



PRODUCT ANALYSIS

IKEA

TECHNOLOGY ENTREPRENEURSHIP (ENT600)	CASE STUDY
FACULTY & PROGRAMME	FSKM & BACHELOR OF SCIENCE (HONOURS) IN MANAGEMENT MATHEMATICS
SEMESTER	6
PROJECT TITLE	6 IN 1 TABLE BOOKCASE
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TABLE OF CONTENTS	PAGE
ACKNOWLEDGEMENT	1
EXECUTIVE SUMMARY	3
1.0 INTRODUCTION	
1.1 Background of the Study	4 – 5
1.2 Problem Statement	
1.3 Purpose of the Study	
2.0 COMPANY INFORMATION	6 – 18
2.1 Background	
2.2 Organizational Structure	
2.3 Product/Services	
2.4 Technology	
2.5 Business, Marketing, Operational Strategy	
3.0 PRODUCT ANALYSIS	19 – 21
3.1 SWOT	
4.0 FINDINGS AND DISCUSSION	22 – 24
4.1 Findings	
4.2 Discussion	
5.0 RECOMMENDATION AND IMPROVEMENT	25 – 27
6.0 CONCLUSION	28
7.0 REFERENCES	29
8.0 APPENDICES	29 – 30

EXECUTIVE SUMMARY

The purpose of this report was to look at one of IKEA's products, a table bookcase, and make some suggestions for its continued success. Besides, External analysis (Strength, Weakness, Opportunity, Threat analysis), internal analysis (product analysis and determinants of strategic options and also solution), and analysis of strategic outputs are among the methods used in the report.

IKEA is a company that sells a wide range of well-designed, functional home furnishings at such low prices that as many people as possible can afford them. Furthermore, they share a passion for home furnishings and an inspiring shared vision: to make everyday life better for many people. As a result, the report addresses the following recommendations to resolve its product evolve, product improvement, and product solution of table bookcase:

- The product SWOT analysis
- Clothes rack weakness and finding
- The product recommendation and improvement
- New solution for the product to evolve into new innovation of the future product

As for the conclusion, there are many strengths than weakness to produce this multifunctional table bookcase. I believe that this product will be successful if we introduce it to the market

1.0 INTRODUCTION

1.1 Background of Study

A bookcase, also known as a bookshelf, is a piece of furniture with horizontal shelves that is often stored in a cabinet and is used to keep books or other printed materials. Private households, public and university libraries, workplaces, and bookshops all utilise bookcases. Bookcases varies in size from tiny, low models the height of a table to tall ones reaching up to the ceiling. They may be permanently mounted to the walls or floor in areas solely dedicated to the storing of books, such as libraries. The contrast between a bookcase and a bookshelf is that a bookcase is a close-sided structure that actually encases books and is intended to rest on the floor, whereas a bookshelf does not have enclosed ends and is often intended to hang on a wall. The importance of having bookcase is book will get easy to access. Moreover, they are easily found when required. Generally, when books are not arranged in the case then it becomes a tough job to search for any book when they are needed in an emergency. Having a bookcase saves time. Having a bookcase is important because it saves a lot of space in the house or hostel especially for student. If books are kept here and there, they take much of space in the room. People can buy a suitable bookcase according to the availability of space in their room. This would save the space as the books and files will no longer be scattered. Bookcase helps to keep the books organised and arranged.

The benefit of having a bookcase is that books will be easier to access. Furthermore, they are easily located when needed. When books are not organised in a case, it becomes difficult to find any book when it is needed in an instant. It saves time to have a bookcase. A bookcase is essential since it saves a lot of room in the house or hostel, which is especially vital for students. If books are scattered over the room, they take up a lot of space. People can purchase an appropriate bookcase based on the amount of space available in their room. This will conserve space because the books and documents will no longer be dispersed. The bookcase aids in the organizing and arrangement of the books.

Nowadays, there are a lot design of bookcase can be found such standard, cube, modular, leaning, corner, barrister, wood, metal, laminate, glass, traditional, modern, cotemporary and rustic. Bookcases in a home or library are typically large, tall, and heavy. For students, there is a small and light bookcase that is easier to carry and can be placed on their desk or table. However, the bookcases provided by IKEA only serve to store books and no other items such as stationary. As for a student, a normal bookcase is not a student friendly bookcase. Because of the issue, this study will focus on a multifunctional table bookcase for a student.

1.2 Purpose of Study

The objective of this case is to discover, develop, and increase the function of a bookcase that may be added to become a student-friendly table bookcase. Following that, the bookcase problem must be investigated in order to suggest a solution. This enables me to study the possibility of accessing sectors for new improvement items in order to evaluate if the product has market opportunity or otherwise.

