SUSTAINABLE INNOVATIONS, STRATEGIC MANAGEMENT, SUPPLY MANAGEMENT AND R&D ACTIVITIES IN THE COSMETICS INDUSTRY: THE CASE OF AKALIFE PHARMACEUTICALS

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Abstract

Purpose – In this study, in the light of best practices and strategies of AKALIFE PHARMACEUTICALS, which develops first-class cosmetics and dermo cosmetics products and manufactures also food supplements; the research question “How cosmetics companies can sell their sustainable innovations to the customers?” has been answered.

Design/methodology/approach – In order to answer the research question a survey was formed and the data obtained from this survey, The paper discusses what takes for a cosmetics companies to achieve sustainable accomplishments in a cosmetics industry. In this context, besides the accomplished practices of AKALIFE PHARMACEUTICALS, data was collected from 107 people by survey method by selecting three independent variables that are effective on the preferability of sustainable innovations in the cosmetics sector. The statistical analyzes of these data were completed and the findings were discussed.

Findings – As a result of the analysis, it has been observed that the most effective primary factor on the preferability of sustainable innovations invented on the cosmetics industry by customers is R&D activities. The fact that cosmetics companies develop niche formulas that have never been applied before and produce unique cosmetic products by supplying raw materials that have not been used in any cosmetics product before, brings about them to strengthen their position in the cosmetics market and provide a strong comparative advantage over their rivals. It has been observed that the effectiveness of strategic management is almost as effective as the efficiency of supply management, although not as much as the efficiency of supply management, in the customer's preference of cosmetics products as sustainable innovations.

Originality/value – Cosmetics industry, which is a dynamic and innovative sector that is always open to change, attracts the attention of many entrepreneurs and investors in these days. The study concludes that it is crucial for sustainable cosmetics companies to take advantage of the values of sustainability, healthy content, uniqueness and innovation in generating a prosperous corporate identity and potent brand image that customers will adhere to.

Keywords : Entrepreneurship in the Cosmetics Sector, Sustainable Innovation in the Cosmetics Sector, Strategic Management in the Cosmetics Sector, Supply Management in the Cosmetics Sector, R&D Activities in the Cosmetics Sector, AKALIFE PHARMACEUTICALS.

Paper type Research paper
I. INTRODUCTION

The cosmetics industry attracts the attention of many new entrepreneurs and investors every day. Nowadays, beauty has become the focus of almost all people, and the popularity of cosmetic products is increasing day by day. The cosmetics industry is a sector that has proven to be quite resilient against economic difficulties. So much so that, despite the global economic crises and macroeconomic uncertainties, the demand for cosmetics products, far from decreasing, but is increasing. The fact that all cosmetics companies worldwide will generate approximately 450 billion dollars of revenue in 2022 in the beauty industry. Beauty industry includes various products, especially skin care, perfume, make-up and hair care products, which are the right examples of this increase in demand in cosmetics sector.

In recent years, many brands are constantly developing new strategies to achieve success in the innovative, rapidly changing and increasingly competitive cosmetics industry. The cosmetics industry, which is a dynamic and innovative sector open to change, will reshape itself around a different product range with expanding marketing and distribution channels in the next decade. Consumers’ perceptions of beauty, especially the younger generations’ perceptions change day by day. By the changing perceptions about everything but mostly about beauty, the meaning of sustainability in the cosmetics industry changes too. The point of the views of those who direct the perception of beauty (influencers, bloggers, celebrities, etc.) and important opinion leaders (specialists, etc.) about personal care, change in the industry also change and their sights will be inevitable in the near future (Glenister, 2021: 100-106).

II. LITERATURE REVIEW AND HYPOTHESES DEVELOPMENTS

Cosmetics is now an attractive sector in which many people, from high-income investors to celebrities are willing to take initiative for justified reasons. Especially in the cosmetics industry, which has made a significant recovery after the pandemic, the estimated annual growth rate of 10% attracts investors to this sector. It is expected that all companies in the cosmetics industry in the world will earn approximately 650 billion dollars in revenue in 2030, by newcomers companies. This income expectation in the cosmetics sector is higher than income expectations in basic consumption sectors like clothing, food and beverage, etc. (Kolling, et.al., 2023: 1226-1243).

Companies are trying to protect their huge profits as the economy changes, and "primization" is becoming the new buzzword in the cosmetics industry. Beauty is characterized by "primization", that is, even the most ordinary product is crystallized and presented to the consumers with gold plating. It whets the appetite of consumers with a premium perception of beauty, and the number of premium customers is increasing day by day. As consumers increase their spending through premiumization, it is predicted that the cosmetics market, which was previously expected to grow by 10% annually between 2023 and 2030, will grow more than expected (Kolling, et.al., 2023: 1226-1243).

Many changes are expected to occur in the cosmetics industry in the coming years. A dynamic future full of many sectoral opportunities and threats awaits the actors in the sector. Profit Before Tax is usually looked at to measure the organizational performance of companies. While existing cosmetics sector representatives experience high profitability with pre-tax profit margins of up to 35%, these high margins are expected to continue to attract new entrepreneurs and investors to the sector (Hasan, et. al., 2014:109-130). Successful brands, the giants of the cosmetics industry, will adapt to the changing rules of the game and enrich sustainable, innovative and premium value propositions that are uniquely differentiated for each consumer. Unique value propositions will now be discussed in the cosmetics industry, which has become a saturated market.

Sustainable Innovations

Environmental awareness has improved considerably in all industries in recent years. With the development of environmental awareness, almost every company has begun to develop strategies on how to use natural resources more ethically and effectively and how to offer products and services without harming the environment. Consumers in every sector have changed their purchasing attitudes; has acquired responsible consumption habits that save energy, do not harm the environment, and seek social benefit (Khan, et. al., 2020: 1168-1180).

