SKU MANAGEMENT FOR THE COSMETIC INDUSTRY:

WHAT IS THE BEST POLICY FOR

PRODUCT PORTFOLIOS?

by

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ABSTRACT

The purpose of this research is to explore crucial factors for SKU optimization decisions, specifically for the cosmetic industry. As product proliferation increases in popularity and consumers come to expect more personalized product, cosmetic companies, like Mary Kay, need to evaluate their product portfolio to ensure that they are meeting their corporate objectives and offering consumer solutions without compromising operational efficiency or profits. Implementing a SKU optimization process allows companies to establish a regulated method to manage product portfolios. This paper aims to conclude with an applicable decision tree that Mary Kay can incorporate as a SKU optimization process.

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TABLE OF CONTENTS

<u>INTRODUCTION</u>

In mid-September of 2017, popular singer and songwriter, Rihanna, released her highly-anticipated Fenty Beauty line. Consumers developed high expectations for the release simply because of Rihanna's popularity and fame. However, when the line was fully released, consumers went crazy over the inclusivity of her products. The Fenty Beauty Pro Filt'r Foundation comes in forty different shades. Only one other well-known brand offers the same number of shades. Most lines average around only twenty shades.

Beauty bloggers around the world tested the range of different shades from Rihanna's line to see how they performed, not only on different skin tones but also for coverage, blending, and durability. The initial enthuses came from women of especially darker skin tones, who shared that Fenty Beauty shattered the usual feeling of being left out of product lines due to the hue of their skin. Shortly after, a beauty blogger expressed her praise because she found a shade to match her skin, despite having albinism. For a line to reach such opposite ends of the spectrum is impressive. And it seems it would be hard to find someone who was not pleased by the range of shading options this foundation line offers. Every person deserves to have a makeup shade that blends with their natural skin tone. The Fenty Beauty line is changing the expectations of consumers. In order to remain competitive, Mary Kay needs to decide how to meet those expectations and to what point.

However, more shade options mean more stock-keeping-units (SKU). And although there is some standardization with supplies for makeup lines, an

additional shade means a different formula, label, demand, and ultimately a part number that requires maintenance. This maintenance complicates a company's supply chain and with complications comes cost, so where is the balance? The right answer includes multiple factors and thus takes time and consideration to find. This complex situation inspired the following research conducted in hopes of finding or creating the process to help companies regularly find the right answer.

The number of options overwhelm consumers and the list only continues to grow. Consumers cannot ignore the fact when stores, both physical and online, are bursting with options. Most consumers believe more products will mean more revenue for companies and better choices for themselves. However, growth in a product portfolio does not always lead to incremental growth in revenue for the cosmetic companies taking on this product proliferation (Mocker and Ross). Additionally, a longer list of options does not necessarily better meet consumers' needs. This project culminates in a process that will aid companies, specifically in the cosmetic industry, to optimize their product portfolio to meet consumer needs while maintaining their business focus. Ultimately, this SKU optimization process focuses on the specific factors that affect the cosmetic industry in order to streamline product portfolios. Optimization, despite being a popular buzzword, best explains the purpose behind the process being recommended.

This project focuses on Mary Kay as an example due to access available through an internship. Using contacts and time in the office, research collected opinions from different departments, through structured interviews, related to the product portfolio including, but not limited to, marketing, cost accounting, supply

chain, and distribution. This project also includes a literature review to consider and manipulate ideas meant for other industries to fit with a cosmetic company. The final deliverable of this project will be a decision tree applicable to cosmetic companies that considers the factors important to this specific industry. This process, if implemented, facilitates a reduction of costs and an increase in sales with a lean product portfolio.

Currently, SKU optimization has been implemented by mainly retailers such as Target, Walmart, Walgreens, and CVS rather than by manufacturers. There was an initial wave of SKU rationalization that resulted in drastic cuts of product offerings a few years ago. Then these retailers realized they had gone a step too far when customers reacted negatively. They brought back some products and initiated an optimization process to think more critically about the correct balance for their product portfolios.

However, the process would be more effective if it was implemented at the manufacturing level, because just about any consumer-packaged goods company can benefit from reducing product offerings. The needs of consumers can usually be met with fewer products and this will allow companies to focus on their core competencies. The implications of an optimization process for cosmetics includes various complex factors that inspired this project. The cosmetics industry is inundated with not only a wide range of color cosmetics, due mainly to shading, as was mentioned earlier, but there are also a lot of skin care products aimed at meeting different needs. This complicates the optimization process because there are factors to consider beyond business specifications. But

someone needs to work through the process or else companies will continue expanding portfolios until they burst.

