cup. Customers can also bring their own cups from home.

3.3.3. Deposit System

The deposit system consists of the customer returning the bottle to the company, usually receiving an economic incentive in exchange. The company cleans it, refills it with more product, and sells it again. For this type of refill, price is recognized as the most important driver for consumers. Some companies allow the return of a bottle without the need for the consumer to buy a new product in exchange (Lofthouse, 2006).

Although it clearly brings economic benefits, some consumers find it inconvenient, as they have to travel to the return point with the empty packaging (Lofthouse, 2006).

Some examples of deposit systems are (see Appendix N° 5 for pictures):

- Fillaree: this American company offers the refill of beauty products in two ways: the customer must either order online and send the empty package back by mail or bring the empty bottle to refill it themselves at refill stations. The first option is a deposit system. One noticeable policy to keep the refill circle running is to charge customers a bottle fee separately if the bottle is not sent back within 30 days of receiving the refill.
- Pilsen: beer brands such as Pilsen can be bought in certain liquor stores in a plastic box that contains beer bottles. Consumers can buy a box and save it after drinking the beer. They then take the box with the empty glass bottles back to the store and purchase a new one at a cheaper price. The bottles returned are then cleaned and refilled with more beer, to later be sold to the public again.
- Biocoop: this French supermarket allows its customers to return the glass bottles that they had bought in Biocoop stores after using them. The bottle costs the customer €2, if they return it, there is a €1 refund. The company cleans them and then sells them again.

3.3.4. Lightweight Self-Contained Refill

In this refill method, the consumer buys a durable container, that can be refilled with a self-contained refill pack. A self-contained refill doesn't require the transfer of product from one container to another, but the replacement of an individual cartridge inside the

durable container. This is a widely used form of refilling that consumers find attractive. It is easy to use, convenient, hygienic, and cheap (Lofthouse, 2006).

An issue with this type of refill is that customers are not always aware of the possibility of refilling the durable container. Others find it difficult to open and handle the durable container. These two challenges show the need for clear communication (Lofthouse, 2006).

Some firms that offer this form of refill are (see Appendix N° 6 for pictures):

- Airwick: it is a brand of air fresheners by Reckitt Benckiser. The consumer must buy a scent diffuser separately from the container of the essence. Once the essence is finished, the diffuser can be refilled.
- Ecco Bella: it is a cosmetics company that sells powdered eyeshadows, face powder, blush, and eyeliner in a main package made of hard paper. Once the consumer finishes the product, they can choose to buy magnetic compacts that contain the product. These come in a smaller package and are placed in the original paper package. This type of refill offers the possibility for customers to mix and match as many colors as they wish, not necessarily buying the original color.
- Elate Cosmetics: it is a company that produces and distributes cosmetics and beauty products. They use bamboo packaging. The consumer must purchase a compact that does not contain product and separately the product in stainless tin receptacle. The package has a magnet that holds the refills. The stainless tins can contain eyeshadow, blush, or foundation. The compact can contain any variation of products inside.
- Faber Castell: this manufacturer of office supplies offers refillable pens. These pens have a container for the ink that can be removed and replaced. The customer keeps the pen and replaces the ink at a lower price.

3.4. Characteristics of a Refill

With the information found on the different methods of refilling and the observation of various refill systems, the characteristics listed below were found. These were identified by analyzing the information found on refill systems and recognizing aspects that must be

acknowledged when developing a refill system, answering the question: what do companies need to define when developing their refill systems?

- Refill process: the way the refill is done can vary immensely. The company must map out the journey the consumer goes through when refilling their packaging, and analyze which is the most convenient way for their processes and for the consumer. Each type of refill mentioned previously would have its own specifications that need to be taken into account.
- Ownership of the package: when developing a refill system, the ownership of the packaging must be defined. Is it the company or the consumer? What would this imply for the process? Another aspect related to packaging is: will the consumer be able to refill with any type of bottle or must it be a bottle produced specifically by the company? This needs to be specified.
- Materials for main package & refills: when establishing a refill process, the material of the packaging must be considered. A regular plastic bottle might not be durable enough to survive many refills. Which would be the best option? Glass, aluminum, acrylic, hard plastic, etc. Many retailers that offer refills look for packaging that is environmentally friendly, such as bamboo or cardboard. To choose the one most suitable for the product price, weight, and durability must be examined.
- Person in charge of refilling: if it is in store, is it done by the staff or the consumer? If the refill can be performed at home, the consumer is in charge. If the refill is done in the factory or production facilities, the company is in charge.
- Value for consumers: the refill option needs to be designed in order to add value for the consumer (WRAP, 2008). Whether value comes from environmental issues, economic benefits, easiness to use, etc. there must be something in it for them, and they must be able to perceive it.
- Implications for the company: the various types of refills can have different implications for a company. Refilling affects logistics, brand loyalty, maintenance, staff training, communication, product design, etc. These must be considered when choosing a refill system.

3.5. Reasons for refilling

Different studies have analyzed the reasons consumers choose to refill. In the article “Reinventing refills: guidelines for design” written by Lofthouse, et al. (2017), they found that consumers choose to refill for some of the following reasons:

- Light packaging refills such as soft plastic containers are lighter than the original container and are easier to transport. In cities where public transportation is the main form of transit, these characteristics take importance.
- When a refill is offered by delivery, it becomes more convenient and attractive for the consumer. They avoid the hassle of having to take their empty packaging to a store.
- Positive brand experience motivates consumers to engage in refilling. As they are satisfied with the experience, they will continue to do it.
- Consumers feel that a refill must have a lower price than the original version. This is a high motivator for them to participate. In contrast to economic incentives, environmental impact is not high on the priority list of consumers when choosing to refill.

This same article mentions three aspects that are required of a refill in order to be successful:

- Design of the pack: to take a 100% advantage of the product bought by the consumer, they must be able to drain all the content of the package. If that is not possible, they will feel that product is being wasted and the process is not beneficial to them. Also, this package must be easy to clean; the consumer must feel that the experience is hygienic and clean. The maintenance of the package should be simple and easy. If not, it will be considered a hassle and loose attractiveness. Lastly, the pack itself and the labeling must be durable. The quality of the pack must reflect the quality of the product.
- System design: the process of refilling should be easy and intuitive. Consumers want to know that the option of refilling will be available in the long run. It was

found that expensive refills combined with giveaway parent packs are negatively viewed.

- Quality of the product dispensed: if the consumer has a negative experience with the product they will not participate in refilling the package. They will change brands. To be successful, the product must satisfy the consumer.

On the other hand, the article “A Creative Approach to Investigating Refillable Packaging Systems” by Lofthouse (2006) found that most consumers felt that refillable packaging was better for the environment. 25% of them had been driven to refill for environmental reasons. They mentioned things like: “they use less material”, “they generate less waste packaging to go to landfill”, “there is less impact through manufacturing”. Moreover, Lofthouse (2006) found that consumers actively search for refill because of these reasons:

- Eco friendly: consumers want to feel like they are actively contributing towards reducing waste. They want to feel altruistic.
- Cost-value: price is an important motivator. There should be an economic benefit for the consumer.
- Innovation/technology: it is more attractive to the consumers if it is a creative and if it looks and feels stylish.
- Packaging: size of the refill can have an effect on consumers who don't own a car; they will find a refill attractive if it is light and easy to transport.
- Brand association: positive brand image has influences consumer participation.
- Past experience: if it has been positive, consumers will be more prone to refill.
- Product quality: product must at least meet expectations.
- Convenience: if the process does not generate mess and is quick and easy consumers are more likely to refill. Refills that can be received by delivery can have an advantage.
- Hygiene: the process must be clean and hygienic. Consumers must perceive that the integrity of the product and its safety is not affected by refilling.

Moraes (2018) found that the most important attributes consumers value in refill systems are: price, quality of the package, quantity, easiness of refilling, and brand reputation. Environmental issues are not amongst these because, although it was mentioned as a consideration, it was an idea that was thought as “nice” and but not a motivator to participate.

Of the attributes mentioned by Moraes (2018), price was the most important. Consumers would complain if the price of the refill was too close to the original one because they felt as if the cost of the package was not taken into consideration. They should perceive this price difference as significant. Price should also be delicately handled, as consumers can feel that they are the ones paying to protect the environment and the company only uses the refill process as a marketing initiative.

Bitner, et al. (2002) found that consumers perceive that price should be lower for refills, as they reduce manufacturers’ packaging costs and make transport cheaper. Additionally, they found that consumers want refills to be convenient. Thus, they have to be cost effective, quick and easy to use, light and easy to transport, environmentally friendly, and conveniently delivered. Also, the nature of the refill must be suited to the product’s purpose and the original container durable.

