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UNIVERSITY OF TECHNOLOGY



# **Closing the Loop: Adapting a Circular Business Model for IKEA Taiwan**

Master's thesis in Management and Economics of Innovation

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Business Model for IKEA Taiwan

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*Cover:*  
*The IKEA logotype*

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## **Abstract**

This master's thesis investigates how a circular "Refurbish & Resell" business model can be successfully implemented on the Taiwanese home furniture market, taking economical, environmental, and social aspects into consideration. The objective is to formulate a recommendation and implementation plan for IKEA Taiwan that aligns with IKEA's strategy regarding sustainable and circular practices, as well as contributing to the field of circular business model implementation within the furniture industry. Data was collected through means of interviews, a survey, a pilot project, and secondary sources. The interviews showed that other IKEA entities have developed a variety of different Refurbish & Resell business models that can be drawn upon. For Taiwan specifically, the survey showed that higher income does not correlate with higher WTP with regards to a proposed Refurbish & Resell offering, but rather younger and lower income consumer groups are recommended target segments for the new offering. Opportunities connected to the Refurbish & Resell business model include low labor costs in Taiwan, franchisee independence in operating new business models while challenges include a lack of interest in second hand among Taiwanese consumers. The business model was also found to be closely aligned with IKEA's overall strategy of environmental and social governance. In the short term, IKEA Taiwan should focus on continuing to develop the pilot project, outsource refurbishment, and develop the technical infrastructure that allows for convenient buy-back operations. In the long term, refurbishment should be done in-house to minimize costs and environmental impact of logistics.

Keywords: IKEA, Taiwan, Circular Economy, Circular Business Model, Triple Layered Business Model Canvas (TLBMC), Market Research



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Sincerely,

Handwritten signatures of Adam Englund and Arvid Hanson in black ink.

Adam Englund & Arvid Hanson  
Gothenburg 2021





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# 1

## Introduction

This thesis focuses on circular economy and the implementation of circular business models. The specific business case was provided by *IKEA Taiwan* with the task of investigating how a “Refurbish & Resell” business model can be successfully implemented by *IKEA* in Taiwan in a way that aligns with *IKEA*’s overall economic, environmental and social goals. The *Triple Layered Business Model Canvas* (Joyce and Paquin, 2016) has been chosen as the main theoretical framework in which to analyze relevant input from *IKEA* staff and customers and to serve as basis for the final recommendation.

### 1.1 Background

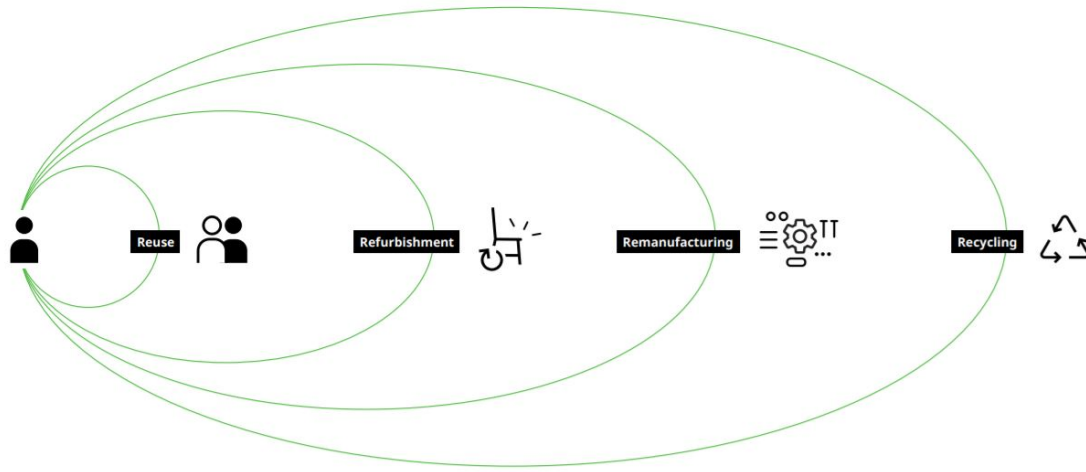
Since the beginnings of the industrial revolution, the dominating model of resource consumption has been a linear one that follows the ‘take-make-dispose’ pattern (MacArthur et al., 2013). In recent decades, increased focus on humanity’s impact on climate change has led to a questioning of prevailing economic consumption patterns. One of the outcomes of this has been the development of the concept of *circular economy*.

A circular economy can be defined as a “regenerative system in which resource input and waste, emission, and energy leakage are minimized by slowing, closing, and narrowing material and energy loops through long-lasting design, maintenance, repair, reuse, remanufacturing, refurbishing, and recycling” (Sariatli, 2017). This can be compared to the traditional, linear economic model, where value-making activities typically come in a sequence of take-make-dispose, without any intentions of maintaining resources in the economy for a longer period. As resources become more scarce, the linear model is not able to uphold the high demands of today’s society in the long term, making a move toward circular practices essential if a sustainable global economy is to ever be reached.

*IKEA* is a multinational furniture retailer and one of the world’s largest private companies, making them an important player in the pursuit of a sustainable global economy. For a long time, *IKEA* has offered low-cost products that consumers tend to see as more or less disposable, increasing the speed of consumption according to the traditional linear consumption pattern. Therefore, *IKEA* have asserted a strong commitment to sustainability and to changing the way consumers view and utilize *IKEA* products. The ambition is to meet the UN Sustainable Development Goals by

2030, which will require efforts in a broad array of areas. In order to achieve these goals, IKEA has chosen to focus on combating three key challenges; unsustainable consumption, climate change, and inequality (IKEA Group, 2021a).

To combat climate change, IKEA aims to become circular and climate positive by 2030, which in quantitative terms means that IKEA must reduce its climate footprint by 15% compared to 2016 (IKEA Group, 2021a). One of the ways to do that is by working to prolong the life of all new materials and products by shifting to circular business models. Within its circular business models, IKEA defines four different circular loops, namely reuse, refurbishment, remanufacturing, and recycling, as seen in Figure 1.1 (IKEA Group, 2021a).



**Figure 1.1:** The four circular loops of IKEA's business models.

IKEA is actively assessing opportunities to create new ways of creating value while reducing their climate impact through these four loops. One of the circular loops, refurbishment, is currently being evaluated through a test project in Eskilstuna, Sweden. There, a second hand store has been set up to sell damaged and repaired IKEA furniture.