While sustainability strengthens the corporate image of companies in terms of customers, it also makes easier for companies to gain competitive advantage over their competitors (Zameer, et. al.,
2020:247). When sustainability is supported by innovative approaches, the sustainable innovations that emerge allow companies to continue their success for a long time. Because sustainable innovations are among the basic business strategies that promote economic development (Soewarno, et al. 2019: 3061-3078).

Obstacles to the development of society, environment and economy show that the need for sustainable innovations is increasing. Sustainable innovations have emerged as a current business strategy to use advanced technology and social, digital and innovative practices to make the success of companies more sustainable (Luo, et. al., 2023: 1847-1871). In the cosmetics industry, ethical resource used formulations development do not harm nature and humans, and minimize the carbon footprint resulting from production. These solutions are required for future. Similarly, sustainable innovations in the cosmetics industry are developed to solve problems such as the harmful effects of chemicals, environmental pollution, waste and waste of natural resources (Aguiar, et. al., 2022: 35-51). In this by focusing on the best practices on cosmetics industry, the main success factors and strategies and management skills of cosmetics companies and their products considered as sustainable innovations will be discussed.

**Strategic Management**  
**Company Identity**

Company identity means how the company identifies itself with customers, suppliers, intermediaries, etc. It is the version it presents to its external stakeholders. Company identity consists of mission, vision, corporate values, organizational culture, organizational structure, and the scope of products and services offered. Company identity reflects the company's core values and different characteristics from other companies (Mukherjee, and He, 2008: 111-125).

AKALIFE PHARMACEUTICALS is a successful manufacturer of food supplements (vitamins, minerals, etc.) as well as cosmetics and dermocosmetics products, which are the most accomplished one in the cosmetics industry. The company identity is considered as the values that the company offers to the market and desires to emphasize to its customers in the first place. The company identity of AKALIFE PHARMACEUTICALS is equivalent to this definition and AKALIFE PHARMACEUTICALS clearly expresses its company identity as “they prioritize sustainability for their customers’ health and the future”. AKALIFE PHARMACEUTICALS, states that it is a cosmetics company that develops cosmetics products that are sensitive to humans and nature and introduces them to its customers by sharing its mission, vision and core values. AKALIFE PHARMACEUTICALS aims to develop sustainable innovations that provide social benefit in the long term by considering the health of the society rather than its financial benefits and expresses its sincerity as it protects these values on its practices to its customers. Company’s sustainable practices are the rare examples that can pass through.

AKALIFE PHARMACEUTICALS controls all production and management factors that contribute to the company identity, including management and production processes, product development and R&D activities, supply, marketing and distribution processes, in detail with innovative and sustainable approaches. One of the most effective factors in the AKALIFE PHARMACEUTICALS’ company identity is the corporate social responsibility factor of the company. AKALIFE PHARMACEUTICALS, one of the pioneers of the cosmetics industry in which it operates, attaches reputation to the environmental and social sensitivity of its suppliers as a supplier selection criterion. The company prefers suppliers that focus on sustainability.

**Company Management**

Many customers are unaware of the management and organizational skills that go into great dedication to the products and services they purchase. However, the company’s unique management decisions and strategies play a huge role in the success of the products produced and services offered. Successful company management is effective in successfully creating and maintaining organizational culture, as well as in ensuring customer satisfaction (Isensee, et. al., 2020: 275. Because successful management is effective in ensuring customer satisfaction with the products and services offered. It also contributes to the development of brand loyalty. Brand loyalty is indispensable for ensuring sustainability (Tanveer, et. al., 2021: 6839).

Correct perception of the company's products and services also depends on the company having a strong management mechanism. AKALIFE PHARMACEUTICALS, a thriving cosmetics company that offers products and services focused on sustainability. The company ensured the active participation of employees at all levels within the organization and the projects are completed.
regarding the management strategies and action plans in accordance with core values. In addition, the leadership commitment of AKALIFE PHARMACEUTICALS employees is quite high. The employee loyalty is also quite high at AKALIFE PHARMACEUTICALS, which ensures the active participation of employees in every project. AKALIFE PHARMACEUTICALS’ employees’ sense of belonging and active participation support two basic components of the management strategies.

The issue of determining high-level strategy throughout the AKALIFE PHARMACEUTICALS’ organization belongs to the senior manager. The charismatic leadership attitude is adopted by the senior manager in AKALIFE PHARMACEUTICALS (Khan and Khan, 2022: 921-933). As a result of leadership commitment developed by employees, the high-level strategies determined are quickly accepted by lower-level employees and transformed into internal company practices. AKALIFE PHARMACEUTICALS managers direct all management and production processes with the goal of sustainability. It is possible to organize a sustainable company identity and the company is able to develop many successful sustainable innovation cosmetics products by adhering to these core values.

At AKALIFE PHARMACEUTICALS, the senior leader's effective communication and social and environmental sensitivity towards sustainability inspire other employees to commit in new projects in the company. As a result of this effective communication, there are many social responsibility projects that employees develop by their individual efforts. They feel socially responsible beyond the company’s expectations. The leaders of cosmetics companies with a strong commitment to sustainability could demonstrate a good management approach. These leaders could better integrate the sustainability issue into their basic business decisions and quickly implement it into internal company practices. Enhancing a high-participation organizational culture that reaches a consensus with employees so that the work done remains focused on sustainability.

Currently, sensitivity to the environment and society is a main issue that needs to be focus on. Company leaders should also determine sustainability as the center of their activities, form organizational structures that support sustainability by embedding this awareness in the corporate culture as AKALIFE PHARMACEUTICALS’ leader. As AKALIFE PHARMACEUTICALS’s leader the managers of the company have also superior managerial skills as well.