3.6. Barriers for Refilling

A barrier is an obstacle that prevents an action from occurring. According to WRAP (Waste and Resources Action Programme, 2008), some of the main barriers for refilling could be classified into:

- Inconvenience: consumers find refilling to much of a hassle and don’t want to be bothered with it. Things like difficulty to open the refill or not understanding how to do it can affect a consumer’s openness towards refilling.
- Impracticality: when refill packs are poorly designed and make the process complicated for the user consumers are discouraged. Packages that can cause spilling will be problematic.

- Re-closeability: can the refill pack be closed after being opened? Spilling or leaking would cause product waste. For products with an expiration date, such as food products, consumers worry that the product could go bad before they have had the opportunity to use it all, so packs that aren't able to close correctly would be an issue. On another hand, it was expressed that consumers worry about the expiration date as it won't be reflected on the durable container. Lastly, for the refillable pack, consumers were concerned about the contamination of the pack and its content when it is not closed properly.
- Transportation, stackability, storage: if the refill requires extra transportation and storage considerations, it could become an issue for the consumers.
- Cost: since consumers expect a price difference between the original and the refill price, if this difference isn't perceived as enough or there is no real price saving, the refill system will lose attractiveness.
- Environmental: many refill options still use non-biodegradable or non-recyclable materials; this gives consumers the impression that their efforts to refill are not enough.

On another hand, Bitner, et al. (2002) identifies the following attributes give consumers a bad refill experience: inconvenience, hassle of maintenance, increased waste, poor product quality, bad delivery, bad quality packaging, 'fiddly' to refill, concerns over how long refill will be available for, and incompatibility between different refill systems.

Similarly, Lofthouse (2006) found that a negative experience in a refilling process can be caused by:

- Inconvenience: this is found when a refill requires the consumer to undertake extra or complicated actions in order to refill their packaging. Some inconvenient actions mentioned by the consumers are: refilling small containers from bulk suppliers, returning packaging to the store, removing parts of the package in order to refill it, necessity to store large container of product at their home in order to refill the container later on, etc. Another barrier mentioned is not being able to buy the

correct refill due to lack of stock in store or not being able to identify the correct refill, thus purchasing the wrong product. On another hand, Lofthouse (2006) found that consumers were frustrated when the refill required the bottle to be completely empty and washed before they could refill it; they were worried about running out of product.

- Cost: if a consumer finds the process too expensive, they will not be motivated to participate in the refill process.
- Ineffective communication: consumers mentioned that they were unaware of refill options, which led them to recycle instead of refilling the bottle.

For the cosmetics industry in particular, it can be quite difficult to move towards refilling because it is an industry that is very package driven. Many female consumers are motivated to purchase by attractive packaging, rather than considering the quality of the product chosen. This has demotivated the industry from moving towards better packaging options that benefit the environment (Levenstein, et al., 2011).

3.7. Chapter Conclusions

- For this thesis, a refill is offered to a consumer when they can reuse a container multiple times and fill it several times with a certain product. The concept of refilling is present in many industries using the various forms of refilling identified: soft plastic refill pack, self-dispenser or bulk, deposit system, and lightweight self-contained refill. These different systems are not exclusive to a certain product type or industry. Also, different refill systems can be applied to the same product. There is no right way to do it for a certain product. Nonetheless, soft plastic refill packs tend to be used more for liquid products.
- The main characteristics of a refill were identified in order to provide the basic concepts that are required for a refill system to be complete. In comparison to the rest of the thesis, these focus on an intrinsic part of the refill system, whereas the rest of the thesis focuses on the external part related to the consumer: their perceptions, what attracts them, and what demotivates them from refilling.

- Given the information gathered from secondary sources, the motivators for refilling are:
 - Price: consumers expect the price to be lower. If not, they will feel as if the company is taking advantage of them.
 - Convenience: the refill must be easy and quick. It must be easy to transport, for example, receiving it by delivery would make it more attractive. For some, the package should be lighter and/or smaller. The consumer doesn't want to make an extra effort in order to refill.
 - Brand: a consumer that has had a positive brand experience is more likely to refill. Therefore, companies must work on making the consumer journey positive in order to motivate consumers. Moreover, brands with a positive image, association, or reputation are more likely to succeed in the refilling business.
 - Product: it must be of good quality. Quantity also has an impact as consumers want more for less, not the other way around.
 - Hygiene: the refill must be perceived as clean.
 - Packaging: its quality must be noticeable. It must be reliable, durable, stylish, and functional.
 - Environment: some studies found it as a motivator while other did not. But still consumers take it into consideration.

- The reasons a client doesn't refill are the opposite of the reasons they refill. The most important barriers are listed below:
 - Price: if it is perceived as too high and doesn't justify the effort required to refill.
 - Convenience: if it is difficult and requires too much energy and time, transportation and storage is complicated, and/or the process is complicated and consumers do not understand it.

- Packaging: if it is not functional and complicates the process of refilling, it doesn't show expiration dates, is difficult to clean, and/or it cannot be reclosed.
- Communication: consumers might not be aware that refilling is an option. Consumers are not informed of how to refill, which can lead them to waste product or damage the package.
- Environment: consumers need to feel that the refilling effort are reducing waste.

CHAPTER 4: BENCHMARK: REFILL SYSTEMS IN EUROPE AND NORTH AMERICA

In chapter 4 I will review refill systems in the beauty industry in North America and Europe. It will detail various characteristics of refilling that will explain how firms adapt to this business model. The objective of the chapter will be to discover how various firms have applied refills successfully.

This chapter will be divided into 3 main sections. First, a detailed explanation of how firms in the beauty industry have applied refilling in North America and Europe. Second, a comparison of the price difference for refilling versus the regular package. Lastly, a conclusion of this benchmark will be drawn.

To structure the examination of the firms' application of refilling, the concepts that will be used are: refill process, packaging material, pricing, convenience, hygiene, and communication. These were chosen based on the information gathered from the previous chapters.

4.1. Refill Systems in North America

Table 4 explains how beauty firms in North America have applied refilling.

4.1.1. Plaine Products

This is a company that sells beauty products such as haircare, bodycare, and liquid soaps. All of their products are available for refilling.

- Refill process: Plaine Products uses a deposit system for refilling, where the company is in charge of doing the refill. Their process consists of 3 steps (Plaine Products, 2019):
 1. Consumers order the product online. The bottle comes with a lid and a pump. Once they receive it, they must replace the lid with the pump.
 2. Once the product has run out, the consumer can order a new bottle online. They can also subscribe and Plaine Products will periodically replenish their supply.

3. When the bottle is empty, the consumer must clean it and switch the pump to the refill bottle. They must return the empty bottle to the company via carrier.

Table 4: Refill Systems in North America

	Plaine Products	The Refill Shoppe	Estée Lauder	Ecco Bella	Fillaree
Refill Process	Deposit System	Self-dispenser or bulk	Lightweight Self-contained Refill	Lightweight Self-contained Refill	Deposit system and self-dispenser
Packaging Materials	Aluminum Bottle	Glass, plastic, soft plastic	Metallic compact	Paperback compacts	Glass, heavy-duty plastic
Pricing	10% discount when subscribed	Product and package are charged separately	\$12 or \$14 for refill vs \$42.50 for compact with product	\$14.95 - \$15.95 for the refill and \$9.95 - 10.95 for an empty compact	\$10 fee if bottle is not sent back
Convenience	Products are delivered to consumers	Consumers can choose the amount of product they prefer. Products can be delivered	Refills can be delivered Easy to refill	Consumers can mix and match products Easy to refill Can be ordered online	Products are delivered to consumers
Hygiene	Company cleans packaging in factory	Consumer must clean their own container	No cleaning necessary Refill comes with new puff	No cleaning of the packaging necessary	Consumer must clean their own bottle at home
Communication	On web page there is a clear explanation of the refill process and environmental concerns	Their logo and name communicate their business model	Company does not focus their communication on refilling	Focuses on being an organic and vegan company that is environmentally friendly	Brand name gives sign of refill option. Refills are prioritized in their communication

Source: (Plaine Products, 2019), (The Refill Shoppe, 2019), (Estée Lauder, 2019), (Ecco Bella, 2019), (Fillaree, 2019). *Elaboration: The Author*

- Packaging material: products come in aluminum bottles with a plastic pump.
- Pricing: the refill per se does not offer a discount; the consumer has to order a new bottle online at the regular price. Nonetheless, they can receive a 10% discount when they subscribe to the automatic replenishment. Thus, the cost benefit is only received once the costumer decides to commit to the brand and a particular product.

On the other hand, the consumer doesn't have an extra charge for sending the empty bottle back because the firm with the original package the return label.