1.3 Problem Statement

IKEA is one of the world's most well-known and successful home furnishings companies. This Swedish company sells a diverse selection of home accessories and interior design items. They are well-known for their modern design, environmentally friendly products, low prices, and flat-pack furniture. One of their most popular products is the bookcase. Their bookcase, on the other hand, is lacking. Students mostly learn from home during the COVID-19 era, which necessitates that they have a proper study environment in their room/house. Having a normal bookcase does not assist them in creating a good study environment. A student requires a desk space for books, stationary, a study lamp, and a mini fan. After all, these items need to buy separately instead of having them in at once. This can make the student's table look miserable and unorganized. Due to this, this case study will develop a multifunctional table bookcase that combine all this item at once for student named "6 in 1 table bookcase". The six items include bookcase, stationary rack, study lamp, mini fan, air humidifier and Bluetooth speaker.

2.0 COMPANY INFORMATION

2.1 Background

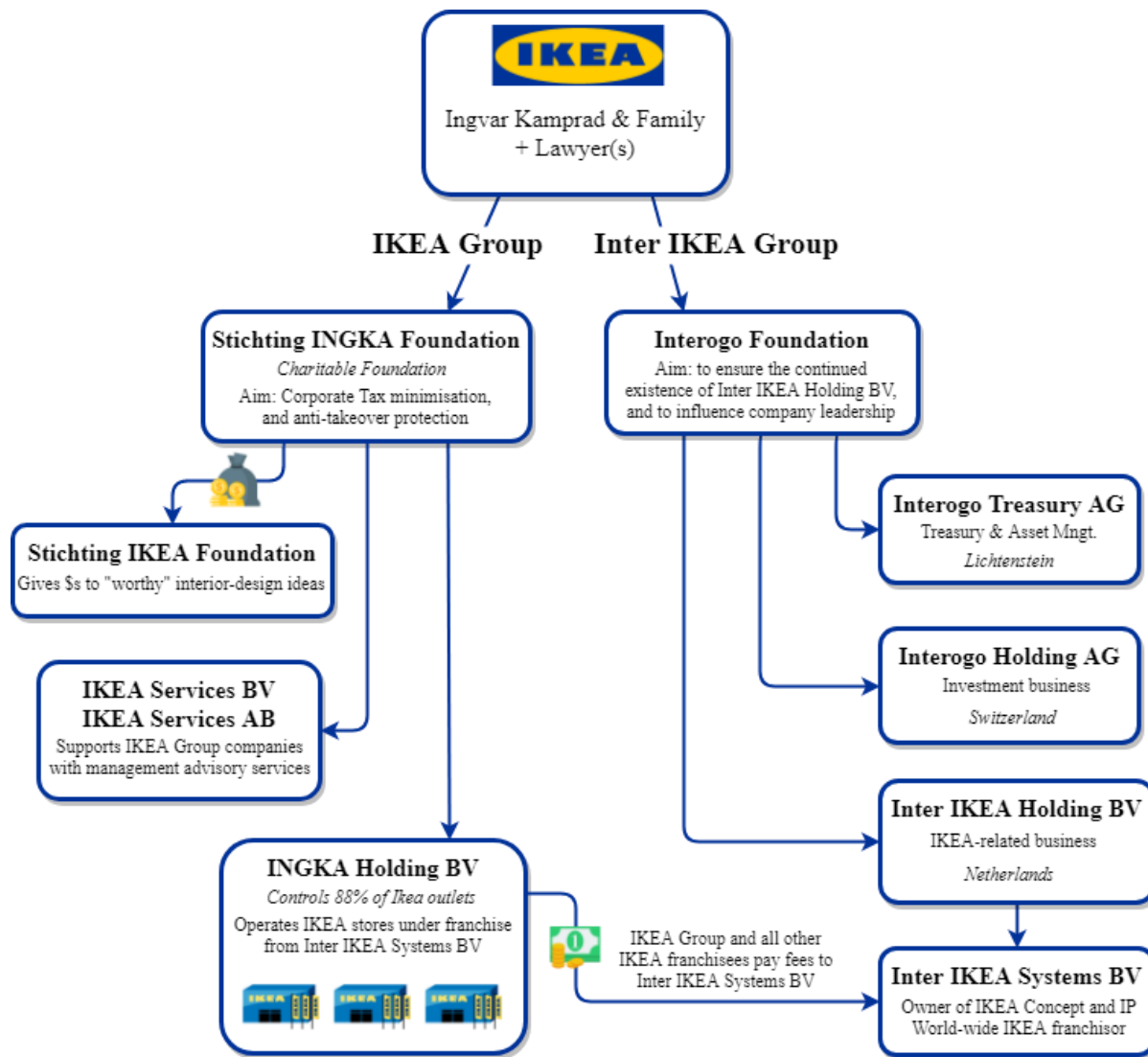
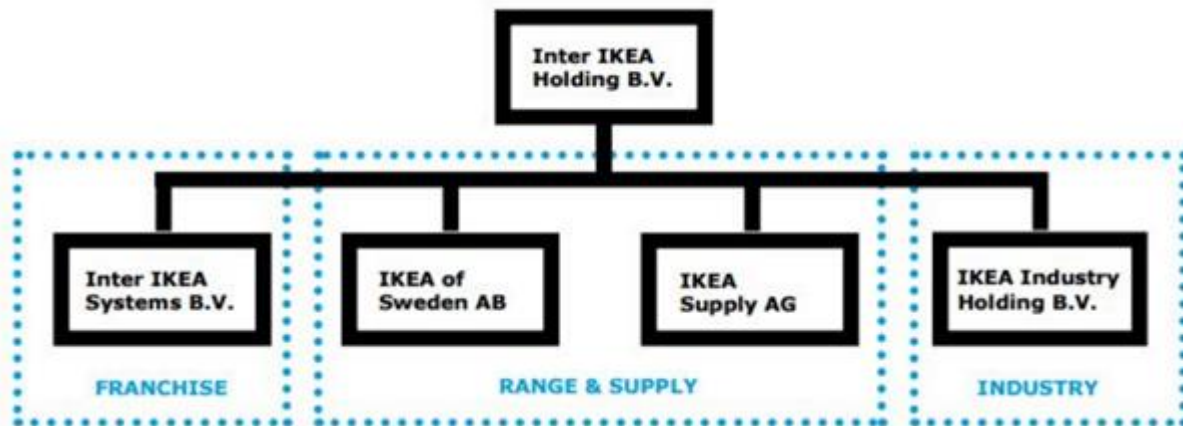
IKEA is a multinational conglomerate headquartered in the Netherlands that designs and sells ready-to-assemble furniture, kitchen appliances, and home accessories, among other goods and services. Ingvar Kamprad, a 17-year-old from Sweden, founded the company in 1943. Since 2008, IKEA has been the world's largest furniture retailer. The group's brand is an acronym made up of the founder's initials, as well as the initials of Elmtaryd, the family farm where he was born, and the nearby village Agunnaryd (his hometown in Småland, southern Sweden).