## 1.2 Literature Gap

There is extensive literature on how circularity can be theoretically incorporated into business models (see literature review by Stubbs and Cocklin (2008)), as well as studies detailing how specific products can be adapted into a circular business model (see Mont, Dalhammar, and Jacobsson (2006)). Many articles note the fact that even though much research is being conducted within circularity, adoption of circular practices within industrial and consumer markets has been slow. Linder and Williander (2017) argues that circular business models are inherently more uncertain for the entrepreneur, as revenues are spread out throughout the products life

cycle, rather than at the time of purchase as is the case with linear business models. This makes it difficult to calculate pricing and adapt products to new technology innovation and changing tastes in a cost effective manner. Guldmann and Huulgaard (2020) adds to this by citing several reasons for lack of adoption, such as taxation and regulatory barriers (as an example, he highlights the fact that many countries label recaptured products as 'waste', which legally complicates their usage). He further mentions that achieving management buy-in may be difficult in risk-averse companies that traditionally focus on linear business models.

As for the furniture industry, studies have mostly focused on the impact of product design and manufacturing on circularity. For example, Koszewska and Bielecki (2020) argues that standardized product components are key for enabling a circular business models for furniture manufacturers. Rosman (2018) makes the case that modular product design is a way to achieve circularity within the furniture market, as it allows for updating the aesthetics or function to fit the needs of a subsequent user.

There has been a wide array of circular business model implementation case studies within different industries. By leaning on five case studies of circular business model focused firms across different geographies, Ranta, Aarikka-Stenroos, and Mäkinen (2018) argues that important enablers for creating value through circular business model were cost efficiency in circular operations, sufficient incentives for customers to participate in take-back services and ability for organization to focus on circularity within different steps of the value chain.

There is little literature however about business model implementation within the furniture industry. This paper aims to add to this field by outlining how a circular business model (more specifically, a Refurbish & Resell business model) can be practically adapted into the existing retail offerings of IKEA Taiwan.

## 1.3 Problem

IKEA Taiwan has a goal of aligning themselves with the overall IKEA strategy of achieving a circular business by implementing a Refurbish & Resell business model in a Taiwanese context. A Refurbish & Resell business model means refurbishment and resale of used furniture. While IKEA has implemented pilot projects of a Refurbish & Resell model in Sweden and in other markets, it has yet to try the concept on the Taiwanese market. As with any new venture in a foreign market, there are several considerations that must be taken into account, such as cultural differences, economic factors and market conditions. For example, there are significant differences in sustainability awareness and behaviors between Swedish and Taiwanese consumers (Berglund et al., 2019), which likely calls for different approaches. Through a successful implementation, IKEA Taiwan can achieve greater economic returns via additional sales and environmental benefits through the closing and prolongment of product and resource loops.

### 1.4 Purpose

The purpose of the project is to develop a circular business model for refurbishment and reselling of furniture on the Taiwanese market, and to evaluate how it can be successfully implemented at IKEA Taiwan in a way that aligns with IKEA's economic, environmental and social goals. With the purpose in mind, the project will focus on solving one main problem:

- How can a circular business model for a furniture refurbishment and reselling service be successfully implemented on the Taiwanese market, while taking into account economic, environmental and social goals?

### 1.5 Limitations

The report will not go into detail when it comes to the financial figures underlying the new business model. Although a specific business plan will be erected and possibly implemented at IKEA Taiwan, the report will only contain the business model without specifics of financial data or sensitive information.

The sampling for customer interviews and the survey will be performed using a convenience sampling method, which means that the views of the interviewees/respondents may not necessarily reflect the views of the overall public. This will be taken into consideration throughout the analysis. The customer survey is sent out to IKEA Taiwan employees, which may impact the objectivity of the results.

Furthermore, the fact that the authors are working closely with IKEA to design the business model broaches the question of bias and independence. There is an inherent risk of positively biased recommendations as a result of having a close relationship to IKEA and that much of the data collection will consist of retrieving information about how IKEA have done in similar projects. Therefore, experiences from past projects will be collected with this in mind, and the researchers will take this potential bias into account when forming analysis and recommendations.

### 1.6 Societal and Ethical Aspects

The customer interviews and survey data will be anonymized, in order to minimize privacy concerns. Additionally, as the customer interviews will largely be conducted in Mandarin, there is a risk that views and nuances will be lost in the translation process.

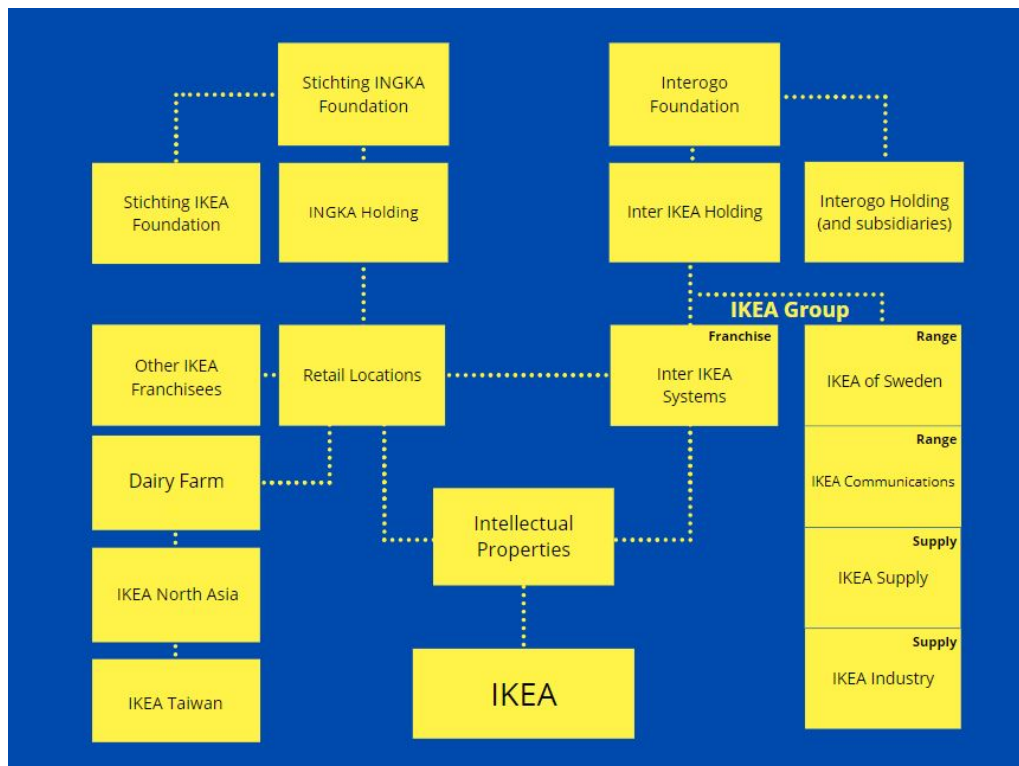
# 2

## Empirical Background

In this chapter, the IKEA concern and IKEA's work with sustainability and circular practices is introduced, followed by a presentation of second hand data about the Taiwanese consumer market and how cultural values differ from other cultures relevant to the study. Corporate social and environmental responsibility and the workings of a multinational corporation is then looked into, focusing on the relationship between headquarters and subsidiaries.