- Convenience: consumers can receive their product at home. The purchase of the product can be done online and the return of the empty bottle is as simple as leaving it on their doorstep to be picked up. Since the consumers don't have to worry about refilling themselves, there is no spillage nor waste of product. Also, since they don't have to return the empty bottle right away, they don't have to wait until their product is finished to order the replenishment. On a negative note, when a customer subscribes, they can only do it for one type of product, taking away the flexibility of changing the flavor or type of product received.
- Hygiene: since the refill is done by the firm, the consumer doesn't have to worry about the cleanliness of the process.
- Communication: Plaine Products clearly communicates through their website their commitment to being an environmentally friendly company and explaining their refill process.

See Appendix N° 7 for refill system and characteristics.

4.1.2. The Refill Shoppe

This American company sells not only beauty products but also food and cleaning supply. Their business model revolves around refilling.

- Refill process: this store uses a bulk or self-dispense system for refilling and soft plastic refill packs. The consumer must pay a separate price for the package and for the content. The consumer has the option to buy in store or online. When buying in store, they can take their own packaging from home or purchase packaging in the store. On another hand, when shopping online, consumers have to purchase new packages that can be reused afterward and, if they already have a container at home, they can purchase the refill pouch.
- Packaging material: The Refill Shoppe doesn't use branded packaging, which allows the consumers to reuse it with whatever they want. They offer different

options for packaging materials such as glass, plastic, soft plastic, etc. When purchasing in store, consumers can use the container they please; it doesn't have to have been purchased in the store.

- Pricing: it doesn't vary for the content. The price difference is found in not having to pay for a new container.
- Convenience: as products are sold in bulk, consumers can choose the amount of product they wish to purchase. They can also use any bottle that they have at home, saving costs for them and reducing waste. Moreover, consumers can choose the scent they want for their products and they don't have to purchase the same product for a certain container; they are free to change as they please. Since the company also offers delivery, they can have easy access to their favorite products.
- Hygiene: the cleanliness of the container cannot be guaranteed by The Refill Shop as each consumer must clean it themselves.
- Communication: the name and logo give away their main activity: refilling. Advertisement of their environmentally friendliness is also explicit, with their slogan: "Making a difference one bottle at a time". Also, they offer a clear and simple explanation of the refilling process, in store and online.

See Appendix N° 8 for refill system and communication.

4.1.3. Estée Lauder

This cosmetics company offers refilling for their foundation.

- Refill process: Estée Lauder uses a lightweight self-contained refill method where the consumers must first purchase a compact that contains foundation. Once the foundation is finished, it can be taken out of the compact and be replaced.
- Packaging material: the compact is stylish and durable, making it more attractive for the consumer to purchase despite its high price. The refill's self-contained packaging is made of tin.
- Pricing: there is a large price difference between the compact and the refill. The first purchase, that includes the container and the product, costs \$42.50 and the refill

\$12 or \$14 depending on size. This is a large motivator for consumers to participate in refilling.

- Convenience: consumers can either buy the refill in retail stores or online. It is an easy way to refill where there is no waste of foundation. Furthermore, consumers don't have to wait until their product is finished to buy a new one, making sure they don't go without product for a certain time.
- Hygiene: it is not a large issue with this option as the compact doesn't require to be deeply cleaned and the refill comes with a new puff. A puff is a piece of soft material used to apply the foundation. This could be of big concern for clients as this part of the product is in direct contact with their skin.
- Communication: Estée Lauder is a fashion oriented brand which doesn't prioritize the communication of their refill option. It only offers refills for a limited amount of products. Customers will only notice the refill option if they specifically search for the product online or in store.

4.1.4. Ecco Bella

This cosmetics brand offers refills for their eyeshadows and blush.

- Refill process: they use a lightweight self-contained refill system in which consumers must purchase a compact (durable container) and the content separately. Once the product is finished, the consumer can take it out and place a new one inside the compact. They can either purchase the product online or in retail stores that carry Ecco Bella products.
- Packaging material: they use compacts made of hard paper for storing blush and eyeshadow. The products come in magnetic packaging and are placed within the compact.
- Pricing: the refillable paperback compacts can cost from \$9.95 to \$10.95. On another hand, the refills can cost from \$14.95 to \$15.95.
- Convenience: this type of refill is available online and in store; thus, consumers can choose the form of purchase most convenient for them. The process to refill is easy,

intuitive, and doesn't produce product waste. Consumers can mix and match products and colors as they please. The refill is also light and easy to store.

- Hygiene: hygiene in this system is not a big issue as the paperback compact can be easily cleaned and the content is new with each refill.
- Communication: Ecco Bella focuses on being eco-friendly, organic, and vegan. Their name tries to insinuate this by starting with the word Ecco. Nonetheless, the communication about refilling is limited.

4.1.5. Fillaree

This American company makes refilling available for all of their products. Among their beauty care section soap and body wash are included.

- Refill process: Fillaree offers a deposit system for refilling. There are 2 ways consumers could refill:
 - o The consumer must subscribe to Fillaree and order their products online. The initial pack includes the main package and a refill bottle. Once the refill is finished the consumer must return to Fillaree the refill bottle in a prepaid envelope.
 - o The consumer can buy a bottle at a retail store or online. Once they have used all its content, they can refill at their local refill station (located in various retail locations).

In this method, the consumer is in charge of refilling their own bottles, either in the store or in their homes, depending on how they choose to purchase Fillaree products.

- Packaging material: Fillaree uses simple designs in blue colors that are made of glass and hard plastic. The purpose of their packaging is "to be the last bottle a consumer needs to purchase" because of the quality and waterproof label (Fillaree, 2019).
- Pricing: Fillaree charges \$12 for a plastic container of 16 oz. and \$16 for glass package of 16oz. The refill bottles sold online cost \$20 for a 32oz refill and \$10 for

a 16oz refill, giving the consumer a 17 to 37% saving based on the material of the main package. On another hand, one of their most relevant characteristics is that, for the online delivery, if the consumer does not return the refill bottle empty within 30 days of receiving the 2nd refill, they must pay a \$10 fee, which is the equivalent of purchasing the packaging. This way they motivate consumers to contribute towards the efforts of waste reduction.

- Convenience: consumers have the option of buying online or going to a store where Fillaree has placed a refill station. Therefore, the system has adapted to different consumer habits and needs. Consumers can choose the scent of the product they use and change it as they please when using the refill stations.
- Hygiene: it is up to the consumers, as they must make sure their packaging is clean for a refill.
- Communication: Fillaree communicates their efforts on refilling through their web page, focusing on their contributions to waste reduction and eco-friendliness. They explain the process of refilling clearly and detail the stores where refills are available.

See Appendix N° 9 for refill system.

4.2. Refill Systems in Europe

Table 5 explains how beauty firms in Europe have applied refilling.

4.2.1. L'Occitane

- Refill process: L'Occitane provides a soft plastic refill option for their consumers. They can buy the product and the refill either online or in-store. Once the content of the bottle is finished, they can refill the product at home.
- Packaging material: for main packaging, they offer bottles made of hard plastic that have a pump at the top. The refill bag uses 90% less plastic than a regular container.
- Pricing: a refill contains 16.9oz. and, depending on the product, the price varies from 21€ to 36€, with 29€ being the most common price. There are only 14 different

options of products to refill. The refill has a lower price as the original product can cost from 36€ to 40€.

Table 5: Refill Systems in Europe

	L'Occitane	Lush	Mugler
Refill Process	Soft Plastic Refill Bags	Lightweight Self-contained Refill	Self-dispenser and soft plastic refill pack
Packaging Materials	Plastic	Recycled aluminum	Glass bottles
Pricing	29€ for the refill vs 36€-40€	£8.92 for the refill and £7.95 for the lipstick case	100 ml refill £83.5 vs 90ml original pack £95
Convenience	Easy to store Less weight Easy to refill	Easy to store Easy to refill	Fidelity program Easy to refill
Hygiene	Consumer must clean their own bottle at home	Package doesn't require cleaning	Consumer must clean the bottle
Communication	Not focused on communication about refills	Focused on becoming a zero waste company	Focus on fashion and products

Source: L'Occitane, 2019; Lush, 2019; Mugler, 2019. Elaboration: The Author

- **Convenience:** It is convenient for the consumers as they can buy the product when it is most suited for them. The refill weighs less and it is not necessary to finish the product in the main packaging in order to buy the refill. The main package and refill pack can even be bought at the same time. The process could produce spillage if not done correctly. The refill bag can be reclosed once opened, allowing the consumer to maintain the product fresh.
- **Hygiene:** the consumer is responsible for the cleanliness of their containers. The soft plastic refill bag has a twist off cap, which allows the consumer to close the refill pack and store it safely if they don't finish its content.
- **Communication:** L'Occitane communicates about refills in their web site; when searching by category, refills are an option. The brand doesn't focus their communication on refilling. They have media accounts and use them frequently but they don't advertise refills. Rather, they focus on product categories where refills are available.

4.2.2. Lush

Lush offers lightweight self-contained refills for their Naked Lipstick.