ALVEND, America’s leading natural and organic cosmetics manufacturer, is a great example of how a good internal management approach, strong leadership skills, employee participation and sense of belonging support the processes of developing sustainable and innovative products. ALVEND was founded in 1995 with an understanding that adopts principles sensitive to the environment, society, innovation, sustainability and economy. ALVEND's core values are as follows (https://www.alvend.com/en/alvend/):

1. To develop safe and effective cosmetics products,
2. Promoting organic agriculture to increase biodiversity,
3. Reducing the carbon footprint of its activities,
4. To establish fair and lasting relationships with its customers.

Briefly; ALVEND company management, like AKALIFE PHARMACEUTICALS, is a successful company that has made sustainability, innovation, sensitivity to society and the environment the center of its management strategies and activities.

AKALIFE PHARMACEUTICALS’ company image is the logo, packaging, etc. used in a company's products and services’ designs, company offices, buildings and exhibition halls, advertisements used for products and services, etc. It is defined as all the visuals presented to the customer (Sharma, et. al., 2022: 31-54). AKALIFE PHARMACEUTICALS has a strong company image in the cosmetics industry. The company, which uses CAD-CAM technology when creating this company image, takes the correct management of corporate reputation and company image very seriously. AKALIFE PHARMACEUTICALS, which presents its company image in a very professional and clear manner, has also developed separate operational models specific to its cosmetics brands in order to manage the company image with CAD-CAM technology. AKALIFE PHARMACEUTICALS carries out separate "corporate identity" and "corporate communication" studies according to the separate operational models it has developed for each cosmetics brand. AKALIFE PHARMACEUTICALS argues that keeping its finger on the pulse of the sector, following the latest trends and creating a corporate image in line with sectoral dynamics provide vital
contributions to its success and renews its brand name in the market.

Company image is different from company identity. Company identity is the company's presentation of itself to the market and its customers. Company identity is about how the company wants itself to appear from the outside. Company identity consists of descriptive elements such as employees, products and services. On the other hand, company image is the visual reflection of the company in the market. Company image is the reflection of company identity (Iglesias, et. al., 2019: 441-459). Creating a strong company identity and subsequently a strong company image; It provides the company with a superior competitive advantage. Thus, especially in sectors such as the cosmetics industry, where competition is intense, companies should attach great importance to creating company identity and company image.

Sustainable Image in Sustainable Cosmetics Companies

Company image does not only include products and services. Company image also includes organizational culture, values and strategies. Developing a strong and effective company image for a cosmetics company such as AKALIFE PHARMACEUTICALS, which develops sustainable innovations, provides a significant contribution to the correct understanding of the products and bringing them together with the right targeted customers. AKALIFE PHARMACEUTICALS has formed a strong sustainable image as follows:

1. After establishing a strong company reputation, it has constituted brand loyalty in its customers with the projects it has developed with social responsibility awareness.
2. It has increased the trust in its products in the society and while doing this, it has supported purchasing simulation etc. benefited from digital applications.
3. The company has strengthened the bond with the customer by developing its own marketing language. Thus, the reliability of its brand is high and the number of products sold has increased.
4. By collecting customer feedback after the use of the products, the company has developed an organic bond with them, taken into account individual demands and needs, and ensured customer loyalty by increasing customers' perception of being valued by the brand.
5. The company has developed a company identity that emphasizes that it cares about its customers by planning various user trainings.

Strategic Cooperation

Strategic Collaboration is a business collaboration in which two or more partners formally agree to achieve their business objectives (Brown, et. Al., 2021: 286). Strategic collaboration is different from mergers and acquisitions. In collaborations that require less capital, both partners gain new business opportunities and develop their own in-house commercial production, etc. is independent in its activities. After such strategic collaborations, no new entity is formed, but generally a project-based partnership is established and cooperation is maintained until the project is completed. Partners in strategic collaboration adapt to each other for a period of time by exchanging certain business resources for mutual gain. While each partner continues to operate as a separate company, the two companies support each other in their joint activities within the scope of strategic cooperation (Castañer, et. Al, 2020: 965-1001).

Partners who develop strategic cooperation can also establish a mutually beneficial marketing relationship not only to increase the marketing potential of their products. When it comes to innovation development, strategic cooperation can also be a research partnership formed to benefit from advanced technology and jointly pursue R&D activities (Kok, et. al., 2020: 104011). In summary, strategic cooperation is a formal relationship that brings together partners' specific knowledge, skills and resources, and in which management processes are carried out together to achieve common goals.

Strategic collaboration is considered a basic business strategy for companies to increase their performance or strengthen their market share. Strategic collaboration not only supports companies to move faster and increase performance efficiency; Strategic collaboration is a formal way of bringing together people with diverse experiences to eliminate uncertainty and complexity in the environment and to quickly adapt to changing conditions. In order to develop successful business strategies in the rapidly developing and uncertain cosmetics industry, the best step to take is to follow the trends and develop strategic collaborations with expert partners who will complete the missing areas (He, et. al, 2020: 589-617). The most basic benefits
that will arise for the partners in a strategic cooperation, when evaluated AKALIFE PHARMACEUTICALS, are as follows:

In terms of strategic collaborations; AKALIFE PHARMACEUTICALS supports new entrepreneurs to make sales without spending large amounts of money and without wasting time when newly entering the sector. AKALIFE PHARMACEUTICALS, which also helps beginners in the cosmetics industry to get to know the sector and enter new markets nationally. The company helps new entrepreneurs by providing consultancy or by developing strategic cooperation to gain recognition in the global market by overcoming environmental, economic, social and financial obstacles.

Entrepreneurs who develop strategic cooperation and receive consultancy support with AKALIFE PHARMACEUTICALS benefit from AKALIFE PHARMACEUTICALS’ consultancy on R&D, production, marketing, advertising, social media management and distribution facilities and decisions. After the strategic cooperation, newly established enterprises become reputed in a very short time and have a say in the market. With the right R&D support, the company offers accomplished scope of strategic cooperation. AKALIFE PHARMACEUTICALS brings together experts from various disciplines according to needs of the entrepreneurs. These experts support and assist entrepreneurs with by their knowledge, experience, technology expertise and skills.