This project includes a real company application—a process that can be fully utilized at Mary Kay and other cosmetic companies. However, this project does exclude a true cost analysis. Access to financial reports that would have allowed a quantification of the impact of this process, did not exist. Conceptually, the decision tree should lead to a lean product portfolio that decreases costs by diminishing excess operations. This project will culminate in the process recommendation by first reviewing literature to the effect of what has been considered and done so far, the research methodology used to collect information, and then finally discussing the findings.

LITERATURE REVIEW

This project necessitated research into a few topics and an understanding of their associations to lay a foundation for this project, because it is truly an aggregate of ideas. First, this project dictated research about the strategy of product proliferation and then the impact it has on the manufacturer, retailer, and end consumer. The literature shows that this is the starting point of a slippery slope many companies have fallen victim to, so to be informed, this project needed to be aware of both the selling points and the adverse effects surrounding this strategy. Second, this projected required consideration of SKU optimization and what has been researched and actually implemented. This project benefits from current, successful processes that could be manipulated to fit the needs of the cosmetics industry or at least best practices to merge into this scenario.

Finally, this project commanded a look into the concept of beauty and the correlation between products and beauty standards within the cosmetics industry. Society's trends and expectations rule this realm of consumer-packaged goods and that is a tricky detail to consider when trying to make pragmatic business decisions to ensure profitability. But when these three topics are combined, the collection creates a unique means by which decisions can be made.

Product Proliferation

In recent years, companies have been practicing product proliferation. This tactic can be implemented in a couple ways for companies, but in this context, this research discusses the internal development and innovation approach. This is not a new strategy, but its popularity seems to come in waves. For example, in 1994, 21,000 new SKUs were launched in supermarkets (Bayus et al 138), most of which were mainly processed and packaged food. Also, in the early 2000s, technology product lines were expanded as exemplified by Royal Phillips (Mocker et al 106). Despite 30,000 to 40,000 choices in a supermarket, the average consumer takes just twenty-one minutes to shop for an average of eighteen items (Narisetti 1). But what does that mean for companies? Each source found on this topic takes a slightly different angle on the problems and effects of product proliferation, so it is important to highlight each focus, as the conglomerate together offers a better overall perspective.

Cox and Alm argue the benefits of product proliferation in their report, "The Right Stuff" (1998). In their opinion, "[v]ariety shouldn't be dismissed as a trivial extravagance" but rather as "a wealthy, sophisticated society's way of

improving the lot of consumers." They do concede that it is not just about mass production, but rather mass production of the right things, but overall, they have no concerns about the abundance of options. They make valid arguments for product proliferation, including the fact that Americans have a growing penchant of variety and options. In the end, though, companies forget to consider the consequences that result from product proliferation strategies. Instead, they focus what it could possibly mean for the economy. They see mass customization as a sign that this is a sophisticated society that demands variety and options. They do not see that more variety and options do not always meet needs. Regardless, this source helps explain where the strategy came from and how it can be positive.

Mocker and Ross (2017) look at Royal Philips, a leader in product innovation, who fell victim to product over-proliferation and offer a few solutions. Royal Philips failed to manage their innovation and they started to deal with excessive operation complexity which hurt their profitability. Unfortunately, top executives focused only on the potential benefits of the innovation, rather than consider possible detriments. To help fix this issue, Mocker and Ross offer a few solutions: focusing on product integration, teaming up product developers and customer-facing and operation employees, and settling on a high-level purpose to guide decision-making. These solutions focus less on cutting a certain number of products but finding the fit for the company, especially when considering that high-level purpose.

Narisetti published an article (1997) about P&G's mistake of overwhelming shoppers. Ultimately, P&G offered too many options, which

resulted in confused shoppers and weakened brand loyalty. They realized they needed to change their thinking, so they issued an overhaul of their sales department and decided to let consumers drive supply. This article demonstrates some of the possible implications of a product proliferation strategy. P&G grasped the idea that variety is good but too much makes it meaningless. When a customer is standing in a grocery store aisle, dumbfounded by all the options, a company encounters difficulty. P&G constantly made price changes throughout every day, tinkered with packaging, and offered almost five hundred promotions in a year. Overall, they forgot about the consumer and had to modify how they interacted with them. They refocused their sales, but also implemented behind-the-scenes operational changes to match their customer-facing strategy. This article serves as an example of the possibilities for consumer-packaged-goods companies, if companies are willing to work through the complexity that comes with redirecting.