- Refill process: consumers can either buy them online or in the Lush store. They must purchase the lipstick case separately from the lipstick itself. Once the content of the case is finished, the consumer can remove the content and change it for a new product.
- Packaging material: the lipstick case is made of recycled aluminum and it has a simple but stylish design.
- Pricing: the cost of the lipstick case is £7.95, a price that the consumer will only have to pay once. The cost of the content is £8.92. This way the consumer perceives that they are saving on packaging costs.
- Convenience: this method of refilling is convenient for the consumer as it is easy to buy and refill. It doesn't waste product or produce mess in the process of refilling. It also allows the consumer to purchase many refills at the same time, preventing them from having to go the store again if they don't wish to. Moreover, consumers can change the color of the refill as they wish; they don't have to purchase the same content each time.
- Hygiene: this process is hygienic as the part of the product that is in contact with the consumer is new. In each refill the lipstick case can be cleaned but it isn't required to guarantee the cleanliness of the lipstick.
- Communication: Lush is focused on becoming a zero waste company. Therefore, their communication doesn't center around refilling, but rather around their reduce, reuse, recycle strategy. They try to portray this on their online and in store experience. They don't spend much on advertisement because they rely on brand advocates (staff and customers).

4.2.3. Mugler

It is a firm that sells and produces perfumes.

- Refill process: consumers have the opportunity to refill their perfumes in two ways: self-dispenser or soft plastic refill methods. Once the customer has finished the content of their bottle, they can go to a Sephora or Printemps store where they can find a refill machine that dispenses perfume. Additionally, they can order online a refill bottle and do the refill at home.
- Packaging material: Mugler uses glass bottles for the main package and lighter glass bottles for the refill if the order is done online. The designs are attractive and luxurious for the main bottle. These bottles are easy to uncap in order to refill.
- Pricing: the refills of 100 ml cost £83.5 and the original pack of 90ml costs £95. If consumers affiliate themselves to the Mugler fidelity program, they can obtain discounts.
- Convenience: as the system gives the option of refilling at home or in a store, a consumer can adapt to the form that is most convenient for them. It is easy to do and doesn't create a mess.
- Hygiene: the product is dispensed from a clean source, but the consumer is in charge of cleaning their own glass bottle.
- Communication: Mugler doesn't center their communication on refilling, nor give much information about it in through their online presence. They focus their efforts on fashion and their products, and how these are disruptive and have a unique perspective.

4.3. Price Analysis

Table 6 shows a comparison of the price of refilling for each company.

The eight firms examined from North America and Europe all show that price must be reduced for the refill to be successful. As studies have shown, consumers need a price incentive to refill (Chapter 3). If not, they feel that they are paying extra for packaging. Price discounts can go from 10% to 71%. One of the biggest differentiators for price discounts was found to be the quality and material of the packaging. The refills that offer the biggest saving are Estée Lauder, Lush, and Ecco Bella. These 3 firms have special

packaging that is not only durable, but also is well designed and uses especial materials, making it more attractive to consumers. As the production cost of special packaging can be higher, firms can transfer the savings of not having to produce more expensive packaging to their consumers.

Table 6: Price Comparison of Refilling

Brand	Product	Price	Price of Refill	Discount	Shipping Fee
Plaine Products	Shampoo Body Wash	\$30	\$27	10%	\$5 for order under \$100
The Refill Shoppe	Hair Serum	Only the container: from \$0.80 to \$5.99	\$2.40/oz	Price varies depending on the content of the bottle	\$7 flat delivery rate. Free for orders over \$100
	Shampoo		\$0.72/oz		
	Body Oil		\$1.7/oz		
Estée Lauder	Foundation	\$42.50	From \$12 to \$14	65%-71%	Standard: free
Ecco Bella	Eyeshadow Blush	Only the container: from \$9.95 to \$10.95	From \$14.95 to \$15.95	40%-41%	Free for over \$75 purchase
Fillaree	Clean Dry Spray	\$12 for plastic \$16 for Glass (16 Fl oz)	\$20 for 32 fl oz (<i>with subscription</i>) \$10 for 16 fl oz	17% - 37.5% depends on the material of bottle	Free
L'Occitane	Shower Gel(16.9oz)	40€	29€	27.5%	Free for order over €60 or store pickup
	Shampoo(16.9oz)	36€	29€	19.4%	
Lush	Lipstick	Only the package: £7.95	£8.90	47%	Standard: £3.95
Mugler	Alien Perfume	£95 for 90ml	£83.5 for 100ml	15%	Standard: free

Source: Plaine Products, 2019; The Refill Shoppe, 2019; Estée Lauder, 2019; Ecco Bella, 2019; Fillaree, 2019; L'Occitane, 2019; Lush, 2019; Mugler, 2019. Elaboration: The Author

It can be difficult to compare the pricing of the different firms examined because they use different refill systems. Some charge a fixed rate while others charge by quantity. Some sell packaging together with product while others, separately. Each company must choose the form of pricing that is most convenient to them and their customers and apply it so that the benefit is clear to the consumer. To compare the different types of refill systems, examples from each type will be used:

- Deposit System: Fillaree and Plaine Products use this method. Plaine Products gives a discount of 10% only if consumers subscribe to their products, while Fillaree offers a higher discount that is also subject to being subscribed. Nonetheless, for Fillaree price can vary based on the type of packaging that the customer chooses.
- Lightweight Self-contained Refill: this method is used by Lush, Ecco Bella, and Estée Lauder. Ecco Bella and Lush choose to sell the compact separately from the product in all purchases, while Estée Lauder offers them together in the first purchase. The 3 firms that use this refill method are the ones that offer the biggest discount to their consumers compared to the rest of firms.
- Bulk or Self-dispenser: The Refill Shoppe, Mugler, and Fillaree use this method. It is difficult to compare price reduction because for The Refill Shoppe and Fillaree the final price depends on the amount of product the consumers need. Also, The Refill Shoppe allows their consumers to take their own bottle if they wish, it doesn't have to be purchased from them; this gives bigger benefits to consumers. On another hand, Mugler has a fixed price and quantity that consumers need to refill.
- Soft-plastic Refill Bags: this system is used by L'Occitane and Mugler. They both use the same type of pricing in which the refill has a fixed price and quantity.

As all the systems analyzed offer their refills by delivery, the price of getting the product to the consumer must be considered. Some companies choose to assume this price themselves, while others transfer it to the consumer. For consumers, the price of delivery adds to the refill cost, so it can have an effect on their choosing to refill or not. On the other hand, some refill methods require that the consumer return their empty bottles to the company. For this, firms offer prepaid stamps. This way, consumers will be willing to participate as it won't require extra spending on their part.

4.4. Chapter Conclusions

- All types of refill are adaptable to beauty products. For make-up, the system most used is the lightweight self-contained refill, while the rest of the refill methods tend to be used for products where the product has a more liquid texture.
- Firms have found a way to make refilling available through delivery, which can help in making them more attractive to their consumers as it increases convenience.
- In the beauty industry, the most common type of packaging is made of plastic. Nonetheless, a variety of materials can be found in the industry: plastic, glass, aluminum, carton, etc. Companies can choose what to offer based on price, quality, and reliability. Many firms offer the option of environmentally friendly materials.
- Pricing is an important factor when offering refills. Indeed, all firms examined are aware of this, as they offer a price reduction with the refill.
- Making a refill system convenient to consumers can be done in multiple ways. All companies have acknowledged the importance of online presence; thus, they have the option available online as well as in stores. Other ways these firms have made refilling fitting for consumers is by: making the process easy and explaining it when necessary, making the refill packaging light and easy to store, offering special benefits with fidelity programs, having the option to change product, etc. Depending on each firm and their business model, special features can be applied to the refill.
- Hygiene in the beauty industry has to be considered. Firms do not advertise on this matter but it must be considered when designing their refill model. Consumers must perceive that what they are applying on their skin is clean and safe. Firms apply this in different ways: some take the containers back and clean them themselves, while others leave the responsibility to the consumers. For this second option, the container must be easy to clean.
- Not all firms focus on refilling. Some companies' business models center around environmental friendliness, while others position themselves as fashionable and unique. Depending on this focus, the firm will choose the form of communication

for their refilling systems. For those where refilling is amongst their core values, communication about their refilling efforts takes special importance.

CHAPTER 5: CONSUMER ANALYSIS

In chapter 5 I will present the information obtained through primary investigation. For this, interviews and online questionnaires were administered. The objective of this chapter is to obtain information about insights and consumer habits on refilling. This chapter will present the results of the two data collection methods separately and finish with conclusions that bring together the results.