The innovation development process is very costly, tedious and time-consuming. The offers in innovation processes based on the strategic cooperation established with AKALIFE PHARMACEUTICALS are the most important contributions offered to beginners in cosmetics sector. Inasmuch as the main source of new entrepreneurs’ problems are originated from nescience and inexperience. This inexperience and nescience prevent them from entering the market is the innovation process and R&D activities. The R&D facilities proceed smoothly with the strategic cooperation developed with AKALIFE PHARMACEUTICALS and new entrepreneurs could avoid risks as much as possible in their investments, as R&D expenses are at a minimum level. Distributing the risk as much as possible is another important of opportunity strategic collaborations so that this opportunity makes strategic collaborations attractive not just in cosmetics sector but in almost every sector.

Sustainable Strategic Cooperation in the Cosmetics Industry

Sustainable innovations that aim to inspire new products, services, technologies and different marketing strategies for cosmetics companies; They are important solutions to protect the ecosystem and reduce the negative impact on social and natural systems. Sustainable innovations in the cosmetics industry also aim to contribute to people’s long-term health by reducing the content of harmful chemicals (Fortunati, et. al., 2020: 5120). Sustainable innovations developed in the cosmetics industry are the most effective solutions of our time to protect people and nature. In recent years, it has been observed that, in addition to large corporate companies operating in the cosmetics industry, newly established enterprises have also brought natural and organic cosmetics to the fore. The transition from cosmetics products produced using traditional chemical additives to sustainable cosmetics products (Atolani, et. al., 2020: 1-11) At its core lies the change in consumer awareness, demands and ultimately purchasing attitudes.

It is important to develop sustainable strategic cooperation in the cosmetics industry. However, since the issue of sustainability is quite new, there are not enough regulations in this field yet. When a cosmetics company that develops a sustainable innovation should aim to design a product logo and packaging that emphasizes that the product is both sustainable and innovative. Yet the clear information about products could not be reachable due to the fact that many countries still do not have any standards about sustainable innovations. The problem that having no macro level standards for sustainable products has faced by many companies in various sectors operating with sustainable goals around the world. While sustainable innovation products are launched into the market, standards and necessary regulations are not set on a macro scale, especially in developing countries. So AKALIFE PHARMACEUTICALS produces its sustainable products in the countries having standards for sustainable innovations. This makes its products more preferable for customers and makes the brand reputation strong. AKALIFE PHARMACEUTICALS clearly indicates its products’ differences from other products (D’amato and Korhonen, 2021).

Europe has set standards that support sustainable innovations and sustainable cosmetics. In Europe, which is a pioneer in many sectors in sustainability studies, the European cosmetics certification body has been established and policies
that harmonize organic sustainable cosmetics standards with consumer expectations and nature have been implemented (Bozza et. al., 2022). In order to develop the awareness of sustainability in many countries, determining macro policies and standards as well as strategic collaborations and transforming them into practices will encourage successful sustainable innovations to increase. In this regard, governments need to focus on this issue and come together to plan sanctions for the future of the planet and humanity.

Supply Management

Raw Material Supply Process

Raw material procurement is the beginning of the product life cycle. Consumers who take sustainability into consideration not only question what the raw materials are in the products they use, that is, the content of the product, but also question where the raw materials are obtained and how they are supplied (Kolling, et. al., 2022: 171-185). AKALIFE PHARMACEUTICALS focuses on sustainability targets from the very beginning. In other words, it implements practices that will ensure sustainability in the supply of raw materials. AKALIFE PHARMACEUTICALS takes care that the raw materials that in use on its formulation of final sustainable innovative cosmetics products are safe and non-toxic. AKALIFE PHARMACEUTICALS, which ensures that those who use its products will not be exposed to undesirable effects in the long term as a result of being meticulous when choosing raw materials, has adopted the principle of not harming the health of its customers. It is known by many that synthetic raw materials with chemical additives cause health problems. Although organic and non-harmful raw materials are more costly than these synthetic substances, AKALIFE PHARMACEUTICALS, which adopts sustainability, natural and organic production as a principle, never includes these chemical raw materials in its ingredients.

However, it is necessary to be careful when including natural ingredients in the production process. The amount of use of raw materials in production processes, storage conditions, etc. factors require to be taken into consideration.

Furthermore, another popular sustainable production issue recently is ethical sourcing. In terms of ethical resource use, which is another component of sustainability based on the environment, producers make efforts to use limited resources in the most efficient way (Oe and Yamaoka, 2022: 882). Procuring raw materials in accordance with ethical sourcing conditions causes sustainable cosmetics companies to impose more responsibility on their company identity and strengthens the company image in the eyes of customers. It can be concluded that sustainable cosmetics companies, which aim to use valuable resources in the most efficient way without polluting the environment, develop green formulations. For example, Alix Avien Paris has started to develop green formulations by using raw materials with a lower carbon footprint than the raw materials it currently uses in its production. In addition, the brand has adopted ethical sourcing and has determined sustainable strategies that give importance to protecting the environment and improving people's health (https://alixavien.com/en/environmental-policy/).

Strategic Cooperation with Supplier

Cosmetics companies cooperate strategically with suppliers of qualified products to ensure a sustainable supply of raw materials. Suppliers' perception of sustainability is the first thing that sustainable cosmetics product manufacturers should pay attention to. It is important that suppliers, as well as manufacturers, comply with the principle of ethical purchasing. When cosmetics product manufacturers observe ethical sourcing behavior in supplier selection for the raw materials they will use in production and choose sustainable suppliers that they find appropriate, they actually support the sustainability ecosystem (Romano, et. al., 2021: 13771). Encouraging sustainable suppliers to increase in number and provide qualified supply raw materials is an important awareness that ensures the continuity of the sustainability ecosystem.