### 2.1 IKEA Structure

As the research focuses on developing a circular business model for IKEA Taiwan, a brief introduction to the corporate structure of the IKEA conglomerate is in order.



**Figure 2.1:** A simplified illustration of the IKEA structure, showing how the businesses relate to each other. Several subsidiaries are not included.

The ultimate parent company of the IKEA brand is *Inter IKEA Holding B.V.*, located in the Netherlands. This holding company is in turn owned by *Interogo Foundation*, a foundation with its base in Lichtenstein. Inter IKEA Holding has several subsidiaries, relating to either of their three core businesses; franchise, range, or supply (see Figure 2.1). The companies held by Inter IKEA Holding are collectively referred to as the *Inter IKEA Group*, or simply IKEA Group (IKEA Group, 2021c). Throughout this study, Inter IKEA Group will be referred to as Inter IKEA.

The main companies in each core business in the Inter IKEA Group are *Inter IKEA Systems B.V.*, which is the worldwide IKEA franchisor, *IKEA of Sweden AB*, which develops and designs IKEA products, as well as *IKEA Supply AG* and *IKEA Industry AB*, two companies that together are responsible for sourcing, distributing, and manufacturing of products (IKEA Group, 2021c).

As mentioned, Inter IKEA Systems are the owner and franchisor of the IKEA concept. They continuously develop the IKEA concept to fit into new and existing markets. Currently, the concept is franchised to 12 different franchisees, with the biggest being Ingka Group, which is another group of firms within the IKEA ecosystem. It is owned by the Stichting Foundation in the Netherlands and operates stores in 31 countries. Another franchisee is *Dairy Farm International Holdings*, hereafter referred to as Dairy Farm, a conglomerate that owns the right to use the IKEA concept in four countries, among them Taiwan. The stores in Taiwan are operated by IKEA Taiwan, which is a subsidiary of *IKEA North Asia*, which in turn is a subsidiary of Dairy Farm (IKEA Group, 2021b).

## 2.2 IKEA Sustainability Strategy

In order to understand why IKEA Franchisees are pursuing circular business models such as Refurbish & Resell, it is vital to understand IKEA's larger sustainability strategy. The IKEA Group's sustainability strategy, called *People & Planet Positive*, aims to create sustainability across the IKEA value chain by making all parts of the IKEA business adhere to the same sustainability agenda, while also setting their own goals and targets to follow up on. The commitments are set in line with the UN Sustainable Development agenda for 2030, with the intention for the entire IKEA ecosystem to become climate positive by 2030 (IKEA Group, 2021a).

## 2.3 IKEA Second Hand Store

As part of IKEA's sustainability strategy, an IKEA second hand store is currently being tested at ReTuna Shopping Center in Eskilstuna, Sweden. It is the first store of its kind, with the purpose of prolonging the life of IKEA products. The project aims to test the business model of procuring old IKEA furniture for cleaning, refurbishing and reselling on the second hand market, in order to gain experience and insights for future sustainability work (IKEA Group, 2021d).

## 2.4 Background to Taiwan's Economic and Cultural Situation

Taiwan's economy has had a steady surge during the past 30 years, exhibiting an average growth in GDP per capita (PPP) of about 8 percent per year (Knoema, 2021). This has led to an increase in overall consumption as well as to changes in consumer habits. The average size of households in Taiwan was 3.1 persons in 2008, which is when the most recent national household survey was conducted. 1.7% of total household expenditure goes to furniture and household equipment (Banco Santander, S.A, 2021).

Wages in Taiwan remain relatively low compared to Sweden, with the average monthly wage being \$1,920 USD (National Statistics, R.O.C, 2021), compared to \$3,891 USD in Sweden and \$3,218 USD in Japan (OECD, 2021). Average manufacturing costs also differ significantly with manufacturing hourly compensation costs in Taiwan being \$9,46 USD in 2012, which is 19.0% of Sweden's figure (\$49.80 USD) and 26.3% of Japan's (\$35.34 USD) (US Dept. of Labor Statistics, 2012). Prices at IKEA however, are roughly the same, with a basic *Billy* bookshelf costing \$59.47 USD in Sweden, \$71.17 USD in Taiwan and \$64.32 USD in Japan.

According to Banco Santander, S.A (2021), Taiwanese consumers are likely to be brand loyal and price sensitive. This results in strong market positions for leading brands, while weaker brands tend to compete via price competition. Quality of products and after-sales service are additional factors that exhibit a strong influence on consumer behavior. Taiwanese consumers also tend to spend a lot of time online, in online shops or on social media. People in the older age spans have greater purchasing power than other segments, in part due to the positive evolution of investments in the Taiwanese sector during the previous decades. The younger segments are generally more price sensitive, tech savvy, and committed to sustainability and environmental care (Banco Santander, S.A, 2021).

*World Values Survey* is a non-profit association that researches on values and beliefs of people from different countries (World Values Survey, 2021). The most recent study on Taiwanese values was conducted in 2017, and contains some interesting insights. When asked to rate the importance of six different factors, the respondents valued family and work the highest by far, followed by leisure time, friends, and religion. Politics was the least important factor of the six. In a separate question about what the government should prioritize, 63% of respondents rated protecting the environment as more important than ensuring economic growth (World Values Survey, 2017).

The home furniture market in Taiwan is described as mature and stable, with many local players competing for market shares. Although Taiwan is one of the largest exporters of metal furniture items, the most common type of furniture in Taiwan is wooden furniture. Due to increases in disposable income, the demand for home furniture is growing quickly and expected to continue to do so in the next few years.

Additionally, Taiwanese consumers tend to be willing to pay a premium for personalized furniture. Notable design trends for home furniture in Taiwan are simplicity, elegance, and blending Eastern and Western styles (Mordor Intelligence, 2021).

When it comes to marketing and reaching out to Taiwanese consumers, Hootsuite Digital Report (2021) reports that Taiwanese consumers are avid Internet users and that social media engagement is relatively high compared to other countries. 82.6% of the total population use social media, and more than 80% of people aged under 55 had purchased a product online in the past month when the survey was conducted. For young people especially, social media platforms such as Youtube, Facebook, Line and Instagram are good channels for marketing (Hootsuite Digital Report, 2021).

Moreover, Nyilasy and Gangadharbatla (2015) did a study on how to best reach out to environmentally conscious consumers, referred to as *green consumers*, online. The study looked into the online patterns and habits of green consumers, concluding that green consumption is strongly correlated with Internet usage, and that social media stands out as the best platform to reach the heaviest green consumers.