4.1. Consumer Interviews

4.1.1. Collection Method

Short interviews were conducted of consumers in Singapore, France, and USA. These had the objective to obtain local information about their views on refilling. These interviews were conducted in commercial and populated areas to women between the ages of 20 and 35 years old. In total 82 women were interviewed: 24 in Paris, 38 in Singapore, and 20 in Boston. The participants were chosen randomly and the interviews lasted approximately 5 minutes each.

4.1.2. Results

The main results of these interviews were individual notions on refills, perceived benefits of refilling, and attractiveness of refilling are displayed on Table 7.

5.2. Consumer Online Questionnaire

5.2.1. Collection Method

Online questionnaires with open ended questions were answered by 94 women between the ages of 20 to 35 years old. 55% of them were located in Europe, 43% in America, and 2% in Asia. The objective of the questionnaire was to obtain global information and insights about consumers' views on refills. The information obtained includes: perceptions about refills, refilling habits, and openness to refill beauty products.

Table 7: Interview Results

Concept	France	Singapore	USA
Refilling Habits	62% of respondents had previously refilled. All but one of these had done it for a beauty product.	84% of respondents had participated in refilling before. Of those who had refilled, 62.5% had done it for beauty products.	65% of the respondents have refilled previously. Of these, 69% have refilled beauty products.
Reasons for Refilling	Environmental concerns and price.	Lower prices and environmental preoccupation.	Economic benefits and environmental awareness.
Perceived Benefits for Refilling	Main perceived benefits are environmentally friendliness and price reductions. Some consumers also mentioned that it is practical.	Main perceived benefits are environmentally friendliness and price reductions.	Main perceived benefits are environmentally friendliness and price reductions. Some consumers also mentioned that it is practical and saves space.
Location for the Refill	93% of consumers had refilled at home. 33% in a store.	64% of consumers had refilled at home, 15% in a store, and 6% returned their bottle.	All consumers who had refilled mentioned having done it at home.
Barriers for Refilling	<ul style="list-style-type: none"> - No access to refilling - Not available in used brands - Not convenient - Not interested in refilling 	<ul style="list-style-type: none"> - Not available in used brands - Not convenient - Prefer to change brands frequently - Believe refills are more expensive - Not enough refill options available 	<ul style="list-style-type: none"> - Not available in used brands - Never considered refilling as an option - Didn't know refilling was available
How to Make Refilling More Attractive	<ul style="list-style-type: none"> - Communication of refilling availability - Significant price reduction - Product quality is not compromised - More refill options - Versatile refill options 	<ul style="list-style-type: none"> - Price Incentives - Loyalty programs - More access to refilling - Emphasis on convenience and practicality - Communication of benefits of refilling - Guarantee that refilling will be safe - Product quality is not compromised 	<ul style="list-style-type: none"> - More communication on benefits of refilling - Communication of availability to refill - Education on how to refill - Firms use less plastic and offer option for consumers to use own container - Refill offered through delivery - Making refilling more accessible - More options to refill
Most Refilled Products	Hand soap, shower gel, perfume, and body care	Shampoo, body soap, and detergent	Hand soap, shampoo, and detergent

Source: The Author

See Appendix N° 10 for full results per country.

5.2.2. Results

Table 8 displays the results of the online questionnaires.

Table 8: Questionnaire Results

Concept	Result
Refilling Habits	68% of respondents had refilled previously. Of them, 58% had done it for beauty products.
Openness to Refill	Of the 32% of respondents who had not refilled previously in their life, 73% of them would be open to refilling beauty products. Other categories mentioned that they would be open to refill were: food, medicine, and water.
Refilled products	Detergent, shampoo, hand soap, perfume, makeup, water, coffee beans, etc.
Location for the Refill	Most common ways to refill beauty products had been either in store or by purchasing soft plastic refill bags.
Perceived Benefits of Refilling	<ul style="list-style-type: none"> - 86% of respondents think refilling benefits the environment. - 38% think price is an important benefit as they have to spend less on their everyday products. - 6% think an important benefit is that refilling is convenient, - 6% mentioned other benefits such as quality, personal satisfaction, and product freshness.
Motivation to Refill for Consumers who had Refilled	<ul style="list-style-type: none"> - 53% said they had done it for environmental reasons. - 53% of respondents were motivated by the price. - 11% said they had done it because it was convenient: saves space and is quick and easy to do. - 5% said quality motivated them.
How to Make Refilling More Attractive for Consumers who had Refilled	<ul style="list-style-type: none"> - 33% respondents mentioned they would like cheaper prices. - 28% gave responses related to making refilling convenient. It needs to be accessible and easy for them to use. - 25% said communication is important: communicate that it is an option, how to participate, and what benefits it brings. - 6% mentioned discounts: special sales on refilling and special offers such as offering packs or combos. - 6% mentioned design: packaging that is durable, resistant, and aesthetic.
Barriers for Refilling	<ul style="list-style-type: none"> - 63% gave availability related answers: it had never been offered to them, they hadn't seen it in stores, or the products they use are not available for refilling. - 17% mentioned they had not refilled because they were unaware refilling was an option. - 13% thought refilling was inconvenient: they think it is hard to use and they don't want to put in the effort. - 3% had never considered refilling, they had not thought it as an option.
How to Make Refilling Attractive for Consumers who hadn't Refilled	<ul style="list-style-type: none"> - 63% said a significant price reduction could motivate them to refill. - 27% said refilling needed to be convenient: easy to access and have a simple process. - 17% gave quality related answers. They want good quality products. - 10% mentioned communication should improve: what brands and products are available for refilling should be clear. - 7% of respondents said they wanted to be taught about refilling.

	- 7% mentioned they wanted attractive packaging that can be easily reused.
Openness to Refill Beauty Products	- 81% of all respondents are open to refilling beauty products. 11% would not be willing to do it. - Consumers are open to refilling: shampoo, conditioner, soap, cream, perfume, and makeup.
Barriers to Refill Beauty Products	- Hygiene: consumers want to know refilling is safe and a hygienic process. For products that will be applied on their skin, they want to make sure it is not going to be harmful. They also worry about expiration dates and bacteria. - Convenience: hard to do and not worth the hassle.
How to Make Refilling for Beauty Products Attractive	- Price: refilling must be cheaper than purchasing the product with new packaging. - Convenience: it must be easy to refill and not require an extra effort from the consumer. - Hygiene: the cleanliness of the process must be guaranteed. - Communication: it can be divided into 3 aspects: consumers want to know about the environmental impact of refilling, the benefits of refilling, and the different refilling options available. - Discounts: consumers would find refilling attractive if there were special deals for them. - Quality: they want good quality that is not compromised by the reuse of packaging or the price reduction. - Packaging: it must be nice, practical, and easy to clean. - Options: consumers want different types of products available for refilling. - Volume: consumers want to be able to buy a lot of a same product to avoid having to shop frequently.

Source: The Author

See Appendix N° 11 for full questionnaire results.

5.3. Chapter Conclusions

- Refilling habits: more than half of the respondents have refilled previously in their life. Of these, most have done it for beauty products and have mentioned to be open to it. This demonstrates that there is a demand for refilling in this market. The refill has to be offered the right way for consumers to want to take part in it.
- Perceived benefits of refilling: consumers identify price reduction and environmental friendliness as the two main benefits and reasons to refill. Other less mentioned benefits are that it is practical, it saves space, and it is convenient.
- Location for the refill: mostly, consumers refill their products at home. Doing it in a store might require an extra effort from them, demotivating them from doing so. Refilling at home means that they could have received the refill by delivery or that they bought a refill pack in a store and took it home; this way, they avoid having to make a special trip to a store only to refill.

- Barriers for refilling: the main barriers for refilling found were that it is not convenient for consumers, it is not available for the products that they use, they are not interested in doing it, they don't want to commit to only one brand, or they don't know refilling is an option. If firms found ways to give consumers more value through their refill options – thus making it more attractive and convenient for consumers – barriers like interest, lack of fidelity for a brand, or finding it not convenient could be fought. For beauty products it is particularly important to hygiene and convenience of the refill system.
- Refilled products: amongst the most refilled products are detergents, shower gel, soap, body care, perfume, and shampoo.
- Attractiveness of refilling: Consumers believe that refilling could be made more attractive if:
 - Firms communicate their refill option better. This communication must have an emphasis on: benefits (environmental, price, daily benefits), how it is done, and why it is convenient and practical.
 - Firms offer a significant price reduction for refills or offer other price related incentives. It is important to mention that this price adjustment cannot compromise product quality.
 - Firms apply refill processes that are convenient and practical for the consumers.
 - More products are available for refilling, thus giving consumers more options.
 - Hygiene is guaranteed in the process. Since beauty products are applied directly on skin, consumers need to feel that refilling is safe and will not harm them in any way.
 - Firms offer durable packaging that has an attractive design.