Whether they have large sales volumes or not in cosmetics industry, suppliers require to encourage the sustainable and nature friendly approaches. AKALIFE PHARMACEUTICALS contributes to the continuity of the sustainability ecosystem by making supply choices that encourage suppliers who comply with the principle of ethical resource use and adopt sustainability as a principle. AKALIFE PHARMACEUTICALS, a strong component of the sustainability ecosystem in the cosmetics industry, uses innovative fermentation technology to develop a stain removal product optimized for healthy living. For this purpose, AKALIFE PHARMACEUTICALS, which cooperates with its sustainable suppliers from which buy sustainable ingredients (100% natural), has purchased the cosmetics component required for its production at an affordable cost and has brought a new breath to
the sustainable cosmetics product market with the most economical 100% natural product by the strategic cooperation developed with its supplier. AKALIFE PHARMACEUTICALS, which has strategically cooperated with the natural cold pressed oil supplier to develop the new ingredient, which is a sustainable innovation blended with 100% organic cold pressed oil, prepares to produce the organic oil required for the formulation developed by establishing a department in its production facility.

Developing strategic collaborations with qualified sustainable suppliers is an important business strategy for cosmetics companies to focus on sustainability. The decision of whether the raw materials entering production should be procured from an external supplier or whether the manufacturer should establish its own production facility and undertake the production of these raw materials itself depends mainly on cost. After the cost, the most effective factors on this decision are the time it takes to bring the raw material from the supplier company to the manufacturer’s location and the logistics cost to be incurred. Whether raw materials are procured by developing strategic cooperation with the supplier, or whether the decision is made to produce the necessary raw materials within the manufacturer itself, in both cases, choosing organic methods is sufficient to draw a sustainable company image. It would be appropriate to benefit from the Kaizen Approach when making these and similar production decisions. (Helmond, 2020: 25-30).

R&D Activities
Product Development Process

The product development process is a that contributes to the company identity. The product that end users purchase is the product that development process has been completed. Although product development and production processes seem unrelated to the identity of the company, the processes like the logo, packaging, content, etc. are the visual of the product. Theses processes are very important that relate to company identity and affecting purchasing attitude (Soewarno, et. al., 2019: 3061-3078).

As much as product images and content affect the purchasing behavior of end users, the product life cycle also affects the purchasing behavior of end users. The reason for this is related with the unexpected situations like pandemic etc. which cause the change in consumer behavior and increase in awareness of people about many health problems.

With the increase in individuals with conscious shopping attitudes, brands that have been in production for a long time have become more preferred, and brands that manage the product life cycle well have become more preferred by consumers due to their past successful performance (Stark, J., 2022: 1-32).

When it comes to product life cycle, the processes from raw material supply to product production processes and the effects of all these processes on the environment should come to mind. AKALIFE PHARMACEUTICALS is one of the unique companies that produces handmade and organic cosmetics products. AKALIFE PHARMACEUTICALS, which transparently shares the contents of its products and the effectiveness of its products with its consumers, has achieved customer satisfaction in a short time with this trust offering to its customers. Integrating sustainability goals into the company identity; AKALIFE PHARMACEUTICALS, which adds value to the environment and human health, sincerely conveys its sustainability efforts to its customers by transparently presenting its life cycle (raw material supply and product production process) to its customers.

Product Production Process

The product production process in the product life cycle is the most effective process on the environment and human health (Bilal, M., Mehmood, S., and Iqbal, H. M., 2020: 13). For manufacturers producing in the cosmetics industry, sustainable production process means ensuring energy efficiency and zero waste management. Sustainable production process means increasing the effectiveness of cosmetics products and producing ingredients that do not harm human health (Crini, et. al., 2020: 1451-1476).

Essential oils are frequently used in the cosmetics industry. The two commonly used refining methods to obtain these oils are either steam distillation or cold pressing. Essential oil extraction by cold pressing is more energy efficient than essential oil extraction by steam distillation. The reason for this is the need for external heat in the cooling process after evaporation. Extracting oil by cold pressing method not only saves energy, but also provides oil with higher quality ingredients (Saldaña-Mendoza et. al., 2022: 441-450). By better preserving the components in essential oils, both a sustainable production is achieved and a product with more positive effects on human health (Machado et. al., 2021: 128-133). For these reasons,
AKALIFE PHARMACEUTICALS has adopted sustainable production processes and adapted its production to sustainable production conditions with targets such as reducing waste, preventing environmental pollution, reducing or even eliminating the use of toxic substances, etc.

AKALIFE PHARMACEUTICALS has developed sustainable green building design for the environment and people. A water storage system was installed in the production facility and management building of AKALIFE PHARMACEUTICALS and energy efficient machinery and equipment, especially solar energy, were purchased. Adopting energy-saving systems, AKALIFE PHARMACEUTICALS carries out conscious activities against environmental pollution by developing production methods that reduce the carbon footprint in its building designed to protect the environment.

The sustainable products developed by AKALIFE PHARMACEUTICALS are produced in sustainable facilities. The company has two important purposes for establishing sustainable production facilities:

1. To implement practices in line with core values and to organize a sustainable company image in the eyes of consumers,
2. Although new applications may seem to cause an increase in costs in the short term, ensuring that the company saves on production costs in the long term.

Conceptual Framework

Since sustainability practices seem costly to many companies, most companies avoid determining sustainability strategies. Cosmetics companies that develop sustainable innovations can have the opportunity to minimize these costs when they develop strategic cooperation. In addition, thanks to strategic cooperation, these companies either establish green cooperation with external stakeholders who develop strategies to protect the environment or support each other with a focus on sustainability by determining joint green marketing strategies with other companies. Therefore, it is important for governments to plan and offer market supports and incentives that make sustainability attractive to companies so that they exhibit approaches that do not ignore the environment.