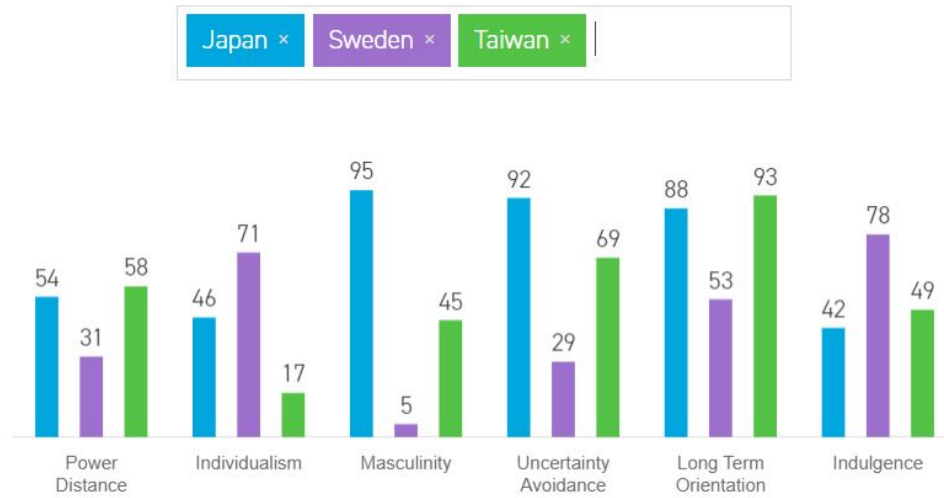
### 2.5 Hofstede's Cultural Dimensions

Hofstede's Cultural Dimensions framework can be used to define how the national cultural aspects of a society impact the values and behavior of its members. There are six dimensions along which a national culture/country can place itself:

- Power Distance
- Individualism/Collectivism
- Masculinity/ Femininity
- Uncertainty Avoidance
- Long/Short Term Orientation
- Indulgence/Restraint

The *Power Distance* dimension is defined by Hofstede (2011) as to which extent that the less powerful members of organizations or institutions accept and expect power to be distributed unequally, effectively representing the acceptance of inequality in a society from the view point of the less powerful. *Uncertainty Avoidance* relates to how comfortable members of a culture are with unstructured situations, and suggests that cultures with higher degrees of Uncertainty Avoidance employ stricter behavioral codes, laws and rules. The *Individualism/Collectivism* dimension describes how loosely or strongly bound individuals in that culture are tied to and identify themselves with societal groups, and the *Masculinity/Femininity* dimension refers to the kind of values that permeate a culture. Cultures with high degrees of Masculinity tend to admire strength, competitiveness, and social status, whereas more feminine cultures emphasize caring, modesty, and work-life balance.





**Figure 2.2:** Comparison of cultural aspects between Japan, Sweden and Taiwan.

*Long/Short Term Orientation* indicates a culture's inclination towards either long or short term thinking. A long term oriented culture tends to have a high acceptance for adapting to circumstances, whereas a more short term oriented culture sees things such as traditions, values, and behavior as fixed and sacred. The last dimension, *Indulgence* versus *Restraint*, is the latest addition to the cultural dimensions framework. It complements the Long/Short Term Orientation dimension by describing to which degree a society allows for free and uncontrolled gratification of human needs, referring to Indulgence, or if gratification is controlled and regulated by strict social norms, implying Restraint (Hofstede, 2011).

Asian countries tend to be long-term oriented and have a tendency toward Restraint rather than Indulgence (Hofstede, 2011). As seen in Figure 2.2, which compares the three countries relevant to this thesis, namely Taiwan, Sweden, and Japan, Taiwan does have a high degree of long-term orientation but a medium degree of restraint versus indulgence. The society is also categorized as a very collectivist society, more than Japan, and has a medium degree of power distance and masculinity. Uncertainty Avoidance is fairly high in Taiwan, although not as high as in Japan.

## 2.6 CSR and Environmental Sustainability

As the challenges of modern society are being spotlighted, pressure increases on businesses to take on a broader, societal responsibility, beyond the traditional role of firms that only called for accountability towards shareholders. As a result, today's businesses tend to lay great emphasis on the notion of *Corporate Social Responsibility* (CSR). CSR is defined by the United Nations Industrial Development Organization (2021) as "a management concept whereby companies integrate social and environmental concerns in their business operations and interactions with their stakeholders". The definition of CSR has evolved over the years, from being a purely external activity detached from the business' core operations, to being an integrated

part of corporate strategy, business models and value-making activities within the firm (Agudelo, Jóhannsdóttir, and Davídsdóttir, 2019).

From a business perspective, CSR presents not only additional responsibilities, but also opportunities. There is both an ethical and a strategic dimension to practicing CSR, since CSR activities usually include a downside in the form of an economic cost but also an upside since the public's perception of the firm and its brand increases (Johnson, Ashoori, and Lee, 2018). This has led to the effects of CSR being debated, as there are cases where the perceived benefits of a bettered image are much less than the cost of investment, while a sensible CSR policy in other cases might lead to increased profits in the long term (McWilliams and Siegel, 2000).

CSR is a good tool for firms to include in their business models as it increases the firms' self-awareness of businesses with regards to their societal impact. It also encourages corporate activities that counteract any negative externalities that a business gives rise to (Jason Fernando, 2021). According to McWilliams and Siegel (2001), CSR activities must be aligned with and integrated into a business model in order to be successful.

## 2.7 International Business Research

The ways that subsidiaries operate and relate to the core corporate functions within large global corporations have been studied extensively throughout the years. This section aims to explore what the relationship between headquarters and subsidiaries can look like within a multinational corporation and how initiatives can be carried out on a subsidiary level within the limits of the corporate strategy.

### 2.7.1 Multinational Corporations (MNCs)

A Multinational Corporation (MNC) is structured like a network with hierarchies, where the *Headquarters (HQ)* has a central role in leading and managing network members. The HQ is responsible for setting a corporate strategy that defines the businesses areas that the MNC should be involved in. The corporate strategy should permeate all parts of the MNC and act as a guideline for the business strategies and initiatives developed by network members. The HQ also coordinates the initiatives put forth by network members and can have a varying degree of involvement in lower-hierarchy projects (Ciabuschi, Dellestrand, and Nilsson, 2015).

The network members are referred to as *subsidiaries* and tend to be located far away from the HQ. They are semi-autonomous entities that can act independently within the restraints of the corporate strategy. The degree to which a subsidiary acts autonomously is often determined by the *hierarchical authority* of the HQ. A subsidiary often has specialized capabilities, resources and knowledge specific to the local market (Ciabuschi, Dellestrand, and Nilsson, 2015).