Barnett and Freeman issued a study (2001) to test their hypothesis that introducing new products cause companies to experience disruptions. To complete this study, they looked at the survival of U.S. semiconductor manufacturers. They found that having a large number of products—especially innovative products—increases organization mortality rates when multiple products are introduced simultaneously (Barnett et al 1). Although the semiconductor manufacturing industry is far from face wash, lotions, and mascara, similarities exist between the manufacturing and innovation aspects of this study and the manufacturing and innovation of the cosmetic industry. Also,

similar disruptions tend to often span across any industry due to analogous reasons. Also, this study points out the potential risks of product proliferation, which adds a new perspective to this project.

Bayus and Putsis (1999) complete one of the first empirical analyses of what they consider product line determinants and then the market outcomes that considers all three possible results. This source proved advantageous because it touches on both the determinants and implications of the product proliferation strategy. They thought it was important to study empirically, rather than theoretically, the effects of product proliferation by making a three-part equation. The three parts are the three theoretical effects listed by prior works and they include: 1) increasing the overall demand faced by the firm, 2) increasing costs and thus affecting supply, and 3) creating strategic consequences such as deterring entry into the market. Bayus and Putsis conclude, overall, that the implications of product proliferation are not simply one-dimensional and thus, cannot be explained within one dimension. But specifically, their results pointed to both a supply (price) and demand (market share) effect, both having possibly negative results. This empirical analysis concludes in an expected way, but it offers concrete data to support this project's purpose.

Product proliferation as a strategy often encompasses a function. It serves that function and results in positive revenue growth for a company. However, it can also result in negative implications that complicate a company's operations. As in any business decision, companies must consider both sides of the equation before implementing this strategy. Researching both sides helped this project

understand the need for balance in decisions like these that can translate into the final recommendation.

SKU Optimization

Because large product portfolios can greatly impact the bottom line, retailers started paying attention to the number of products on their shelf. Shelf space is finite, and they need to have the right product in stock or else customers will shop elsewhere. Supply chain professionals notice product proliferation in multiple industries and realize the need for change. There are some sources that explain the actual process implemented by companies, and there are some that give conceptual solutions to the SKU issue. But again, each provided a unique perspective that added value to this project.

Johnsen (2010) in his article, "Retailers begin to 'SKU' back toward niche items," focuses on drug store SKU rationalization and how the process went too far. Suppliers realized their mistake and then attempted to get more of their brand back on the shelf by promising "niche" products. These drug store managers recognized that optimization is a better approach. A quote in the article says it best that "with optimization, you're not losing any consumer solutions within that mix." Rather than just cutting all of the slow-moving products, they need to decide what mix of products the customer wants to see in the store. It looks like niche brands could help offer the right product portfolio to meet needs.

Brookman gives another example of retailers going too far. He takes a look into beauty products in his article, "Retailers Restock Following Major SKU Slashes" (2011). Retailers implemented a huge slashing process of SKUs but now

are restocking a lot of those items. This article suggests that it is important to consider what mistakes they made and how to prevent a similar thing from happening in a beauty brand's internal processes. Some of the considerations include timing, demographic data, and the overall culture of beauty departments.

"Merchandise assortment honed" (2009), a short article found in the *Chain Drug Review*, focuses on Rite Aid's experience with implementing a rigorous SKU optimization program. The article offers mostly basic information, but it does point out a key point: decision trees. Most articles talk about how important it is to consider the consumer and their needs, but this article takes it a step further to not only recognize their needs but how they make the decision to satisfy those needs. This extra step can make a major difference for cosmetic companies who can meet needs in less traditional ways – maybe by combining products and making skin care routines simpler. These innovations possibly offer companies a way to increase profit margins so that revenue is not affected.

Bernales, Guan, Natarajan, Gimenez, and Tajes published a paper, "Less Is More: Harnessing Product Substitution Information to Rationalize SKUs at Intcomex" (2017) which follows the implementation of a composite method of SKU rationalization. Intcomex experienced poor supply chain effectiveness due to the ever-expanding product options. They partnered with an academic team to figure out a process to prevent this from happening again. Their approach led to a method that looks at substituting low-profit products for higher-profit SKUs. It statistically estimates product demand and product substitution using profit-based

optimization. This journal offers insight to real, verifiable implementation for the process and a different way of decision-making.

Covas offers a quick reference guide for companies about to embark on the SKU optimization journey in his article, "10 Rules for Successfully Leading Portfolio Optimization" (2015). He brings these rules from companies who have been through the process and shared their experience. He defines the guidelines in an effective way to ensure the best outcomes from this process. This process cannot be a quick, easy, fix for SKU issues. This process requires a long-term investment by each company and these guidelines point them down the right path for success.