When it comes to green marketing strategies, sustainability is the first targeted outcome in strategic collaboration, while corporate social responsibility projects are the second targeted outcome in the developed collaboration. In this context, in strategic collaborations with external stakeholders working on the environment and with other companies, we aim to produce solutions that will solve the problems in nature, develop products that do not pollute nature, do not harm human health, etc. Determining green marketing strategies with goals is an important step to take in protecting the ecosystem. Unlike other strategic collaborations, the advantages of sustainable strategic collaboration established for green purposes are as follows:

1. Having a reliable company identity of partners establishing strategic cooperation increases the reliability of green products and services among consumers,
2. Reducing public criticism and prejudices towards products and applications,
3. Strengthening the green image of products and services,
4. In cooperation, each partner should increase their technical knowledge and skills by sharing the information they lack about sustainability with each other,
5. Partners supporting each other in accessing new sustainable markets,
6. Partners who receive customer feedback about the products produced as a result of the new strategic cooperation; gaining speed in responding to customer demands and requests.

Sustainable strategic cooperation contributes to companies gaining reputation in society, gaining users' trust in the products, and increasing the expertise required to develop sustainable products and carry out sustainable activities. Thanks to green collaboration, the company can more easily prove to customers that it has achieved its green marketing goals and reaches potential customer groups that care about sustainability more quickly. Thanks to the cooperation established with external stakeholders (organizations such as TEMA, etc.) that care about the environment, the cosmetics company can enhance a more professional and reliable image in the eyes of the customers while organizing trainings that raise awareness of its customers about the contents of the products, sustainability targets, and corporate social responsibility projects. Receiving support from partners after the cooperation developed with professional environmentalist external stakeholders provides the opportunity for the cosmetics company to benefit from the positive perception encouraged in the society by the sustainability-sensitive works carried out by the partners.
Research Question

In this study, by exploiting the strategies of AKALIFE PHARMACEUTICALS, a successful manufacturer that produces food supplements (vitamins, minerals, etc.) and cosmetics and dermo cosmetic products that are the first in the cosmetics industry and by using the data obtained from the survey; the research question of "Companies in the cosmetics sector are looking for products with sustainable innovation to meet their customers' needs?" will be answered.

The study discusses what successful cosmetics companies do and should do to ensure sustainability in the cosmetics industry. In this context, as a result of the literature review, three independent variables are estimated to be effective in the success of sustainable innovations in the cosmetics industry; Effectiveness of R&D activities, Effectiveness of supply management and Effectiveness of strategic management; will be analyzed using survey data. There has been no previous study examining the effect of similar independent variables on this study's dependent variable "selection of cosmetics products with sustainable innovation". Therefore, it is envisaged that this study will fill the gap in the literature regarding both application examples and findings obtained as a result of the analysis by focusing on sustainability, the most popular concept in every sector in recent period.

Theoretical Framework and Hypotheses

Control Variables

The control variables of the study are age and gender. That is, control was made for the gender and age of the survey participants. The gender of the participant was divided into 2 groups: "female and male". The age control variable is grouped into 3 classes: "18-30, 31-45, 46-60".

Dependent Variable

As stated, the dependent variable of the study was determined as "Cosmetics Product Selection as Sustainable Innovation". The independent variables that are thought to affect the dependent variable the most are given below.

Independent variables

The independent variables in the study are "Effectiveness of R&D Activities, Effectiveness of Supply Management and Effectiveness of Strategic Management".

The independent variable "Effectiveness of Strategic Management" includes the company's strategic goals and efforts regarding sustainability and innovation, the company's managers being visionary, socially sensitive, following innovations and having a developed sense of responsibility, the company developing strategic cooperation with environmental organizations to solve social and environmental problems. This variable represents the employees working with team spirit and communicating effectively with customers.

In the survey, participants were presented with 3 answer options "Always, Sometimes, Never" to evaluate how the Effectiveness of Strategic Management affects their choice of cosmetics products that are sustainable innovations. The Always as an option takes the value 3, the Sometimes as an option takes the value 2, and the Never as an option takes the value 1.

The independent variable "Effectiveness of Supply Management" represents the product content, the supply of raw materials in the content by considering the environment and human health, ethical sourcing, sustainable supplier selection and the absence of toxic substances in the content.

In the survey, participants were presented with 3 answer options "Always, Sometimes, Never" to evaluate how the Effectiveness of Supply Management affects their choice of cosmetics products with sustainable innovation. The Always as an option takes the value 3, the Sometimes as an option takes the value 2, and the Never as an option takes the value 1.

The independent variable "Effectiveness of R&D Activities" represents to what extent the R&D activities of a cosmetics manufacturer that produces with a focus on sustainability affect the "Quality, Sustainability, Innovation" qualities of the products it produces. In addition, the independent variable of the effectiveness of R&D activities also represents that the product formulation and ingredients are safe and unique, the packaging is recyclable, the product is certified and the content of the product is non-toxic.

In the survey, participants were offered 3 answer options "Always, Sometimes, Never" to evaluate how the Effectiveness of R&D Activities affects their choice of cosmetics products that are sustainable innovations. The Always as an option takes the value 3, the Sometimes as an option takes the value 2, and the Never as an option takes the value 1.
Based on the theoretical relationships described above, several research hypotheses can be formulated, including the following:

H1: When the cosmetics company has effective strategic management, cosmetics products with sustainable innovation are more preferred by the customers.

H2: When the cosmetics company has effective supply management, cosmetics products with sustainable innovation are more preferred by the customer.

H3: When the cosmetics company has effective R&D activities, cosmetics products with sustainable innovation are more preferred by the customers.

As can be seen from the hypotheses H1, H2 and H3; when the effectiveness of independent variables increases, customers' demand for sustainable innovation products will increase. It is expected that every improvement and strengthening made in the sub-factors of the independent variables will positively affect customer preferences. In short, it can be said that a positive significant relationship is expected between the independent variables and the dependent variable.