The group is well-known for its modernist designs for various appliances and furniture, and its interior design work is frequently associated with an eco-friendly simplicity. Furthermore, the company is well-known for its focus on cost control, operational details, and continuous product development, which has allowed IKEA to reduce its prices by an average of two to three percent. The IKEA Group is owned by INGKA Holding B.V., which is based in the Netherlands and is in charge of the centres, retails, customer fulfilment, and all other services related to IKEA products. At the same time, Inter IKEA Systems B.V., based in the Netherlands, is the owner and manager of the IKEA brand, which is owned by Inter IKEA Holding B.V. Inter IKEA Holding is also in charge of IKEA product design, manufacturing, and distribution. IKEA Group is a franchisee who pays Inter IKEA Systems 3% in royalties. For accounting and tax purposes, the IKEA Group and the Inter IKEA Group claim to be unrelated parties. They are, however, both controlled by the Kamprad family and close family associates. Members of the European Parliament have claimed that this corporate structure was designed to avoid paying more than €1 billion in taxes between 2009 and 2014. It is run by a number of foundations based in the Netherlands and Liechtenstein.

IKEA has 422 stores in 50 countries as of March 2021, and in fiscal year 2018, €38.8 billion (US\$44.6 billion) in IKEA goods were sold. All IKEA stores are franchised by Inter IKEA Systems B.V., with the majority of them operated by the IKEA Group and the remainder by other independent owners. IKEA's website contains approximately 12,000 products, and there were over 2.1 billion visitors to IKEA's websites between September 2015 and August 2016. The group accounts for about 1% of global commercial-product wood consumption, making it one of the largest users of wood in the retail sector.


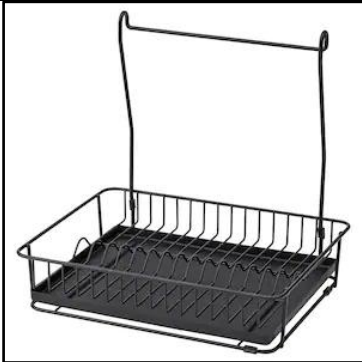
IKEA, the world's largest home furnishings retailer, is conducting a feasibility study and market viability study in East Malaysia, among other places. Arnoud Bakker, IKEA South-East Asia's head of leasing, stated that the company is always exploring all markets before deciding to open a physical store. As a result, he stated that IKEA is concentrating on improving and expanding its business through its assets in Mutiara Damansara (Selangor), Cheras (Kuala Lumpur or KL), Tebrau (Johor), and Batu Kawan (Penang). IKEA first opened a store in Malaysia in 1996, at the 1Utama Shopping Centre in Petaling Jaya, Selangor. In 2003, the Swedish furniture conglomerate opened Malaysia's first blue-box store in Mutiara Damansara. According to Bakker, all IKEA stores in Malaysia are in the top 50 out of more than 400 IKEA stores worldwide in terms of visitation. IKEA stores are run by franchisees who work for the company that owns the IKEA concept and is the world's largest franchisor, Inter IKEA Systems BV. Ikano Handel Sdn Bhd, the brand's franchisee in South-East Asia and Mexico, currently operates seven stores in the region, three in Malaysia, two in Singapore and Thailand, as well as several pick-ups and collection points.




2.2 Organizational Structure



2.3 Products/Services

IKEA contains more than 20 types of products and services which consist of more than 12,000 items. From household appliances, decoration, furniture, food, and many more. IKEA has been an attraction to all levels of people in shopping as it has varieties of products that have been offered at an affordable price. Here are some examples of the product and services.