"Reaping the Rewards of Category Management" by Cruse (2003) focuses on category management, which can be viewed as a more overarching approach to SKU optimization. Specifically, this article uses convenience stores as an example, but research shows that these processes are applicable across most industries. Cruse cites certain convenience store chains focusing on certain categories such as bulk coffee or beer and defining their business around that main category in order to squeeze more profits from it. Mainly, choosing a "power category" reduces costs, simplifies the process, and helps with customer loyalty. Cosmetic companies could greatly benefit from this approach—to focus on one sector of cosmetics to dominate their product portfolio.

Mahler and Bahulkar (2009) in "Smart complexity" argue for what they refer to as smart complexity management. In Mahler's opinion, smart complexity

means focusing on what the needs of the consumers are and eliminating the redundant products to find where less means more. He argues that complexity management should reject unwanted complexity for complexity that drives sales. This theoretical approach to SKU optimization suggests a different application of this process, specifically how it can be physically implemented in a company's business model. Redundant products are hard to delete from a cosmetic company's portfolio, simply due to different shade and skin care needs, but it is the idea of rejecting unwanted complexity that drives the important point from this source.

Byrne (2007) argues for a more strategic way to eliminate poor-performing SKUs. His approach centers around three principles: understanding products from the consumer's perspective, identifying SKUs that serve unique channels, conducting an elimination process. He also argues low-volume SKUs should not always be the first to go. Instead, he encourages companies to focus on what is important and then design a product portfolio around meeting the customer's needs. Byrne goes on to explain that companies are thinking about product portfolios in the wrong way which constrains them from acting strategically. This article offers the most robust process that this research found.

Albright (2016) offers, in his article, arguments for streamlining inventory, mainly for warehouse distributors. Albright argues that reducing part numbers does not reduce sales, but actually increases sales while making the distribution process easier. He does not fail to mention the investment of time and analysis capabilities to streamline though. He recommends using sales velocity as an

indicator for distinguishing part number that need to be removed. Although this is not cosmetic-specific, it offers a basic reasoning for SKU optimization.

Bookbinder and Zarour (2001) go into detail about two main approaches for retail shelf-space allocation. They take a very scientific approach to the issue, but they provide great points. Although this is not directly related to SKU optimization, the direct product profitability method holds capabilities that can be manipulated to use for SKU rationalization in a cosmetic company. This approach measures the contribution to profit from an individual SKU. This method presents a promising manner to measure the productivity of a product to distinguish it through the rationalization process.

Slone, Dittmann, and Mentzer collaborated on *The New Supply Chain Agenda: The 5 Steps That Drive Real Value*. This book is meant to expound on the five levers of supply chain excellence in order to utilize supply chain as a competitive advantage that can produce economic profit. The authors first discuss eliminating cross-functional disconnects, specifically SKU proliferation. The main issue, according to authors, converges in the panic companies create for themselves and then respond with a mass cleanse, rather than maintaining a process to systematically work through a SKU's life cycle. Through company examples, the book offers three possible ways to implement such a process. First, companies take away a SKU each time a new one is offered. Second, companies follow a continuous process to get rid of unproductive SKUs. Third, companies require marketing to fully justify their new product to the CEO and the executive

committee. In general, this book highlights that these solutions can be continuously used and are applicable to many industries.

Overall, these different sources show a lot of consistent themes, despite their differences. At the same time, SKU optimization decisions include a range of moving parts. This research revealed some best practices throughout the information that can be manipulated to fit the cosmetics industry. The mass collection of information helps ensure the decision tree considers all of the variables.

Beauty Industry

The beauty industry offers two key elements that impact product portfolios. First, as mentioned at the beginning of this paper, trends rule the realm of style, fashion, makeup, and even skin care. Brands go to great lengths to get celebrity endorsements for their products in order to be trendy, and when they come without a contract, that's marketing gold. Over the summer, during the internship at Mary Kay, Kris Jenner, the matriarch of the ever-popular Kardashian and Jenner clan posted a picture to her Instagram account praising Mary Kay's sun care line. As expected, sales jumped within the next month. However, trends are fleeting, and this complicates the business plan. Cosmetic companies are constantly working through research and development to come up with the next big hot item. Because there is very little consideration for the supply chains of cosmetic companies, research led to an article by Carugati, Liao, and Smith, (2008) about Zara's management of a global supply chain while balancing the dynamic fashion industry. This article points to their creative strategies to stay on

top of trends and persuading customers to return. They have implemented vertical integration to control more of the process in order to streamline the time. Because Zara is an example of best practices, cosmetic companies must consider their own capabilities when determining how many SKUs to offer and whether they can meet the demand of the dynamic skin care and color cosmetics industry.