Subsidiaries engage in intra-firm rivalry for new mandates to develop their role, while also needing to cooperate with other subsidiaries to achieve the shared goals of the MNC. This duality of cooperative and competitive behavior, referred to as *coopetition*, is a key feature of the MNC according to Tippmann et al. (2018). Benefits of cooperation between subsidiaries are that economies of scale and scope can be achieved, operational flexibility developed, problem solving efforts and project management can be bolstered, knowledge development aided, and cross-border subsidization allowed for. At the same time, subsidiaries have to compete for intra-firm resources, internal talent, corporate support, power delegation and market expansion decisions (Tippmann et al., 2018).

It is important for the HQ to recognize the implications of subsidiary coopetition. Although the HQ sets the agenda for the relationships within the MNC, subsidiaries adopt their own behavior and can influence the development of subsidiary roles. To benefit from the efforts of subsidiaries, whilst also benefiting from a healthy, internal competition, a HQ must “facilitate a context conducive to enabling coopetition between its subsidiaries”. Doing so opens up possibilities for new subsidiary role configurations and more optimal design of MNC activities (Tippmann et al., 2018).

### **2.7.2 Internationalization Process in MNCs**

According to López-Duarte, Vidal-Suárez, and González-Díaz (2016), the internationalization process is a trade-off between exploitation (incremental processes through use of the firm’s existing resources) and exploration (more radical processes through the search of new business opportunities). Trust is pivotal in a partner relationship because of its role as a governance mechanism which favors cooperative behavior above opportunistic behavior. Cultural differences between partners hinder communication processes between them, which also hampers trust development. Consequently, a higher degree of cultural distance between two partners leads to a higher tendency to use formalized control mechanisms. Cultural differences also have a negative impact on knowledge transfer across borders. The strength of this impact depends on the mechanisms used to carry out the knowledge transfer - if very culturally distant then a personal mechanism is regarded as the least effective. On the flip side, cultural differences between HQ and subsidiary have a positive influence on subsidiaries’ degree of assertiveness in their local markets (López-Duarte, Vidal-Suárez, and González-Díaz, 2016).

### **2.7.3 Management of Subsidiary Initiatives**

Tseng, Fong, and Su (2004) mention three determinants that have been proven significant to MNC subsidiary initiatives in Taiwan:

- HQ-Subsidiary Relationship
- Subsidiary resources
- Network characteristics of the subsidiary

## 2. Empirical Background

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Management at both HQ and subsidiary level must encourage and develop means to realize subsidiary initiatives after considering how the contributions of individual subsidiaries can improve the competitiveness of the MNC. Increasing procedural justice, promoting a subsidiary's capabilities, and facilitating interactions with local networks can help achieve the initiative. It is also important that the subsidiary managers promote initiatives internally, in order to highlight the subsidiary's contribution to the MNC (Tseng, Fong, and Su, 2004).

# 3

## Theoretical Frameworks

This section begins with a definition of the circular economy concept, followed by the theoretical frameworks that will be used throughout the study. The main framework is the Triple Layered Business Model Canvas, an extended version of the Osterwalder Business Model Canvas that is used to incorporate environmental and social perspectives onto the traditional framework focused on profit maximization. A framework for classifying different circular business model archetypes is also presented. The theories described are of a descriptive kind, rather than a prescriptive one.

### 3.1 Circular Economy

A circular economy is defined by Eurostat as “an economy where the value of products, materials and resources is maintained in the economy for as long as possible, and the generation of waste minimized” (Eurostat, 2021). The term circular, or *circularity*, refers to the idea of imitating the environmental cycle that occurs in nature, where all different parts of the natural ecosystem work in symbiosis to achieve a mutually sustainable outcome (Fogarassy and Finger, 2020). When applied to a business context, this implies that all actors within the economy must collectively strive to align business models and mission statements with the overarching goal of achieving circularity.

### 3.2 Business Models

Throughout the paper, the definition of business model as defined by Osterwalder et al. (2011) will be used: *A business model describes the rationale of how an organization creates, delivers, and captures value.*

#### 3.2.1 Business Model Canvas

The *Business Model Canvas* (BMC), proposed by Osterwalder et al. (2011), provides a useful framework for formulating and analyzing business models. The framework consists of nine building blocks, each of which aim to explain workings and rationale of different aspects of a business model. The term “business model” became increasingly popular with the advent of internet in the late nineties.

**Table 3.1:** Components of the Business Model Canvas

BMC Component	Description
Value Proposition	How the organization aims to satisfy a customer need
Key Partnerships	The network of suppliers and partners that are necessary for the business model
Key Activities	The activities that the organization must commit to in order for the business model to work
Key Resources	The assets that are necessary to offer and deliver the value proposition
Customer Relationships	What type of customer relationship the organization aims to maintain with its customers
Customer Segment	The customers that the organization or business model aims to serve
Channels	How the value proposition is communicated, distributed and sold
Cost Structure	The costs that the business model gives rise to
Revenue Streams	The revenues that stem from the value proposition

### 3.2.2 Triple Layered Business Model Canvas

In order to answer the analyze the economic, environmental and social implications of the Refurbish & Resell business model, the *Triple Layered Business Model Canvas* (TLBMC) has been chosen as the primary framework for this thesis. The Triple Layered Business Model Canvas is a framework developed by Joyce and Paquin (2016) with the purpose of integrating social and environmental values into the original Business Model Canvas by Osterwalder et al. (2011). As a tool, the TLBMC is meant to bridge the gap between business model innovation and sustainable business model development (Boons and Lüdeke-Freund, 2013) in order to help entrepreneurs and organizations formulate competitive and sustainability-oriented change.

The first layer of the TLBMC is the same as described by Osterwalder et al. (2011), explained in the preceding subsection.

The second layer uses a *Life Cycle Assessment* (LCA) approach to break down a product's or service's environmental impact during different stages of the life cycle. Most commonly, the indicator chosen for this evaluation would be CO<sub>2</sub> emissions, but other indicators such as water usage, human health and resource depletion can also be used. LCA can be used to develop business models with better environmental characteristics compared to traditional business model innovation tools (FORA, 2010).