Type of Product/ Services	Name of Product / Services	Description
1. Furniture	 Micke Desk	<ul style="list-style-type: none">● Spacious study desk● Available for other colors● Can easily move
2. Kitchen & Appliances	 Dish Drainer	<ul style="list-style-type: none">● Can be hung anywhere● Has water tray● Available for other colors

<p>3. Beds & Mattresses</p>	 <p>Gursken Bedroom Furniture set of 5</p>	<ul style="list-style-type: none"> • Available for other colors • Set of 5-bedroom furniture • Durable wood and high-quality plastics
<p>4. Storage & Organization</p>	 <p>SMASTAD/PLATSA Storage Combination</p>	<ul style="list-style-type: none"> • Available for other colors • Spacious organizer • Can be used as a make-up table, wardrobe, and others.
<p>5. Textiles</p>	 <p>Saltstar Fitted Sheet</p>	<ul style="list-style-type: none"> • High-quality cloth • Doesn't wrinkle easily • Has rubber to support the sheet from slipping

<p>6. Decoration</p>	<div> </div> <p>Potted plant</p> <div> </div> <p>Artificial plant</p>	<ul style="list-style-type: none"> ● 15 cm potted plant ● Available for other designs of plant ● Does not trap dust ● Can be styled up to our taste ● Has varieties of design
<p>7. Bathroom Products</p>	<div> </div> <p>Corner Shelf</p>	<ul style="list-style-type: none"> ● Can be hung at the corner of the bedroom ● Spacious ● Doesn't rust as it is made from aluminium

2.3.1 Other services

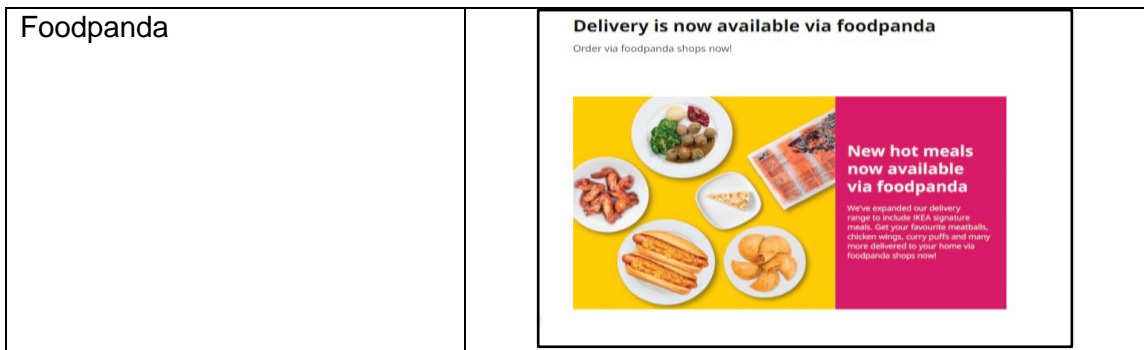
- Warranty

IKEA provided a warranty on their product. The guarantees start on the day of purchase. If any of the customer's purchases were broken or anything happened,

they can get a replacement and claim from the nearby stores. They just need to show the original purchase receipt as proof of purchase. Different types of products have different duration of the guarantee.


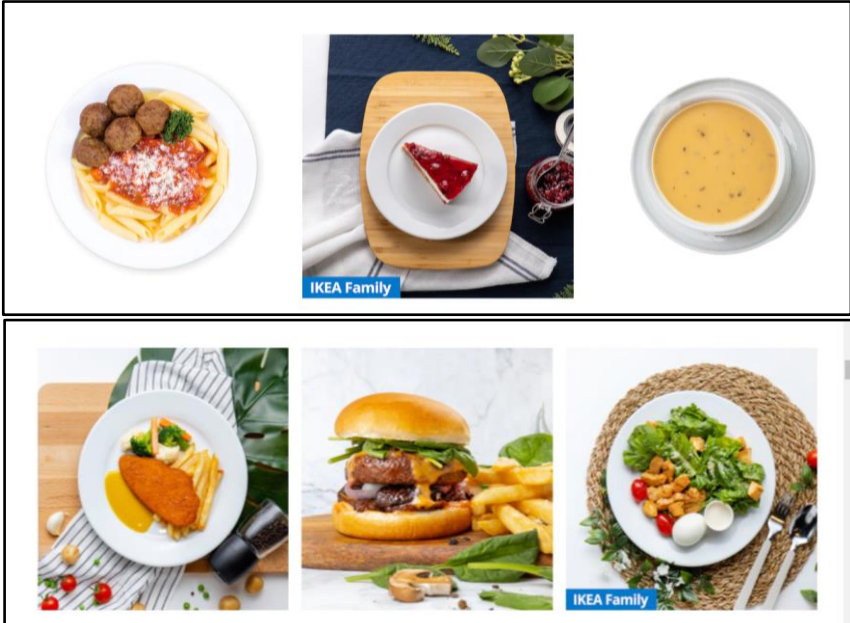
➤ Delivery

IKEA products are also available for delivery to the customers. For example, the furniture, bed, and mattresses. Customers could buy the product either in-store or via online purchase. Besides, IKEA foods and beverages are also open at all stores for delivery via Bungkuslt and Foodpanda, especially during this pandemic.