CHAPTER 6: DISCUSSION

This thesis divided its investigation into 3 main parts: an examination of refilling as a concept and consumer perceptions based on secondary information, a benchmark of refill systems present in Europe and North America, and an analysis of consumer habits and perceptions on refilling based on primary information. With the information collected from these three parts, this final chapter will focus on identifying the main success factors – from a consumer’s point of view - firms need to consider to improve or launch their refill systems. First, the information from the three parts will be compared in order to see if there is consistency in the results. Second, a consensus of the success factors will be drawn using the previous information.

6.1. Discussion

To start, when comparing the information found from primary and secondary sources, it was identified that there is congruence between the reasons consumers refill and what makes a refill attractive for them. Amongst these reasons were price reduction, environmental factors, convenience (easy to use, easy to transport, available for delivery, intuitive, easy to store, etc.), quality of the product, and quality and design of the packaging. Nonetheless, one secondary source mentioned that consumers considered environmental factors, but they were not an important motivator to act; whereas in the interviews and questionnaires, environmental awareness figured as one of the most important factors in a consumer’s decision to refill.

On the other hand, secondary data mentioned hygiene as an important motivator for refilling of all product categories, while in results from the primary investigation, hygiene was only mentioned when asked about beauty products. It was not considered as important in other categories. Also, brand experience was considered an important factor in the studies reviewed, whereas in the interviews and questionnaires it was not mentioned by consumers as a reason for refilling.

The interviews and questionnaires separated the questions of benefits of refilling from reasons consumers refill. This was done because consumers may have different reasons for

participating in refilling than the general benefits they perceive from refilling. It was found that the two main answers were the same: price and environmental reasons.

In relation to consumer's barriers for refilling, the primary and secondary investigations offered different results. Secondary information mentioned barriers that are the opposite to the reasons consumers refill. Amongst these were inconvenience (requires too much energy, difficult to transport, complicated process), high price, packaging (not functional, difficult to clean), and lack of communication. Whereas in the interviews and questionnaires, consumers believed they hadn't participated in refilling mostly because they didn't have access to it or it was not available where they shopped, they were not interested in refilling, they found it inconvenient, they thought there were not enough refill options, they wanted to change brands, or they didn't know refilling was an option.

Furthermore, besides from reasons and barriers to refill, information about consumer habits was obtained through the primary sources. It was interesting to find that most consumers had previously refilled, and of these a large amount had done it for beauty products. Also, of those who had never refilled, many of them hadn't done it for reasons like they weren't aware of it or the products they wanted were not available to refill; thus being open to the possibility of refilling in the future.

Secondary sources found that there are four main types of refills. Each of these has its own perceived benefits and barriers. The main ones are listed in Table 9.

Chapter 4 examined the different types of refills present in the beauty industry. It was seen that they had all been applied to various products in successful ways. It also presented the opportunity to see how different brands have adapted their refill options to consumers and how different refill types can be used for the same product type. For example, for haircare (shampoo, conditioner) Plaine Products uses a deposit system, while The Refill Shop a self-dispenser or bulk refill. Make-up as a category tends to go more hand in hand with the lightweight self-contained refills system, although this category could fit into the other refill types.

Table 9: Perceived Benefits and Barriers of Each Refill Type

	Soft Plastic Refill Pack	Self-Dispenser or Bulk	Deposit System	Lightweight Self-Contained Refill
Perceived Benefit	<ul style="list-style-type: none"> - It is light and easy to transport - Easy to store - Can be bought in advance - Cheaper than other refill types 	<ul style="list-style-type: none"> - Cheap - No extra packaging needed - Consumers can change the product they refill the packaging with 	<ul style="list-style-type: none"> - It offers and economic incentive with the return of packaging - Consumers don't need to purchase more product 	<ul style="list-style-type: none"> - Cheaper - Convenient: easy to use - Hygienic
Perceived Barriers	<ul style="list-style-type: none"> - It is perceived as having lower quality than other refill types 	<ul style="list-style-type: none"> - Prone to spillage - Doesn't save time as it requires a trip to a store 	<ul style="list-style-type: none"> - Consumers find it inconvenient 	<ul style="list-style-type: none"> - Many consumers aren't aware of this option to refill

Source: Lofthouse, 2007. Elaboration: The Author

On the other hand, from primary sources, it was found that most consumers do their refilling at home. The least common way of refilling is by the self-dispenser of bulk system, as it requires the consumer go to a store.

When comparing the information found in Chapter 4 with that of the Chapters 3 and 5, it was identified that firms attack consumers' needs differently:

- Price: all firms offer a discount for their refills. The discount percentage can vary. From the examples analyzed, the discount can go from 10 - 71%. This proves that companies have identified that price is an important motivator in consumers' decision to refill.
- Environment: not all refill options show an environmental purpose. Firms such as Lush and The Refill Shoppe are concerned about this; however, others such as L'Occitane and Estée Lauder aren't explicit with the purpose of their refill option. This is a consequence of their business model, as Lush and The Refill Shoppe focus on being environmentally friendly companies.
- Convenience: all the firms offer their products through delivery. This makes it simpler for consumers to participate in refilling.

- Packaging: some companies look for environmentally friendly material for their packaging, while most still have plastic as an option.
- Hygiene: companies don't communicate how their refill systems are safe and clean, even though hygiene was found to be an important consideration for consumers when refilling beauty products.
- Communication: some companies, such as Plaine Products, The Refill Shoppe, and Fillaree give a detailed explanation of how their refill systems work. This is important for consumer participation. For these companies, it is especially important to communicate this because their processes are not as simple as the other firms.

6.2. Success Factors

Finally, after analyzing the information obtained, below are listed the success factor identified for refilling systems in the beauty industry. The information used to formulate them was: reasons for refilling, barriers for refilling, what makes refilling attractive for consumers, and perceived benefits of refilling.

- Price: consumers perceive that refilling must be cheaper than purchasing a product with new packaging. Companies have to adapt and offer a discount that is large enough to justify the participation in refilling. Consumers feel that since they are not receiving new packaging, that must be reflected in the price. Discounts and loyalty programs could also add economic value to the refill option for consumers.
- Quality: this can be divided into two aspects: the product and the experience. The quality of the product must be maintained in the refill process. Consumer won't participate if they feel the product is being negatively affected in any way when refilling. On the other hand, having a good experience with the brand will motivate repurchase.
- Convenience: this factor can include many aspects, amongst which are:

- Difficulty of the process: the refill process needs to be simple, easy, and intuitive. If it is hard to understand it could become a problem for the consumer.
- Transportation: the refill must be easy to access and transport. If a consumer has to make an extra effort to go where refilling is done, they might not want to participate. The refill could also be more attractive if it is light, making it easier to transport. Also, offering refilling by delivery could make it more attractive for consumers.
- Volume: if a refill allows the consumer to buy large amounts of product at the same time, they could avoid extra shopping trips.
- Options: consumers want different types of products and more brands available for refilling. They also want to be able to change product smell or flavor as they please.
- Hygiene: consumers must feel that the process is clean and won't harm them in any way.
- Communication: this communication must revolve around different aspects:
 - Informing the consumer that refilling is an option.
 - Informing the consumer on the environmental impact of refilling.
 - Informing the consumer of the benefits of refilling.
 - Showing the consumers how to refill. Demonstrate that it is easy and won't be complicated for them to participate in.
- Packaging: consumers want nice, practical, and easy to clean packaging. The package must be made with the intention to facilitate the refill process. It cannot be prone to spillage, uncloseable, difficult to manage, etc. Also, consumers must be able to drain all the content out to not feel like they are wasting product when refilling.

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APPENDIX

Appendix N° 1: Interview Structure

To interview consumers in Paris, Boston, and Singapore, the following interview structure was used:

1. What perception/ideas do you have about refilling products?
2. What do you think are the benefits of refills?
3. Would you refill beauty care products? Which beauty products would you refill? (if they say they won't refill one product in particular, ask why)
4. Have you ever refilled a product? (any product)

If the answer of question 4 was NO

5. Why not? What stops you from doing it?
6. What would convince you to do so?

If the answer of question 4 was YES

7. What drives you to do it?
8. What benefits do you think it brings?
9. Which products do you refill?
10. How do you refill them?
11. How could refilling be made more attractive to you?

Appendix N° 2: Questionnaire Structure

The online questionnaire consisted of the following structure:

General Questions

1. Gender
2. Age
3. Country of residence

About Refilling

4. What are the benefits of refilling products?
5. Have you ever refilled a product?

If the answer of question 5 was YES

6. Which products have you refilled?
7. How did you refill them?
8. What motivated you to refill those products?
9. What do companies have to do to make refilling more attractive to you?

If the answer of question 5 was NO

10. Why have you never refilled a product?
11. Which products would you be open to refilling?
12. What would companies have to do to make refilling attractive to you?