**Table 3.2:** Components of the Environmental Business Model Canvas

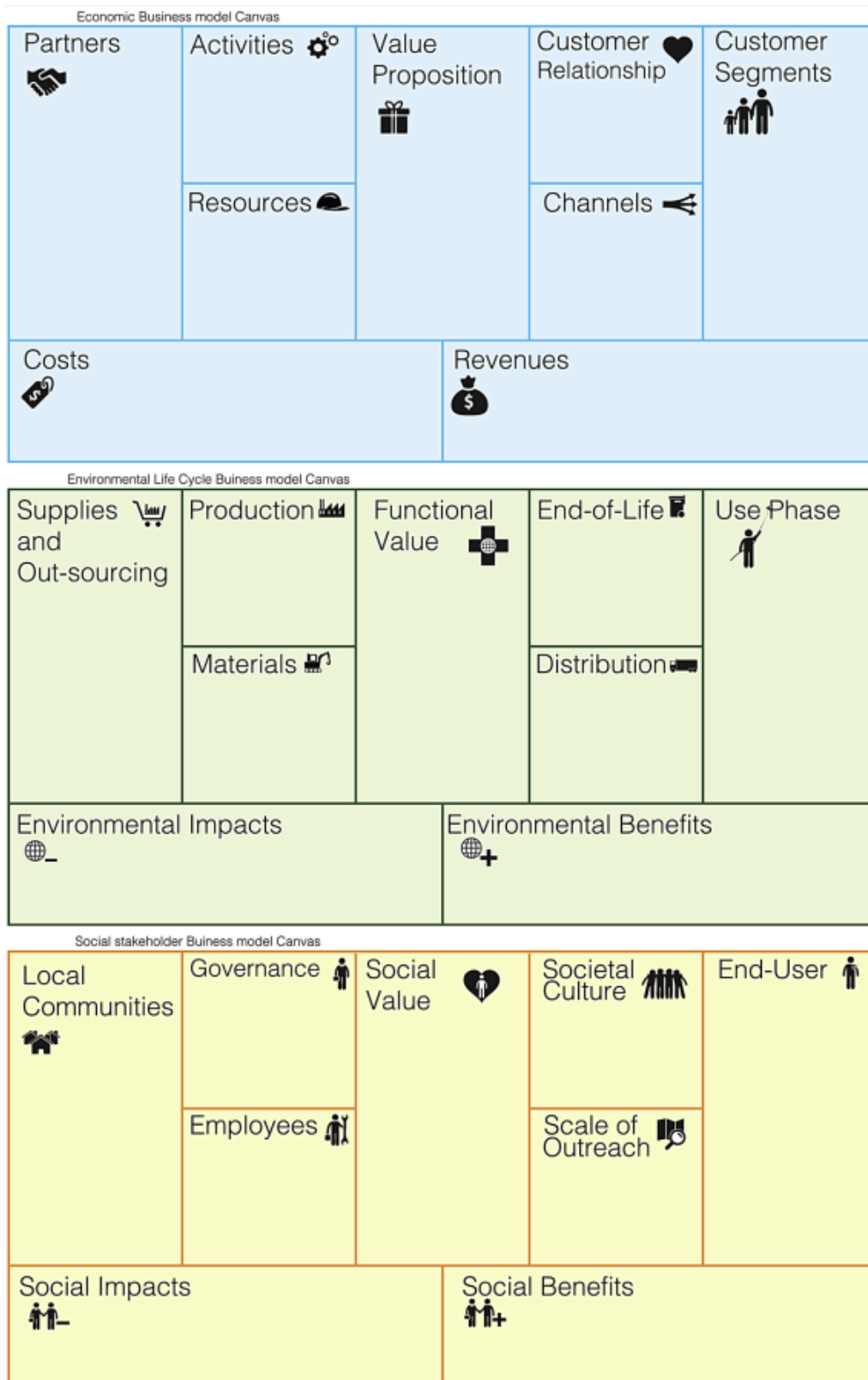
BMC Component	Description
Functional value	The quantified functional output of the business model i.e a description of the customer need fulfilled by the business model
Supplies & Outsourcing	Material and production activities and material that are outside the core functions needed to create value
Production	Impact of the key production activities that is needed to create value
Materials	The bio-physical materials necessary for the business model to create the functional value
End-of-Life	The impact of what happens to the product after its use phase
Distribution	How the functional value is delivered to customers and its impact
Use Phase	The impact of how a customer uses the product during its use phase
Environmental Impact	The combined ecological negative impacts that the business model contributes to
Environmental Benefits	The environmental benefits that the business model brings

The third layer aims to characterize the social impact of the new business model based on a stakeholder management approach, which means that stakeholders interest should be balanced rather than just maximizing the organization's gain (Joyce and Paquin, 2016). Stakeholders in this sense typically include employees, suppliers, shareholders, community members, and governmental bodies.

**Table 3.3:** Components of the Social Business Model Canvas

BMC Component	Description
Social Value	How the business model creates benefits for its stakeholders and society more broadly
Local Communities	How the business model impacts the local community
Governance	Which stakeholders are involved in decision-making within the organization
Employees	How the organization's business model impacts its employees
Societal Culture	How the business model impacts the general society
Scale of Outreach	The depth and breadth of the social impact and benefits
End-Users	How the end-user is impacted by the business model
Social Impacts	The negative social effects of the business model
Social Benefits	The positive social effects of the business model





**Figure 3.1:** Triple Layered Business Model Canvas (Joyce and Paquin, 2016)

### 3.2.3 Circular Business Models

A circular business model can be defined as the logic of how an organization creates, delivers, and captures value with and within closed material loops (Mentink, 2014). In comparison with a traditional business model, a circular business model goes beyond the aim of purely economic value creation and instead aims to create value for a wider range of stakeholders, while also taking into account considerations from societal and environmental perspectives (Antikainen and Valkokari, 2016). In order to understand how this theoretical model was used in practice, Bocken et al. (2014) defined eight circular business model archetypes, described in Table 3.4.

**Table 3.4:** Circular business model archetypes

CBM Archetype	Description
Technological	Maximize material and energy efficiency & test
	Create value from waste
	Substitute with renewables and natural processes
Social	Deliver functionality rather than ownership
	Adopt a stewardship role
	Encourage sufficiency
Organizational	Repurpose for society/environment
	Develop scaled up solutions

# 4

## Methods

This chapter aims to present the methods that were employed to investigate the research question, “*How can a circular business model for a furniture refurbishment and reselling service be successfully implemented on the Taiwanese market, while taking into account economic, environmental and social goals?*”. The research strategy, process, and design are first introduced, followed by a description of how the data collection and data analysis took place.

### 4.1 Research Strategy

The research project was conducted using a mixed method with predominantly qualitative data as well as some quantitative. The qualitative data collection consisted of customer and staff interviews along with a pilot project for the second hand offering. The quantitative data was collected by means of a customer survey. In addition, previous research on circular business model creation and Taiwanese culture and consumer behavior was studied to complement the data collection. The combination of these approaches will help answer the research question by supplying several different view points from people with insights into IKEA, the Refurbish & Resell business model as well as the Taiwanese consumer market.

The research problem was designated by IKEA Taiwan and is a mostly practical one. The main aim of this research was to contribute to IKEA practices and to see how a circular business model can be optimized for the Taiwanese furniture market. However, a secondary aim was also to contribute to literature about circular business model implementation on furniture markets in Taiwan and other Asian countries.