➤ Restaurants

Restaurant, Bistros, Swedish Food Markets, and Cafe in IKEA allows the purchase of foods via takeaway, order & collect and dine-in in the store.

<p>IKEA Food Order & Collect</p>	 <p>IKEA Food Order & Collect</p> <p>Step 1: Send your order to the following Whatsapp numbers during the following operation hours:</p> <p>Click on the number to order: Damansara: 017.235.7261 from 10am – 7.30pm. Cheras: 016.973.1649 from 10am – 7.30pm. Tebrau: 016.239.1283 from 10am – 7.30pm. Batu Kawan: 016.221.0028 from 10am – 7.30pm.</p> <p>Step 2: You may pick up your order at the following locations within 30 minutes after order is placed.</p> <p>Damansara: Bistro, Level G. Cheras: IKEA Bistro Kiosk, Level B1. Tebrau: Grab and Go Kiosk, P1 parking. Batu Kawan: Taxi stand/Bistro Kiosk, P2 parking.</p> <p>Step 3: Choose to pay your order by cash, credit card or debit card at Damansara, Cheras and Batu Kawan stores. For Tebrau store, only cash payment option is available.</p> <p>Place your order today!</p>
<p>IKEA Restaurant</p>	<p>Some of the foods that are being served:</p> 

➤ Outlet

IKEA has 445 stores located in many countries which enables customers to buy the product. The areas served are Europe, Middle East, North Africa, East Asia, South Asia, Southeast Asia, Oceania and North America.

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2.4 Technology

The latest invention from the retail giant is a fresh twist on an old problem that has many shoppers stumped when it comes to finding the right furnishings for their homes. Aside from that, IKEA offers an augmented reality (AR) component to their mobile application, which is the pure-play online retailer MADE.com, where it can superimpose a 3D modeled piece of their furniture into the viewfinder of customers' smartphones' cameras. IKEA was so impressed with Geomagical Lab's technology that they purchased the company.

Because many IKEA stores are currently closed due to the pandemic coronavirus, Geomagical Labs technology allows buyers to refine their home ideas while the stores are closed, and then order furniture that is delivered without touching it. They have developed a new technique that uses AI to analyse a sequence of panoramic images from the customer's phone to generate a 3D virtual copy of a room. Customers can use the 3D models to see the room in photographic detail, modify arrangements, and try out other models.

Aside from that, the firm has chosen a user-centric approach to the use of its customers' data, in keeping with the IKEA customer data promise, which is founded on respect for individuals and their privacy. As a result, any images used in conjunction with the new room design capabilities can be saved, reduced to only data components, or completely removed.

2.5 Business, Marketing and Operational Strategy

2.5.1 Business Strategy

1) Offering the reasonable prices

Cost-efficiency is a solid foundation for IKEA's competitive edge. The worldwide furniture distributor is able to offer low prices much appreciated to a combination of economies of scale and technology integration into different commerce forms.

2) Increasing variety of products.

A wide range of products is also included in IKEA's list of competitive advantages. The IKEA portfolio comprises 9,500 products and the company renews its product line by launching around 2,500 new products every year. The company is additionally expanding its nearness in nourishment and catering businesses.

3) International market expansion strategy.

The renovation and furnishing line has traditionally engaged aggressively in the development of new markets. IKEA gather works 422 stores in 50 markets around the world. 19 modern IKEA stores opened in 2018 alone. Additionally, IKEA has 22 Pick-up and Arrange Focuses in 11 countries, 41 shopping malls in 15 countries and 38 transportation locations in 18 countries.

4) Leverage strategic alliances.

Experience and skill in forming strategic alliances can be defined as one of IKEA's most important competitive benefits. The list of the foremost effective collaborations incorporate organization with Apple to investigate the conceivable outcomes of Expanded Reality as a device for home-furnishing, organization with LEGO for modern item advancement and association with Adidas in information sharing approximately client behaviour.

2.5.2 Marketing Strategy

1. Pricing

Reasonableness is a portion of the offering suggestion of the company. It is additionally critical to highlight the truth that it targets the mass showcase to capitalize on mass consumer culture. Based on the costs of its items, it utilizes a blend of penetration pricing techniques, cost authority, value-based pricing, and cost-plus estimating technique.

IKEA is not the as it were furniture producer in a specific geographic advertise. The best competitors of IKEA incorporate Groupe SEB, Ashley Furniture Businesses, Walmart, Bed Shower & Past, Amazon, Target, Dock 1 Imports, and Wayfair. Moreover, the Swedish aggregate too competes with nearby furniture creators and smaller ones. To preserve a competitive advantage, the company must make its items as reasonable as conceivable besides staying genuine to its special offering recommendation. The company at first built on an infiltration estimating technique to permit it to enter an advertisement and pick up showcase share.