III. METHODS

To test the effects of the independent variables Effectiveness of Strategic Management, Effectiveness of Supply Management and Effectiveness of R&D Activities on the dependent variable of cosmetics product selection as sustainable innovation, a survey was conducted on consumers purchasing cosmetics products and statistical analyzes were applied on the collected survey data.

The survey participants answered their opinions about sustainable cosmetics products, and identified factors that contribute to the success of sustainable innovations developed by cosmetics companies. The survey consists of sections that collect information about the effect of the independent variables of R&D Activities Effectiveness, Supply Management Effectiveness and Strategic Management Effectiveness on product selection. In the survey, participants filled out their gender, age, education, etc. After the "Demographic Characteristics" section, which includes control factors, the participants were asked about their experiences with cosmetics products. The survey was not continued with participants who had no experience. The survey, which included questions about these 3 independent variables, continued with participants who had cosmetics product user experience.

To test the significance of the survey answers, a permutation test, which does not require any distribution assumption, was applied to the matched data. Given that only 3 values are possible for each response, it is unreliable to make parametric assumptions that require a specific response distribution.

According to the averages of independent variables (main factors) and sub-factors, it is evaluated which factors are more effective on the dependent variable and which are less effective. Averages are calculated according to the following formula:

**Average = (Total (Ranking Coefficient x Number of People Who Prefer)) / Number of Samples (Total Number of People)**
Results

134 people participated in the survey and 107 people completed all the questions of the survey because they use cosmetics products. The sample consists mainly of women. While women participated in the survey by 76.7%, men participated by 23.3%. 83% of the participants in the survey are between the ages of 18-30.

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It would be appropriate to classify the impact of factors on customers’ purchasing attitudes and preference for cosmetics products that are sustainable innovations in 3 sections. In this context, the general ranking of three independent variables before customers’ decision to purchase cosmetics products that are sustainable innovations is mentioned in 3 separate tables below, which include the averages of the factors:

Table 1. Demographics
Sample (Number of Participants) 107
<table>
<thead>
<tr>
<th>Gender</th>
<th>Female</th>
<th>%76,7</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td></td>
<td>%23,3</td>
</tr>
<tr>
<td>Age</td>
<td>18-30</td>
<td>%83</td>
</tr>
<tr>
<td></td>
<td>31-45</td>
<td>%12</td>
</tr>
<tr>
<td></td>
<td>46-60</td>
<td>%5</td>
</tr>
</tbody>
</table>

Table 2. Effectiveness of Strategic Management Sub-Factors Ranking
<table>
<thead>
<tr>
<th>Strategic Management / Company</th>
<th>Always/3</th>
<th>Sometimes/2</th>
<th>Never/1</th>
<th>Average (107)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sustainability / Innovation Strategies</td>
<td>47</td>
<td>34</td>
<td>26</td>
<td>2,20</td>
</tr>
<tr>
<td>Visionary, Socially Responsible Management</td>
<td>39</td>
<td>33</td>
<td>35</td>
<td>2,03</td>
</tr>
<tr>
<td>Strategic Cooperation with Environmental Organizations</td>
<td>28</td>
<td>37</td>
<td>42</td>
<td>1,87</td>
</tr>
<tr>
<td>Employees Team Spirit and Customer Effective Communication</td>
<td>33</td>
<td>39</td>
<td>35</td>
<td>1,98</td>
</tr>
</tbody>
</table>

Table 3. Effectiveness of Supply Management Sub-Factors Ranking
<table>
<thead>
<tr>
<th>Supply Management / Raw Material</th>
<th>Always/3</th>
<th>Sometimes/2</th>
<th>Never/1</th>
<th>Average (107)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Environmentally Focused</td>
<td>44</td>
<td>32</td>
<td>31</td>
<td>2,12</td>
</tr>
<tr>
<td>Health Focused</td>
<td>51</td>
<td>37</td>
<td>19</td>
<td>2,30</td>
</tr>
<tr>
<td>Beauty Focused</td>
<td>27</td>
<td>40</td>
<td>40</td>
<td>1,88</td>
</tr>
<tr>
<td>Ethical Sourcing</td>
<td>28</td>
<td>39</td>
<td>40</td>
<td>1,89</td>
</tr>
</tbody>
</table>

Table 4. Effectiveness of R&D Activities Sub-Factors Ranking
<table>
<thead>
<tr>
<th>R&amp;D Activities / Product</th>
<th>Always/3</th>
<th>Sometimes/2</th>
<th>Never/1</th>
<th>Average (107)</th>
</tr>
</thead>
</table>
The choice of cosmetics products that are sustainable innovation by customers varies according to the factors given in the tables. In order to determine the most effective factors in product selection and purchasing attitude, it is necessary to test the importance of these factors in the formation of the company's image with the help of empirical experiments. Below is the consolidated table showing the average ranking of the main factors according to the test results of the three sections:

<table>
<thead>
<tr>
<th>Independent variables</th>
<th>Always/3</th>
<th>Sometimes/2</th>
<th>Never/1</th>
<th>Average (321)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strategic Management / Company</td>
<td>147</td>
<td>143</td>
<td>138</td>
<td>269</td>
</tr>
<tr>
<td>Supply Management / Raw Material</td>
<td>150</td>
<td>148</td>
<td>130</td>
<td>2,73</td>
</tr>
<tr>
<td>R&amp;D Activities / Product</td>
<td>179</td>
<td>182</td>
<td>67</td>
<td>3,01</td>
</tr>
</tbody>
</table>

The results reveal customers' increasing demand for sustainable cosmetics products. Among these sub-factors, the three least effective factors in customer product selection decisions are beauty-oriented raw material supply, supplier selection that pays attention to ethical sourcing, and preference for products with recyclable packaging. Considering these factors, the reason why they are the least effective in the product purchasing decision is that these factors; is high price of final sustainable cosmetics products due to its high production cost. High price is an important factor that directly affects the final customer's purchasing decision. Therefore, although customers prefer to shop products caring sustainability, unfortunately they cannot choose these sustainable products because of the fact that these products exceed their purchasing power.