### 4.2 Research Process

Initially, meetings were held with IKEA Taiwan to identify the problem and desired outcomes with the project. Following these discussions, a research question was proposed and a project plan set up in alignment with the project expectations of IKEA Taiwan. A hypothesis for the finalized business model design was also created using the Business Model Canvas framework. Next, the topic of circular economy and circular business models, as well as methods for research design, was researched through academic articles and other literature.

Once the research methods had been studied, the interview and survey questions were designed to retrieve the desired data, after which the data collection commenced through interviews with IKEA staff and customers. Meanwhile, the pilot project was being planned by contacting refurbishers in Taiwan and coordinating efforts with the IKEA store in which the second hand offering was to be set. When the results of the customer survey had been collected, the pilot project was initiated along with an analysis of the data collected through interviews, survey, and the ongoing pilot project. Finally, the findings were summarized using the frameworks introduced in chapter 3 and presented to IKEA Taiwan and Chalmers staff. The step-by-step research process is presented below.

1. Initiative to research
  - (a) Identification of the problem
  - (b) Formulation of research question
  - (c) Business model hypothesis
2. Literature review
3. Research design
4. Data collection
  - (a) Interviews with IKEA staff
  - (b) Interviews with customers
  - (c) Customer survey
  - (d) Pilot project
5. Data analysis
6. Business model formulation
7. Presentation of the findings

### 4.3 Research Design

Sreejesh, Mohapatra, and Anusree (2014) defines research design as a framework that provides specific details about the process to be followed when conducting the research. During this master's thesis, a hypothetical business model was formulated and then iterated upon after data collection and analysis. Data collected in the form of interviews, a survey, a pilot project and secondary data review was analyzed to provide insight into how the business model should be implemented.

#### 4.3.1 Sampling Design

The sampling methods differed depending on the purpose of the sampling. For the staff interviews, a *snowball sampling* method was employed, meaning that each interviewee was asked to name other interview targets of interest (Easterby-Smith, Thorpe, and Jackson, 2015). This method should work well as the IKEA employees are all part of the same network and have greater knowledge about which people that are relevant to interview. The customer interviews have instead used a *convenience sampling* method, which includes sample units based on how easily accessible they are (Easterby-Smith, Thorpe, and Jackson, 2015). In this case, coworkers at IKEA Taiwan were requested to ask their friends and family to participate in the

interviews. By utilization of this method, a sufficient number of Taiwanese IKEA consumers was reached. Lastly, sampling for the survey was also done via convenience sampling, as most participants were IKEA Taiwan employees.

Easterby-Smith, Thorpe, and Jackson (2015) present two basic principles for sampling design; *representativeness/bias* and *precision*. Both design principles are important in order to achieve a credible sampling design. Bias, or representativeness, is introduced through sampling choices that skew the sample in any certain way. It could be choices to exclude certain groups of people, choices of how to conduct the interview/survey, or which language is used. In the case of the customer interviews and survey, a possible source of bias could be the fact that most interviewees were urban residents, which could lead to conclusions that are only applicable for urban consumers. A second source of bias could be that the samples for the customer interviews were retrieved by asking IKEA Taiwan co-workers to recommend people. This could lead to the interviewees having a more positive perception of IKEA than the average Taiwanese consumer, as a result of their personal relationship with IKEA Taiwan employees. Seeing as both English and Mandarin have been proposed as interviewing languages, language bias is not expected to be a problem.

The principle of precision in sampling design relates to how credible a sample is. To retain a high precision, the sample size, meaning the number of people included in the sample, must be large enough to be able to make assumptions about the population as a whole (Easterby-Smith, Thorpe, and Jackson, 2015). The smaller the sample, the less precise it will be. Exactly how large the sample should be to retain a sufficient level of precision is hard to say, and depends on the study. In this study, the sample size was 8 for the customer interviews and 153 for the survey, which was deemed as sufficiently large samples for this business case considering the time constraints and scope of the project.

Most studies aim to combine a low bias and high precision. Since resources for this project were limited, some compromises had to be made, and the sampling design could probably have been optimized further. For example, a probabilistic sampling design could have been used instead of the non-probabilistic convenience sampling to ensure that the conclusions drawn from the samples are applicable to the larger population. Nonetheless, the samples were deemed to have a moderate amount of bias and precision, making them acceptably reliable.

### 4.3.2 Qualitative Research Design

The qualitative research was based on an *exploratory research design* with elements of *descriptive research design*. The staff interview questions were mostly exploratory, designed to open up for the participants to talk freely about different topics and to gain an understanding of the relevant areas (Creswell, 2009). The customer interviews feature both exploratory and descriptive characteristics, aiming to find out new information as well as assessing how second hand was currently perceived by asking targeted questions about Willingness-to-Pay (WTP) and importance of dif-

ferent aspects relating to second hand purchases, connecting to the quantitative research (Creswell, 2009). The main purpose of the customer interviews was to gain first-hand insights from Taiwanese consumers and to trial questions for the customer survey.

For both the customer interviews and the staff interviews, a semi-structured interview approach was chosen in order to fully capture the interviewees opinions and thoughts, and to afford flexibility in expanding on relevant topics that were not foreseen before the interviews. Greener (2008, p. 89) defines semi-structured interviews as those that are based on a question guide, but with the interviewee being allowed to go where they want with the question and to divert to other things. A full list of questions asked to IKEA staff and Taiwanese customers is found in Appendices A and ??.

### 4.3.3 Quantitative Research Design

The quantitative research design, consisting of the customer survey, was designed as a factual survey, meaning that the main aim was to understand customer's opinions, habits and willingness-to-pay (WTP). Easterby-Smith, Thorpe, and Jackson (2015) defines a factual survey as one that involves collecting and collating relatively 'factual' information from respondents. Examples would be market research surveys and opinion polls.

Participants were asked to rate the importance of certain variables and how well they feel that these aspects are covered by current second hand offerings. The participants' WTP was then tracked by directly asking them to estimate their WTP for refurbished IKEA products in general, as well as by asking how much they would be willing to pay for four product types that were likely to be included in the planned offering of refurbished second hand products. For each product, a picture as well as the original price was presented to the participant. Additionally, general questions such as inquiries about respondents' living situation, disposable income, and perceived likelihood of buying second hand furniture were asked to be able to segment the respondents into different consumer groups. The full list of customer survey questions can be found in Appendix D.

## 4.4 Data Collection

The data for this research project was collected from mainly primary but also secondary data sources. The following section details how the different types of data were retrieved.