The company did not raise the costs of its items significantly. Instead, it created capabilities required to lower costs related to fabricating, operations, and client procurement. In addition, the company coordinates other estimating considerations that rotate around value-based estimating and cost-plus estimating techniques to support assist its interesting offering recommendation. Since the company is presently the biggest furniture retailer within the world, it presently includes a cost authority advantage that permits it to decide costs within the advertisement.

2. Place

There are more than 440 IKEA retail stores across the globe. In Sweden alone, there are 52 retail stores while more than 270 stores operate in entire Europe. There are 52 stores in the United States and 35 in China. The largest store is located in the Philippines. The company also plans to expand further in South America and Southeast Asia.

Reaching the mass market too implies deciding and utilizing the foremost successful and effective dispersion channels. All things considered, the situation or dispersion technique of IKEA on a very basic level centers on worldwide retail operations. This operation has empowered the company to reach worldwide clients. It is curious that its retail stores ordinarily involve huge floor zones to exhibit the aggregate of its item offerings. Moreover, in expansion, these stores are either found in exterior cities or within city centers to create them moderately open to the public.

Retail operations require legitimate warehousing. Full-size stores have coordinates stockrooms. In any case, in cities with constrained arrival ranges such as Hong Kong, the company worked a few stores whereas keeping up a central stockroom in another area. IKEA executes an assortment of store plans and contemplations depending on the topography of a specific area. For illustration, in a few nations with constrained arrival regions and arranging limitations, retail stores serve as show exhibitions and give pick-up administrations in which clients would need to make in-store or online reservations.

3. Promotion by Social media

IKEA employs an assortment of limited-time strategies to advance its brand. The most special and most fruitful among the apparatuses utilized by IKEA to advance its brand is the limited time catalogs. These catalogs of IKEA items are printed in several dialects and distinctive catalogs are served different markets. Apart from interesting domestic outfitting thoughts, there are genuine life stories and a wide extend of items showcased through the hundreds of pages of the catalog. The catalog is accessible both in print and online. Apart from that an amplified form of the catalog is accessible within the IKEA app. The IKEA websites, distributions, brochures, publicizing, and open connection campaigns are too utilized for the advancement of the brand.

IKEA uses both traditional and digital channels to advertise and promote its brand. It has utilized social media to pull in and lock in clients. Isolated nation pages are utilized to lock in clients on Facebook. Pinterest, Twitter, Google, and other social media channels are moreover utilized by the brand to advance itself. From time to time, it moreover employs well planned open-air campaigns for advancement. Presently, IKEA is utilizing augmented reality to assist customers to get a better involvement of how well IKEA items fit into their homes and lives.

4. Promotion by Brand Promoters

When IKEA began growing to abroad markets, it investigated to discover the reason. The reason was that people's taste, fashion, and inclinations shifted from advertising to showcase and culture to culture. So, IKEA chose to bring changes to its products and marketing techniques procedures and adjust them to the local markets. It considered neighborhood societies and their favored styles sometimes recently presenting items in unused markets taking after which its items began offering and developing well known. From product designs to its catalogs all are created keeping nearby culture and tastes at the center.

2.5.3 Operational Strategy

IKEA utilizes an alternate business approach than its rivals. IKEA's operations must deal with big numbers because its items are very repeatable and specialised. As they offer, the scope of things the association needs to produce is low to medium.

The performance objectives relate to quality, speed, dependability, flexibility, and cost, all of which affect the adequacy of different systems, either straightforwardly or by implication.

These are the operational strategies from IKEA which are Long-term, Sustainable Relationships with Suppliers. A continuous flow of supply and stable prices, which helps minimise inventory management expenses in the long term. Following that, there's Do-It-Yourself Assembly and Flat Packaging. IKEA assembly reduces packing, inventory ordering, and administration expenses. Then comes the Cost-per-Touch Inventory Strategy. IKEA has a cost-per-touch inventory approach, which encourages consumers to choose goods in-store and take them to the checkout themselves, rather than having employees fetch them for them. Furthermore, Optimal Material Usage in Product Manufacturing. IKEA manufactures items with as little materials as possible, which results in cheaper transportation expenses as well as lower product handling and shipment costs. Finally, there are Min/Max Inventory Replenishment Options. The inventory management system responds to reorder points within the inventory, establishing precise reordering triggers for the minimum items available before reordering as well as the maximum amount of a certain product to be purchased.

3.0 PRODUCT ANALYSIS

A SWOT (strengths, weaknesses, opportunities, and threats) analysis is a planning process that assists a company or product in overcoming obstacles and determining which new leads to pursue. SWOT analysis assists organisations in developing a complete understanding of all the factors involved in making a business decision. Perform a SWOT analysis before committing to any type of company action, whether looking into new initiatives, revamping internal policies, looking for opportunities to pivot, or changing a plan in the middle of its execution. Make recommendations and strategies based on SWOT analysis, with a focus on leveraging strengths and opportunities can overcome weaknesses and threats.