Considering the benefits, customers have high demands for purchasing sustainable cosmetics. Certifications have a very high impact on customers...
in determining truly sustainable products. Although customers attach great importance to safe formulation and ingredient information, they do not have sufficient knowledge about how to interpret some ingredient information. It will be possible to eliminate the lack of interpretation of this technical information by the cosmetics company seriously evaluating customer feedback after use, providing them with sufficient information, and informing their customers by planning free customer/user training through various social and digital platforms. At this point, if sustainable cosmetics companies pay attention to include customer seminars and events in their basic business strategies in order to raise the awareness of their customers about distinguishing the real sustainable cosmetics products they offer from others, they will both increase customer loyalty to their brands and provide a competitive advantage to their competitors relatively easily.

IV. CONCLUSIONS

The concept of sustainability, which aims to act with environmental and human awareness, has become an indispensable concept in the business world to realize the determined management strategies and achieve long-term success. Developing innovation with a focus on sustainability provides opportunities for companies, especially senior managers and employees of product development and marketing departments, to act in accordance with the requirements of the age and customer expectations and to rethink in order to eliminate inefficient / idle practices.

Forming a sustainable image helps the cosmetics company gain more trust and build long-term loyalty from its customers. Companies that plan and implement their management practices and product development processes with innovative approaches, social responsibility and environmental awareness, rebuild their company identity in line with developing trends. Although these transformation processes may seem costly in the short term, in the long term it will be possible for cosmetics companies that develop sustainable innovation at a lower cost to reduce the product prices they set in the market. Thus, they will be able to increase their sales volumes by delivering higher quality and demanded products to their customers at more affordable prices. Although R&D expenditures require high investment expenditures for manufacturers while developing sustainable innovation, the excess demand for sustainable innovative products developed in the long term will pave the way for these R&D costs to be eliminated and companies to reach satisfactory profits.

The 3 independent variables that are thought to be most effective in customers finding a cosmetics company that aims to develop succeeded sustainable innovation and making a purchasing decision with confidence about sustainable products are; "Effectiveness of Strategic Management, Effectiveness of Supply Management and Effectiveness of R&D Activities". It was observed that these factors were significantly effective after the surveys conducted and the data was analyzed. AKALIFE PHARMACEUTICALS, which is a pioneer with its successful and first in nature R&D projects in the field of cosmetics, whose practices are exemplified in this study, supports same independent variables subject to analysis as expected.

The company states that developing sustainable innovation depends on three integral basic components of business plans. These three components for AKALIFE PHARMACEUTICALS; “Strategic Management, Supply Management and R&D Activities” are indispensable for planning and implementing realistic strategies. However, while testing these independent variables, the effect of the sub-factors should not be ignored. In particular, formulation, content, components, supply of materials and the production process of the products, developing safe and environmentally friendly policies are important issues that require to be taken into consideration.

Technological breakthroughs in universities and research centers are increasing day by day. It is possible to finance the majority of the expenses required for production processes, especially R&D activities, through strategic collaborations established to benefit from the support and incentive mechanisms. In order to help sustainable cosmetics companies improve sustainability and gain competitive advantage in the market, strategic cooperation should be developed with various institutions and organizations. Developing strategic collaboration with well-equipped laboratories of universities and research institutions will help sustainable cosmetics companies improve their products, production processes and obtain more effective green ingredients.

One of the limitations of this study is focusing only on the cosmetics industry. Additionally, research findings can be diversified by increasing the number of participants and questions surveyed in the study in future studies. Sustainable innovations
should become a focus in many sectors. Therefore, in other studies, examining sustainable innovation production and R&D processes for different sectors and the incentive mechanisms that support such innovations will make significant contributions to the literature.

REFERENCES

knowledge recombination novelty on knowledge utilization in R&D alliances. Research Policy, 49(7), 104011.


Annex
Survey Questions

Part 1 - Strategic Management
1. I would prefer the cosmetic company’s website to clearly explain its strategic goals and efforts regarding sustainability and innovation.
   Options: Always, Sometimes, Never
2. I prefer that the job descriptions of the cosmetic company management and employees are clear, and that the employees are visionary, socially sensitive, follow innovations and have a developed sense of responsibility.
   Options: Always, Sometimes, Never
3. I would prefer the cosmetic company to actively cooperate strategically with environmental organizations to help solve social and environmental problems.
   Options: Always, Sometimes, Never
4. I prefer that the employees of the cosmetics company work with team spirit and communicate effectively with consumers by displaying socially conscious and socially sensitive behavior.
   Options: Always, Sometimes, Never

Part 2 - Supply Management
5. When choosing a cosmetic product, do you pay attention to whether the product is environmentally friendly?
   Options: Always, Sometimes, Never
6. Do you avoid cosmetic products that contain ingredients harmful to human health?
   Options: Always, Sometimes, Never
7. Do you think that healthy living should be aimed together with beauty in cosmetic products?
   Options: Always, Sometimes, Never
8. I would prefer that the supplier from whom the raw materials are procured acts in accordance with ethical sourcing.
   Options: Always, Sometimes, Never

Part 3 – R&D Activities
9. How important are the three factors “Quality, Sustainability, Innovation” in your decision to purchase cosmetic products?
   Options: Always, Sometimes, Never
10. I would prefer the product's formulation and ingredients to be safe and unique, as well as non-toxic.
    Options: Always, Sometimes, Never
11. I prefer sustainable cosmetics that are certified by independent third organizations.
    Options: Always, Sometimes, Never
12. I prefer packaging materials to be degradable and recyclable.
    Options: Always, Sometimes, Never