Second, inclusivity is becoming more and more important when it comes to color cosmetics and skin care. As mentioned at the beginning of this paper, Rihanna's new beauty brand, Fenty Beauty, took strides toward inclusivity with forty different foundation shades. This USA Today article (2017) gives just a few testimonies of praise for not only the range of shades but also the quality of the makeup. This trend affects the minimum expectations to be considered for an order, known as order qualifiers. Because of this growing expectation, cosmetic companies' supply chains will have to include some degree of complexity.

Both of these elements complicate this project, because there is not a "right answer" for cosmetic companies when it comes to deciding how many shades or skin types to cater to. Additionally, trends put high expectations on speed-to-market. Companies need to consider these important factors when deciding on their strategy.

Summary

The literature review covered three topics. The product proliferation topic offered the rationalization and motivation behind growing product lines. The articles revealed, though, how too much growth can be detrimental. The SKU optimization topic suggested possible processes to achieve a manageable product

portfolio. The references posed processes that can be manipulated to meet Mary Kay's needs. The beauty industry topic exposed the changing trends and expectations that companies need to address in order to remain relevant. Certain brands modified, and still are affecting, what consumers are coming to expect as necessary. These references combined to advance this project toward an applicable process to walk Mary Kay through SKU optimization. Appendix 1 further summarizes the literature review.

<div align="center">RESEARCH METHODOLOGY</div>

This project conducted research that utilized multiple facets of knowledge in order to conclude with a well-rounded, well-educated recommendation. First, the project used journals and newspapers to understand the topics conceptually. Because this project essentially combines the three topics into a decision tree, this research needed to create a foundation for the project. This first form of research established initial conclusions through dialogues about the factors that should go into the decision process for a new product at Mary Kay. The internship included the opportunity to sit in on new product development meetings to hear the topics of discussion when planning a new launch and interact with the decision-making process. Figure 1 shows a high-level view of Mary Kay's current new product development process. This gave concrete elements that are considered in these cases, which is applicable to SKU optimization as well.

Figure 1: Current New Product Development Process

| Initial Idea | → | Idea Planning | → | Idea Development | → | Idea Testing & Prep | → | Production & Launch |
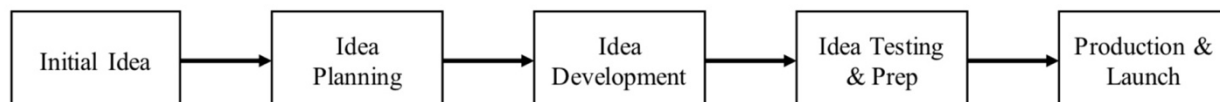
To solidify and authenticate the initial conclusions, the second form of research gathered expertise through structured informal interviews with a representative from each department that interacts with product life cycles to catch any details that typically go without consideration. Appendix 2 lists the interviewees and questions asked during these interviews. The research needed to include a range of representation because optimization comes from collaboration across the company. This process also requires integrative thinking because the products are the core to a company and require cooperation throughout departments (Martin 64). Overall, the research executed led to crucial factors that are considerations in a decision process.

DISCUSSION

This research led to the conclusion that, in order to address the issue of SKU proliferation, a continual or scheduled process must be established to manage the product portfolio. Companies should consider a few factors, from each participating department, throughout this process to ensure that all departments have a say and that product count does not get out of hand. This process requires full department participation in order to catch all relevant factors.

First, and most importantly, companies need to have their overall strategy in mind. Strategies define what the company is attempting to achieve and sets the tone for what business is the core function. If a product does not help achieve the strategy, then it is not providing any benefit to the company or its customers. This factor in itself causes contention, though, because many cosmetic companies reach multiple international markets discrepancies often exist between the

consumer's needs in different countries. This exaggerates the importance of a strategy for decisions regarding the product portfolio.

Secondly, companies also need to keep in mind the cost and profitability for products. There comes a point in the product portfolio that additional products do not offer incremental growth. This could be due to cannibalization among the products. At that point, the SKU count hinders holistic profitability. But a company should also consider the profitability of each individual product to determine its support to the bottom line. For a majority of companies, only twenty percent of the products account for eighty percent of the operating profit. Sometimes this statistic is skewed even worse.

Finally, a company must contemplate the market needs. Cosmetic companies must carefully heed the changing trends for both makeup and skin care, but considering this factor is crucial regardless of the industry. They also need to consider inclusivity levels and how many consumers they are reaching with their products. They must find the balance between meeting a wide range of needs and the SKU count they offer.