Below is the SWOT analysis of table bookcase:

<p style="text-align: center;">Strength</p> <ul style="list-style-type: none">➤ High demand product➤ Affordable price➤ Strong brand image➤ Simple and strong➤ High quality	<p style="text-align: center;">Weakness</p> <ul style="list-style-type: none">➤ Not multifunction➤ Take too much space on a table
<p style="text-align: center;">Opportunities</p> <ul style="list-style-type: none">➤ New development in function➤ Target students as main users➤ Come with different size for customer to choose depend on their table's size➤ Widen the product marketing	<p style="text-align: center;">Threat</p> <ul style="list-style-type: none">➤ Competition from others famous brand company➤ Easy to imitate by other company as the product is easy to make➤ Compete with existing product

3.1 Strength

There are numerous strengths of these products that have been explored. To begin with, the product is in great demand. Every home, workplace, and library require a bookcase or bookshelf to keep the books or files, indicating that bookcases are in great demand. However, bookcases are widely available in stores, therefore the product is available, and make the price is reasonable for customer to buy it. Furthermore, this product has a strong brand image. IKEA is a well-known company for its home furniture products. As a result, the bookshelf supplied by IKEA appears trustworthy and of good quality. Metal and wood were used to create this table bookshelf. In addition to pallet shelves, which are a prevalent kind of hardwood shelving, several industrial shelf systems incorporated metal frames and wooden boards. The most frequent timbers used for them are plywood, oak, and koa. This is because these woods are generally inexpensive and easy to obtain, as well as having a high strength for a variety of applications and holding goods. Finally, the bookcase is simple and sturdy because it is made of high-quality materials.

3.2 Weakness

On the other side, the product's shortcoming is that the bookcase can only hold books and not other book-related items such as stationery. To put it another way, the bookcase is not multifunctional. The term "multifunction" refers to the bookcase's ability to be paired with a stationary rack, a study lamp, a mini fan, an air humidifier, and a Bluetooth speaker. These materials are vital for students since they require them to create a pleasant study area in their room, where students now need to online distant learning during pandemics. Furthermore, a standard bookcase takes up too much room on a table. This issue may bother the user since the table in their room or hostel may be tiny.

3.3 Opportunities

In terms of opportunities, this product has the potential to grow in its function. More features, such as a stationary rack, a study lamp, a mini fan, an air humidifier, and a Bluetooth speaker, will draw more consumers to the product. These things will entice students to purchase them since they are necessary for their educational purposes. The product is then offered in a range of sizes for students to choose based on the size of their table. This table bookcase will come in three different sizes: small, medium, and large. Customers or

students can make their own option based on table size. In addition, the product has the potential to broaden marketing and increase sales.

3.4 Threat

Threats are defined as anything that could harm the product. The threat to this table bookcase is that it is easy to imitate by other companies because the product is easy to make. Imitation can help other companies avoid the mistakes made by this table bookcase, and it can also help them upgrade and add something new to an already existing product. This problem allows another company to enter that market, reducing the risk of this product failing. Moreover, there are already have other home furniture brand company such as Ashley Home Store, Restoration Hardware and Kartell thus make it a competitor for IKEA. The final threat is that this product must compete with existing products. There are several bookcases and bookshelves available, each with a unique style but the same function: to hold books.

4.0 FINDING AND DISCUSSION

4.1 Finding

IKEA is one of the world's most well-known and profitable home furnishings brands. This Swedish firm also provides home décor and interior design materials. They are well-known for their contemporary designs, environmentally friendly goods, affordable costs, and flat-pack furniture. One of the living room appliances is bookcase. The bookcase that used for stored book still have several problems.

4.1.1 Problem 1: Not multifunction

This product's shortcoming is that the bookcase can only hold books and not other book-related items such as stationery. To put it another way, the bookcase is not multifunctional. The term "multifunction" refers to the bookcase's ability to be paired with a stationary rack, a small light, a mini fan, an air purifier, and a Bluetooth speaker. These materials are vital for students since they require them to create a pleasant study area in their room, where students now need to online distant learning during pandemics.

4.1.2 Problem 2: Take too much space on a table

A normal bookcase takes up too much room on a table. This issue may bother the user since the table in their room or hostel may be tiny. When the bookcase takes many spaces, it may not have enough space to put other thing on the table.

Figure 1 below shows IKEA table bookcase that are not multifunction and take a lot of space:



Figure 1

4.2 Discussion

4.2.1 Suggested solution for Problem 1: Make the bookcase multifunction

According to regular bookcase, the only function is store book. This table bookcase intends to assist student organize theirs table. As for this solution, the bookcase can combine with additional study equipment for students such as stationary rack, small lamp, mini fan, air humidifier and Bluetooth speaker. Students require stationary rack to place their stationary properly for example pencils, scissor, correction tape, highlight, ruler and rubber. Students require small light in order to aid them for remain up late to study or performing assignment. Students comfortable utilizing little light since they can bring it anyplace anytime they want to use. As for tiny fan, when the heat is hot outdoors and people can't rely on air conditioning to cool them down, a portable little fan might seem like a lifeline. These fans utilise evaporating water's cooling capacity to deliver respite in hot weather and are also excellent for the environment. This is the reason why student buy tiny fan for their personal comfort. As for the air humidifier, it can reduce difficulties caused by dry air. Disease such as dry sinuses, bloody noses and chapped lip, humidifiers can help alleviate these basic issues produced by dry indoor air. And cool-mist humidifiers also may help reduce symptoms of a cold or other respiratory disease. In current pandemic period, air humidifier plays crucial function to refresh the atmosphere, eliminate the germs and avoid stench in the room. A Bluetooth speaker may provide audio output that can be heard by the listener. Speakers are transducers that transform electromagnetic waves into sound waves. The speakers accept audio input from a