About the Beauty Industry

13. Would you refill beauty products?
14. If yes, which products?
15. If not, why not?
16. What characteristics does a refill of beauty care products need to make it attractive?

Appendix N° 3: Soft Plastic Refill Pack Examples

Figure 1: Soft Plastic Refill Pack Examples



Source: Yves Rocher, 2018; L'Occitane, 2019; Jacques Briochin, 2016

Appendix N° 4: Self-Dispenser or Bulk Refill Examples

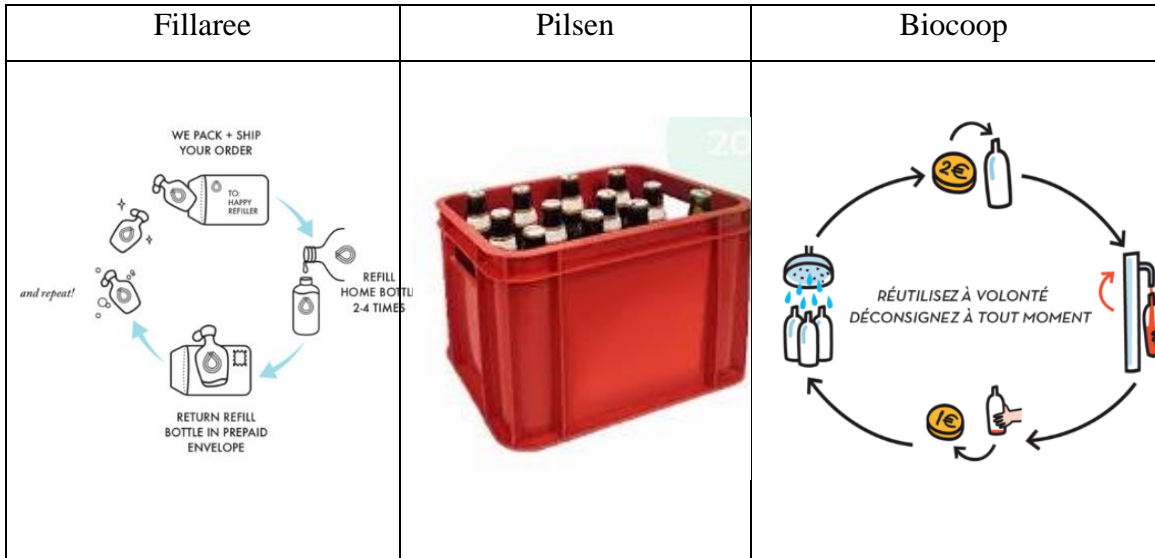
Figure 2: Self-Dispenser or Bulk Refill Examples

Biocoop	Equivalenza	Starbucks
		

Source: Biocoop, 2011; Equivalenza, 2019; Starbucks, 2019

Appendix N° 5: Deposit System Refill Examples

Figure 3: Deposit System Refill Examples



Sources: Fillaree, 2019; Mercado Libre, 2019; Biocoop, 2011

Appendix N° 6: Lightweight Self-contained Refill Examples

Figure 4: Lightweight Self-contained Refill Examples

Ecco Bella	Airwick	Faber Castell
 <p>The Ecco Bella section displays two images. The top image shows a black compact case, its packaging box with a red flower graphic, and a small black case with 'ECCO BELLA' printed on it. The bottom image shows two eyeshadow palettes: one with a blue flower graphic labeled 'MALVE FUMÉE (FROID) Ombre à paupières' and another with a pink flower graphic labeled 'ROSE CORAIL (NEUTRE) Fard à joues'.</p>	 <p>The Airwick section shows a white, vase-shaped perfume bottle with a circular opening at the top, and a purple spray canister with a green label that reads 'Air Wick Freshmatic'.</p>	 <p>The Faber Castell section displays two pens: a silver and black ballpoint pen and a silver and black marker.</p>

Sources: Ecco Bella, 2019; Air Wick, 2017; Faber Castell, 2019

Appendix N° 7: Plaine Products Refill System

Figure 5: Plaine Products Refill System



Source: Plaine Products, 2019

Figure 6: Plaine Products Bottle Return System

Return Empty Bottles for Reuse

If you are planning on ordering a refill no need to fill out this form. We will send you a return label with your refill bottles.

Request a PrePaid Postage Label

Otherwise please fill out the form below so we can email you a link for a return label. You'll print the label and place it over the old label on the outside of the box to send your bottles back to be sterilized, refilled and reused. If you don't have one of our boxes please use a small box to keep the weight down and the bottles safe. We cover the shipping costs!

Please don't use priority mail boxes as they cost us more money.

If you purchased your items from the Plaine Products' website a return label was enclosed with your refill box for your convenience. If you lost the return label we mailed to you fill out the form below and we will email you a label to print.

Source: Plaine Products, 2019

Appendix N° 8: The Refill Shoppe Refill System and Communication

Figure 7: The Refill Shoppe Refill System

HOW IT WORKS

Online

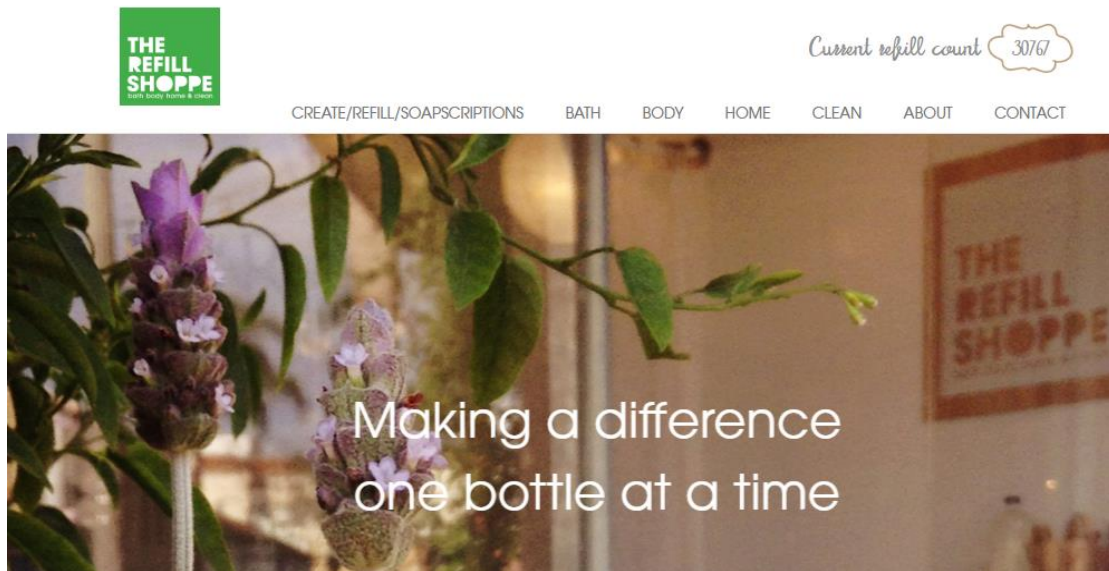
- Pick a product.
- Choose a bottle, jar or refill pouch.
- Select up to six scents (Most liquids are scentable).
- Put them in order of strength or make them all even.
- Specify the overall strength.
- Note any other preferences.
- Review order.
- Add to shopping cart.
- Get excited about your custom creation!

In the shoppe

- Pick a bottle/jar or bring your own pre-cleaned one.
- Refills sold by the ounce.
- Unlabeled bottle and top-offs get weighed and marked prior to filling.
- Fill container 3/4 full.
- Choose up to 6 different fragrances and/or essential oils to scent per your taste. (Most liquids are scentable).
- Shake it up.
- Top it off.
- Label.
- Enjoy!