All of these factors require real conversations with multiple departments. For example, marketing needs to understand the limitations of the manufacturing operations and new product development needs to understand from the forecasting group the cannibalization that takes place during new product launches. Overall, this project insinuates collaborative effort. It will require departments to discuss and compromise on issues and adjust to the more frequent churn of products. To help the transition process go smoothly, management needs
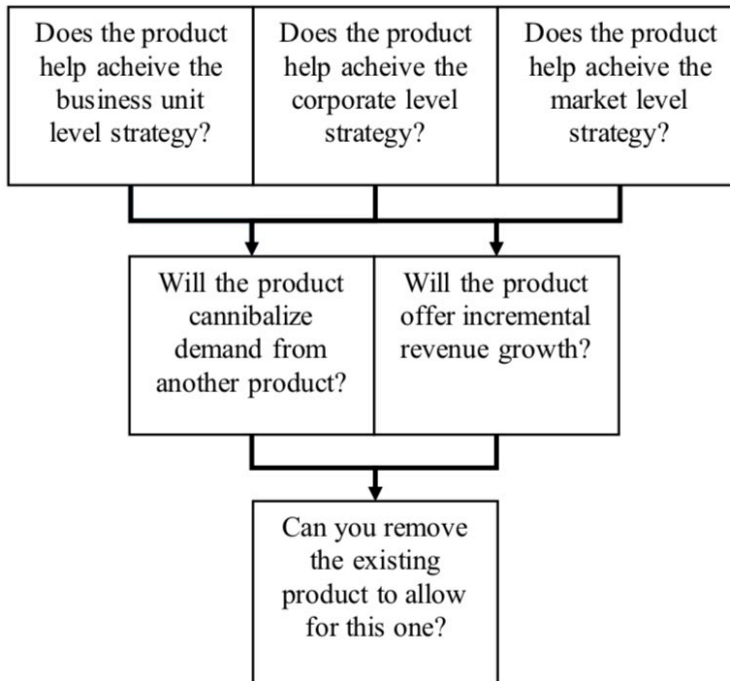
to set expectations and support the time and effort spent on cleaning up the product portfolio. This transition also includes considering the customer's expectations and how to manage that relationship through these changes. However, this process does not indicate a need to do a massive sweep of products. Getting rid of a ton of products at once does not solve the issue. There must be a purpose and a timeline to follow to achieve success in SKU optimization.

This process fits best in a decision tree, because it naturally derives from these factors. However, the order in which the factors are considered can greatly impact the outcome of the decision (Martin 66). Also, this process applies to both new product development and current product reviews. Thus, the company should first determine the priority of these factors and the situation at hand. Then they proceed through the decision tree. The decision tree intends to lead companies through the consideration process for multiple factors ending at an answer. The decision trees in Figure 2 and Figure 3 graphically portrays two examples of a decision tree applied to the two different situations. Each decision tree includes the factors mentioned above and works through the process to come to a conclusion regarding the future of the product. The first situation, expressed in Figure 2, portrays new product development. Cosmetic companies, including Mary Kay, work to continuously update their product portfolio to meet popular trends in skin care and color cosmetics. This scenario requires companies to consider cannibalization and other impacts on current products. The second situation, expressed in Figure 3, portrays a regularly scheduled process to account for performance of existing products. This process requires companies to manage
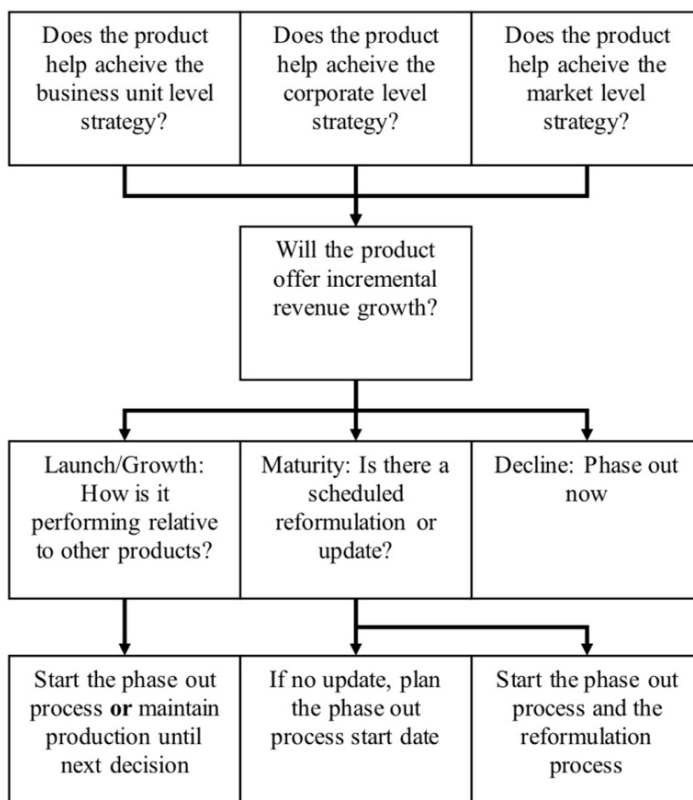
product life cycles to ensure responsiveness and prevent offering products for too

long.