device such as a computer or an audio receiver. Students need it for online class to obtain a better lesson from their speaker. These six components play significant roles for student in order to have a decent learning environment. According to Hendrix. E (2019), research has found that learning environments play a crucial role in student success. Several factors can affect learning ability, including seating, light, noise, and even colour. Students who study in a positive learning environment have been shown to be more motivated, engaged, and have a higher overall learning ability. Along with this issue, by combining all these important items may produce this table bookcase to be a multipurpose for a student or a lecturer.

4.2.1 Suggested solution for Problem 2: Resize the table bookcase

This table bookcase will come in three different sizes: small, medium, and large. Customers or students can make their own option based on table size. Reasonable size offers a feeling of scale and proportion for each area and can make it simple, or difficult, for people to travel from one place to the next. By appropriately addressing the heights of these table bookcase, it produces an atmosphere and creates a degree of comfort throughout people home or room. Customer must feel user friendly while having numerous sizes for the table bookcase.

5.0 RECOMMENDATION AND IMPROVEMENT

Based on SWOT analysis, this table bookcase has many advantages also a few disadvantages. If this innovation were successful, it would be a great product that could help students in the future.

The solutions that could be proposed to resolve the problem is to upgrade the use of bookcases to be multifunctional. As previously stated, there are numerous items that are essential for students and can be combined to simplify the students' lives. The following items must be combined with the bookcase: a stationary rack, a small lamp, a mini fan, an air humidifier, and a Bluetooth speaker. These items play an important role in assisting students during online distance learning. The second option is to make the bookcase customizable in terms of size and design. Students in the hostel are unsure of the type and size of table they will be assigned. Students, on the other hand, can purchase this table bookcase in a variety of sizes to fit their table. This table bookcase will be available in three sizes: small, medium, and large.

Figure 2 below shows that student does not have a table bookcase to organize her items:



Figure 2

5.1 METHOD PRODUCING 6 IN 1 TABLE BOOKCASE:



A table bookcase



Add stationary rack beside
to the table bookcase



Add study lamp behind the
stationary rack

This part is stretchable
so user can pull out
the lamp for 40 cm
high



This part is stretchable so user can pull out the fan for 30 cm high



Add mini fan beside to the stationary rack



Add air humidifier beside to mini fan



Add Bluetooth speaker under the mini fan and the air humidifier



6.0 CONCLUSION

IKEA is a well-known brand that is famous for its modernist designs for a variety of home furnishings and appliances, and its interior design work is frequently associated with an eco-friendly sense of aesthetic. IKEA created a new unified lifestyle emphasizing low-cost furniture and home furnishings. IKEA succeeded in making cheap furniture socially acceptable worldwide while simultaneously reducing costs. IKEA's furniture designs unified style, production, distribution and marketing functions. One of the IKEA famous product is bookcase. This case study focusses on the table bookcase and its function. The purpose of this study is to develop a multifunctional table bookcase that target students for our main customer. The multifunctional table bookcase is convenience for student. Customers or especially a student will find this product is convenience because it combines the bookcase, stationary rack, study lamp, mini fan, air humidifier and Bluetooth speaker. These six items are important for student as they need them for developing a comfortable study area in their room where students nowadays need to online distance learning during pandemic. Besides, this product is easy to get as it is not complicated to make. The materials use to make this table bookcase are metal and wood. Many industrial shelving systems used metal frames and wooden boards, in addition to pallet shelves, which are a common type of wooden shelving. Plywood, Oak, and Koa are the most common woods used for them. This is due to the fact that these woods are relatively cheap and easy to get, as well as having a high strength for a range of applications and holding items. This product does not require a large budget because the things required, such as a study lamp, mini fan, air humidifier, and Bluetooth speaker, are inexpensive and readily accessible. Additionally, the price is affordable of customer to buy. Not just that, the lamp and fan are stretchable thus make it easier to use. At last, high quality of those items. Although these things are accessible at any shop for a reasonable price, our team will manufacture these products in order to obtain the greatest quality of these products to be combined with the bookcase in order to preserve the product's longevity. However, this product's weakness is that it must be placed near a socket to charge the study lamp. Customers may be troubled by this issue if they need to place the bookcase near a socket. Furthermore, because the six pieces are attached to one another, this product is difficult to fix if one of them breaks. Furthermore, the product will take a long time to fix because the expert will have to open each component one by one. As the conclusion, there are many strengths than weakness to produce this multifunctional table bookcase. I believe that this product will be successful if we introduce it to the market.

7.0 REFERENCES

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8.0 APPENDICES