Source: The Refill Shoppe, 2019

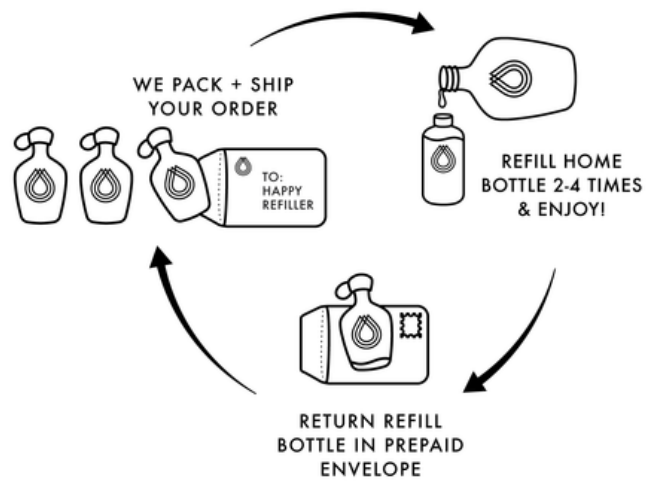
Figure 8: The Refill Shoppe Communication Example



Source: The Refill Shoppe, 2019

Appendix N° 9: Fillaree Refill System

Figure 9: Fillaree Online Refill System



Source: Fillaree, 2019

Figure 10: Fillaree In-store Refill System



Source: Fillaree, 2019

Appendix N° 10: Interview Results per Country

The results of the interview per country are the following:

France

- 62% of respondents had refilled previously. Of these, all but one had done it at least once for beauty products.
- The two main reasons that consumers refill are environmental concerns and price. These were also found as the main benefits of refilling. 70% of the respondents believe refilling is an ecologically friendly action and 33% believe that cost saving is an important benefit. Other consumers also believe refilling can be practical.
- Of the consumers that had refilled, 5 mentioned to have done it in store. And 14 of them had done it at home.
- Reasons for not refilling are that they don't have access to it or isn't available for the brands they use, they don't find it convenient, or they are not interested in refilling.
- The top four most refilled products were hand soap, shower gel, perfume, and body care.
- Consumers believe that refilling could be made more attractive if:
 - o It was communicated better. Communicating the availability of refilling is important; consumers say they aren't aware of products available for refilling.
 - o The price reduction was significant.
 - o The quality of the product refilled was not compromised.
 - o The product options were versatile. Consumers want to be able to change product smell or flavor with each refill. They would also like to use packaging they have at home, instead of having to first buy the firm's packaging.
 - o There were more refill options available in the market. Consumers believe that many products they use are not available for refilling, therefore they don't do it.

Singapore

- 84% of participants had participated in refilling before. Of those who had refilled, 62.5% had done it for beauty products. Consumers who had not refilled beauty care products were worried about hygiene. They were worried about their sensitive skin and believe "some things just need to be disposed of". Some worry about the hygiene of products that would go directly on their face, but not about those for the body.

- 60.5% of the participants perceive refills as cheaper and 39% think it is ecologically friendly to refill. Consumers say the following about their beliefs on refilling: "reuse container, reduce waste, spend less", "save the earth, reduce production of plastic, cheaper", "less plastic".
- The main reasons consumers refill are lower prices and environmental preoccupation.
- The barriers for refilling were that the products the consumer uses are not available for refilling, the consumer finds it easier to purchase new packaging (not convenient), the consumer likes to change brands frequently and can't commit to the brand that offers refills, the consumer perceives refills as more expensive, and because there aren't many refill options available.
- The top 3 most refilled products are: shampoo, body soap, and detergent.
- Consumers who have partaken in refilling have done it mostly from their homes. 21 have done it from home, while 5 have done it in-store and 2 have given the bottles back (deposit system).
- When asked what would make refilling more attractive for consumers, these were the main responses:
 - o More price incentives. Consumers want firms to emphasize the cost savings. Loyalty programs could help make it attractive as well.
 - o More access to refill options.
 - o Emphasizing on why it is convenient and practical to refill. Consumers don't want to participate if it will complicate their shopping process.
 - o More communication about the benefits of refilling, this can focus on the environmental benefits, price benefits, and daily life benefits (convenience). Consumers might not be aware of the importance of refilling.
 - o Guarantee that refilling will not be harmful to them. They want to know that the product they will use will not be affected because it was refilled.
 - o The quality of the product offered must not be affected because the packaging is being refilled. If quality is good, the consumer is more likely to refill again.
 - o The process of refilling is simple and easy to do.

USA

- 65% of the respondents have refilled previously. Of these, 69% have refilled beauty products.
- Consumer who had not refilled mentioned it was because the products they used were not available for refilling, they had never considered it, or they didn't know that refilling was an option.
- Consumers believe the benefits of refilling are that: it is cheaper, it has a positive impact on the environment, and it is practical and saves space.
- The two main reasons consumers refill are economic benefits and environmental awareness.
- The three most refilled products are hand soap, shampoo, and detergent.
- All the consumers interviewed mentioned that they had refilled at home. None mentioned to have done it in store or by deposit system.
- When asked what would make refilling more attractive to consumers, these were the main responses:
 - o More communication about the benefits of refilling, the availability of refilling, how to refill, price benefits, and why it is convenient to do.
 - o If firms used less plastic and encouraged consumers to use containers they already have at home.
 - o If more refill options could be received through delivery.
 - o If refilling was more accessible and there were more locations where consumers could refill.
 - o If more options to refill were available in the market.

Appendix N° 11: Questionnaire Results

The results of the online questionnaire are the following:

- Habits on refilling: 68% of respondents had refilled previously. They had refilled products such as: detergent, shampoo, hand soap, perfume, makeup, water, coffee beans, etc. Of all the consumers who had refilled, 58% had done it for beauty products. The most common ways to refill beauty products had been either in store or by purchasing soft plastic refill bags. Of the 32% of respondents who had not refilled previously in their life, 73% of them would be open to refilling beauty products. Other categories mentioned that they would be open to refill were: food, medicine, and water.
- Benefits of refilling: 86% of respondents think refilling benefits the environment, they want to reduce waste and be sustainable. 38% think price is an important benefit as they have to spend less on their everyday products. 6% think an important benefit is that refilling is convenient, words like “practical”, “convenient”, and “time saving” were used. 6% mentioned other benefits such as quality, personal satisfaction, and product freshness.
- Motivation: For consumers who had refilled, 53% said they had done it for environmental reasons. They wanted to have a positive impact and reduce waste and plastic consumption. 53% of respondents were motivated by the price. The refill would be cheaper than purchasing the product with new packaging; saving money is important to consumers. 11% said they had done it because it was convenient: they repeated the purchase because they liked the product, it allowed them to use the space in their house better, and thought it was quick and easy to do. 5% said quality motivated them: since they like the product they are using, they want to repeat the purchase.

For this group of respondents, refilling could be made more attractive by:

- 33% respondents mentioned price related motivation. They want to pay less if they are refilling.
- 28% gave responses related to making refilling convenient. It needs to be accessible and easy for them to use. They don't want to have to make an extra effort or spend more time to refill.
- 25% said communication is important. Questionnaire answers were focused on informing the consumer about refilling: communicate that it is an option, how to participate, and what benefits it brings.

- 6% mentioned discounts as a way of making refilling more attractive. This motive is related to price, as consumers asked for special sales on refilling and special offers such as offering packs or combos.
- 6% mentioned design. Consumers want packaging that is durable, resistant, and aesthetic.

On the other hand, of the consumers who had never refilled, 63% of them said it was because of availability: it had never been offered to them, they hadn't seen it in stores, or the products they use are not available for refilling. 17% mentioned they had not refilled because they were unaware refilling was an option. 13% thought refilling was inconvenient: they think it is hard to use and they don't want to put in the effort. 3% had never considered refilling, they had not thought it as an option.

For this group of respondents, refilling could be made attractive by:

- 63% said price could motivate them to refill. The price reduction needs to be significant enough for them to think of it as an option.
 - 27% said refilling needed to be convenient. It needs to be easy to access and have a simple process. It can't require them to make an extra effort.
 - 17% gave quality related answers. They want good products that are not affected by the price reduction.
 - 10% mentioned communication should improve. They want to know for what brands and products refilling is available.
 - 7% of respondents said they wanted to be taught about refilling. Consumers who haven't refilled don't know how to do it.
 - 7% mentioned they wanted attractive packaging that can be easily reused.
- Openness to refill beauty products: 81% of respondents are open to refilling beauty products. 11% would not be willing to do it. The rest are not sure. Of the consumers who are open to refilling beauty products, they mentioned openness to refill: shampoo, conditioner, soap, cream, perfume, and makeup. On the other hand, those who aren't open to refilling beauty products, wouldn't do it because of hygiene and inconvenience. In first place, they want to know that refilling is hygienic and safe. If they are refilling with products that will be applied on their skin, they want to make sure it is not going to be harmful. Also, they worry about expiration dates and bacteria. On second hand, they don't refill because they think it is inconvenient: it is hard to do and not worth the hassle.

When asked what could companies do to make the refilling of beauty products more attractive, the main answers were:

- Price: refilling must be cheaper than purchasing the product with new packaging.
- Convenience: it must be easy to refill and not require an extra effort from the consumer.
- Hygiene: the cleanliness of the process must be guaranteed. How can the firm assure the consumer that the packaging was correctly cleaned after the first use?
- Communication: it can be divided into 3 aspects: consumers want to know about the environmental impact of refilling, the benefits of refilling, and the different refilling options available.
- Discounts: consumers would find refilling attractive if there were special deals for them. For example, free product samples.
- Quality: they want good quality that is not compromised by the reuse of packaging or the price reduction.
- Packaging: it must be nice, practical, and easy to clean.
- Options: consumers want different types of products available for refilling. They want variations in colors, scents, brands, etc.
- Volume: consumers want to be able to buy a lot of a same product to avoid having to shop frequently.