Figure 2: New Product Decision Tree

Does the product help acheive the business unit level strategy?	Does the product help acheive the corporate level strategy?	Does the product help acheive the market level strategy?

Will the product cannibalize demand from another product?	Will the product offer incremental revenue growth?

Can you remove the existing product to allow for this one?

Figure 3: Existing Product Decision Tree

Does the product help acheive the business unit level strategy?	Does the product help acheive the corporate level strategy?	Does the product help acheive the market level strategy?

Will the product offer incremental revenue growth?

Launch/Growth: How is it performing relative to other products?	Maturity: Is there a scheduled reformulation or update?	Decline: Phase out now

Start the phase out process **or** maintain production until next decision	If no update, plan the phase out process start date	Start the phase out process and the reformulation process

None of these conclusions are necessarily new or surprising. This application simply offers a new way to employ SKU optimization in a different industry. Additionally, companies of any industry still fail to consider the possible overall impact of product proliferation and thus, need to implement a regular process to manage product portfolios. Figure 4 shows where the decision tree fits into Mary Kay's new product development process.

Figure 4: Suggested New Product Development Process
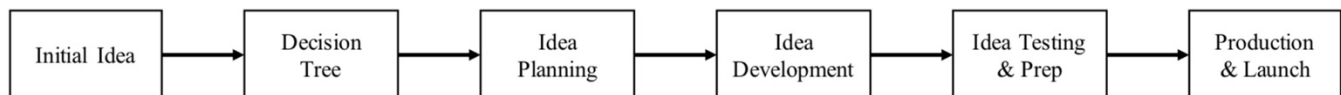
Despite the simple nature of the decision tree, this conclusion required critical thinking because the cosmetic industry sits in an intricate position. Beauty trends vary incessantly, and companies must stay relevant. Also, society now holds cosmetic companies to a higher standard of inclusivity, especially with color cosmetics, but also with skin care lines. Skin tones and skin types vary across the population and there should be equality in the amount of options a consumer has across the industry. These two points exemplify the importance of understanding a company's strategy in the cosmetic industry.

Due to lack of access, this project went without a true cost analysis to quantify the impact of implementing a SKU optimization process. Thus, this project, moving forward, needs financial reports and cost consideration to become robust. However, based on the literature review, professionals seem to agree that SKU optimization proves beneficial to a company's bottom line when

implemented with purpose and with full consideration of relevant factors. The project can offer a stronger argument, though, if it included proven financial implications of a SKU optimization process.

<div align="center">IMPLICATIONS</div>

SKU optimization applies to every company that offers products. As seen in the literature review, a lot of retailers notice the impact it has on their costs. Sharing their insight regarding this problem with manufacturers presents an opportunity for manufacturers to take advantage of the process and manage their product portfolio better. Because this project was based on Mary Kay, the decision tree provides a process specifically for Mary Kay to implement to manage its product portfolio and SKU count. They currently utilize life cycle categorization and new product development processes, but the decision tree helps provide context and a purpose for their current processes while implementing integrative thinking. Product portfolios need to have purpose and this process offers a way to understand that purpose and determine if it supports the company's strategy. This process also supplies a way to manage the cost-benefit balance within a product portfolio. Offering too many products hinders the total operation scheme and this impairment increases operational costs. However, this decision tree also provides means for any cosmetic company wrestling with their product portfolio and possibly could be applicable any industry that deals with changing trends and a wide range of market needs, because of the social aspect.

The manageable process in this decision tree allows companies to clean up their product portfolios and maintain them into the future. The decision tree walks through the questions to ask and the factors to consider in order to determine whether the company is meeting its goals and fulfilling its strategy. In turn, the companies can experience higher collaboration, less operational complexity, and ultimately increased profits. Other byproducts of this process include a focused company culture where employees understand the purpose and direction of their work and improved customer service.

However, this process offers benefits only if implemented correctly. To implement correctly, there are a few reminders to keep in mind. First, the executive team must support this process. Without support from the top, this process will prove difficult if not impossible, because the priority of the process should come from the executives. A lack of support also challenges the process of gathering departments to collaborate. Executive teams can invest in change management to help implement this change smoothly. Overall, this process requires focus and direction to be successful.

Second, this process should include multiple departments. Different departments, such as cost accounting, forecasting, inventory control, marketing bring different perspectives of success, which challenges participants of the process to find the optimal solution for the company as a whole. These departments must interact to come to a consensus on product offerings. This result differs from SKU rationalization by considering all of the factors and making educated decisions on the product portfolio, rather than removing SKUs based on

one element. Overall, this process requires teamwork and participation from the respective departments.

Finally, companies should maintain this process throughout the year in order to properly manage the total SKU count. Working through this process regularly allows companies to truly regulate the product portfolio, but this requires a long-term commitment to the process. The decision tree operates best when used with every new product development process and with SKU life cycle management. Operations perform smoothly with consistent care and the same goes with this process.

<div align="center">CONCLUSION</div>

According to this research, the SKU optimization process only differs slightly for the cosmetics industry, specifically Mary Kay, from other industries. However, the slight difference, the social aspect of beauty trends, creates a rather large factor that must be considered for a cosmetics company to be successful in serving the market needs. Regardless, the decision tree presented illustrates a crucial process that Mary Kay must implement in order to manage the perpetually-growing product portfolio. This process does offer freedom of application for each company, though, depending on prioritization of strategy, profitability, and market needs. Overall, the consumer faces an abundance of options and evermore confusion with the way cosmetic companies are churning out more and more products. But for the benefit of both the consumer and the cosmetic companies, this process must be correctly and consistently implemented to achieve success.

APPENDIX 1: Literature Review Summary

Topic	Author	Year	Defining Piece
Product Proliferation	Cox & Alm	1998	Product proliferation expresses a society's way of improving the quality of life for consumers.
	Mocker & Ross	2017	Royal Philips fell victim to product over-proliferation. Mocker & Ross suggest considering high-level purposes and collaboration.
	Narisetti	1997	By refocusing sales and making operational changes, P&G re-established their reputation with consumers after overwhelming them with too many changes.
	Barnett & Freeman	2001	Barnett & Freeman proved their hypothesis that introducing new products cause companies to experience disruptions.
	Bayus & Putsis	1999	The implications of product proliferation include both a supply and demand effect, having possibly negative results.
SKU Optimization	Johnsen	2010	SKU rationalization can go too far. Instead, optimization allows you to reduce products while maintaining consumer solutions.
	Brookman	2011	Beauty brands need to consider timing, demographic data, and the overall culture of beauty departments when deciding on which products to keep and remove.
	"Merchandise assortment honed"	2009	Rite Aid has implemented a rigorous SKU optimization program that has served them well. They recognize consumers' needs and utilize products to best meet those needs.
	Bernales et al	2017	This paper follows a substantial implementation process. Their method replaces low-profit products with higher-profit SKUs.
	Covas	2015	A successful portfolio optimization requires a long-term investment.
	Cruse	2003	Cruse focuses on category management and how power categories can reduce costs, simplify the process, and establish customer loyalty.
	Mahler & Bahulkar	2009	Complexity management means creating complexity that drives sales.
	Byrne	2007	This process is centered around designing a product portfolio to meet consumer's needs and corporate level objectives.
	Albright	2016	Sales velocity serves as an indicator for distinguishing products that need to be removed.
	Bookbinder & Zarour	2001	Measuring the contribution to profit from each individual SKU measure the productivity to distinguish it during the optimization process.
	Slone et al	2010	This book offers three main ways to systematically implement SKU optimization.
Beauty Industry	Carugati et al	2008	Zara's supply chain manages the dynamic fashion industry and sets an example for cosmetic companies to balance their operations.
	USA Today article	2017	Fenty Beauty's range of shades has affected the consumer's expectations of cosmetic companies to offer more inclusive product lines.

APPENDIX 2: Interviews

Questions

1. What factors should be considered when deciding on SKU count? Which of these factors is most important?
2. How does the SKU count affect overall business?
3. How does Mary Kay's SKU count compare to competitors?
4. What are the necessary considerations for SKU count with international markets?
5. How does SKU optimization play a part in maintaining the core values of Mary Kay?
6. What is the best number of SKUs to offer?
7. How can SKU count be maintained for years to come? What does that process look like?
8. What do you think should be considered more from your area?

Interviewees	Department	Job Title
Thomas Cho	Executive Team	Chief Supply Chain Officer
Erin Duncan	Customer Insights & Strategic Intelligence	Director
Diann Goodman	Sales Forecasting	Associate Manager
Larry Jackson	Supply Planning & Inventory Control	Vice President
Wanda Ward	SW Branch Distribution Center	Director
Laura Wood	Distribution Accounting (Cost)	Manager
Miguel Zuniga	Operations for Latin America	Director

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