### 4.4.1 Primary Data

Sreejesh, Mohapatra, and Anusree (2014) defines primary data as data that is collected by the researcher from respondents through the means of data collection methods such as interviews, questionnaires, measurement or direct observation. The

primary data used in this project was collected through three sources; interviews with customers and IKEA staff, a customer survey and through learnings from a pilot project.

#### **4.4.1.1 Interviews**

The staff and customer interviews were held between February and April 2021 using Microsoft Teams. Seven staff interviews and eight interviews with Taiwanese IKEA customers were conducted during this time period.

#### **4.4.1.2 Customer Survey**

For practical reasons, the survey was conducted online through Google Forms. A link to the survey was sent out to employees at IKEA Taiwan. This means that the respondents are unlikely to be representative of the Taiwanese population as a whole, but rather somewhat representative of IKEA Taiwan's customer base. The survey mainly consists of close-ended questions, with an exception in the form of a question where respondents were asked to give a ranked order answer. The survey was sent out in April 2021 and had 153 respondents out of 1953, indicating a response rate of 7.8%.

#### **4.4.1.3 Pilot Project**

During the months of April and May 2021, a pilot project was conducted at IKEA Taiwan's Hsinchuang store. Within the scope of this project, around 20 pieces of furniture were sourced, refurbished and resold in a designated area of the store.

### **4.4.2 Secondary Data**

Sreejesh, Mohapatra, and Anusree (2014) defines secondary data as data that has already been collected by another researcher or other person and then made available. Throughout this paper, scholarly search engines (such as Google Scholar) and internal IKEA databases were used to collect books, articles and reports of relevance. The main body of secondary data studied consisted of circular business models and business model creation, international business, second hand retailing, Taiwanese consumer markets, and IKEA sustainability reports, as well as literature about research methods.

## **4.5 Data Analysis**

To analyze the data retrieved through data collection, several techniques for data analysis were employed. For the staff interviews, inductive content analysis was used, and for the customer survey, WTP and opportunity values for different factors were calculated. Additionally, bivariate analysis was performed on some key figures, and

the data sample was validated by comparing the results to existing consumer data about Taiwan.

### 4.5.1 Inductive Content Analysis

Interviews were analyzed by means of an inductive content analysis method (Elo and Kyngäs, 2008). The aim of this method is to identify themes across multiple interviews. In the case of the interviews with IKEA staff, the purpose of the content analysis was to gain an understanding of how the company works on different levels to facilitate and drive their circularity agenda. For the customer interviews, the purpose was to better comprehend the customer's habits and perception about second hand purchases and sales. The content analysis procedure was done according to the following steps:

- Interviews were held and transcribed
- Transcripts were read and annotated
- Phrases and sentences were coded according to the opinion, content or activities expressed
- Codes were grouped into different categories
- Categories were segmented and connections between the different categories will be described
- The different categories and their connection were analyzed, important themes highlighted and conclusions drawn

### 4.5.2 Calculated Willingness-to-Pay

As mentioned in section 4.3.3, each respondents' WTP was calculated by asking them what they would be willing to pay for certain refurbished products. For each product, WTP was then calculated as a percentage of the original price. By taking the average for all four products, a figure representing each respondents' WTP for refurbished IKEA products in general was determined.

### 4.5.3 Opportunity Value

In order to be able to adapt the business model according to the value proposition aspects that are most valued by customer, opportunity value was calculated through a framework laid out by Anthony W. Ulwick in his 2002 *Harvard Business Review* article *Turn Customer Input into Innovation* (Ulwick, 2002). The idea is to ask questions about which outcome they would desire instead of asking how they feel about any particular offering. The different outcomes are then grouped and respondents are asked to rate the different outcomes' satisfaction (how this outcome is currently being satisfied) and importance (how important they feel the outcome is to the overall experience) on a scale of one to ten. The opportunity values of different outcomes are then calculated using the formula  $Opportunity = Importance + (Importance - Satisfaction)$ . A greater opportunity value means that there is an outcome that is highly desired but not currently



satisfied, i.e a good opportunity for innovation.

#### **4.5.4 Bivariate Analysis**

Bivariate analysis refers to the simultaneous analysis of two variables in order to determine if there is an empirical relationship between them (Babbie, 2007). In this case, that was performed by determining a correlation coefficient between whichever two variables that were analyzed. Bivariate analysis was performed on WTP versus the Age, Disposable Income, and Furniture Expenditure variables from the customer survey.

#### **4.5.5 Validation**

To validate the data sample as representative of the Taiwanese population in general, the collected data was compared to publicly available figures about Taiwanese households. As reported in chapter 2.4, furniture purchases was reported to be 1.7% of the total household expenditure, which correlates with the 1.96% that Taiwanese consumers reported to spend on furniture out of their annual disposable income in the customer survey. The average size of households, 3.3, also correlates with the figure of 3.1 that was reported in chapter 2.4. The comparison of these figures give a fairly strong validation of the representativeness of the survey sample as a proportion of the Taiwanese consumer market. However, the fact that most respondents are or have been working for IKEA Taiwan, may have affected the results in certain ways.



# 5

## Results

In the upcoming chapter, the results of the data collection and analysis are presented. First, the information gathered from interviews with IKEA staff is presented, followed by customer interviews and the customer survey. The results presented are those considered relevant to be able to answer the research question, *“How can a circular business model for a furniture refurbishment and reselling service be successfully implemented on the Taiwanese market, while taking into account economic, environmental and social goals?”*.

### 5.1 Staff Interviews

Employees from various parts of the IKEA organization were interviewed, including Inter IKEA, IKEA of Sweden, Dairy Farm and IKEA Taiwan, all of which provided valuable insights and perspectives on how to conduct a circular Refurbish & Resell model. The questions revolved mainly around IKEA’s sustainability strategy and experiences from similar projects to the one proposed in this paper, but also included more specific questions based on the expertise of the interviewee in focus.

Table 5.1 highlights the conclusions from the content analysis conducted on the transcripts from these interviews.

**Table 5.1:** Results from staff interviews summarized by topic

Topic	Conclusion	Relevant Quote
<u><b>IKEA Culture &amp; Strategy</b></u>  IKEA Sust. Strategy	<ul style="list-style-type: none"><li>• Motivations for IKEA’s pursuit of sustainability is not only based on moral grounds but also practical and business-oriented concerns around resource use, cost reduction and waste reduction. In essence, there is a strong belief within IKEA that doing good for the environment is also good for business.</li></ul>	<i>‘Sustainability focus aligns with IKEA’s values, and also leads to good business.’</i>

Cooperation between IKEA Entities	<ul style="list-style-type: none"> <li>• Inter IKEA sets the sustainability agenda and expects its franchisees to align and implement the changes needed, however the franchisees are to a large degree given freedom to implement them as they see fit.</li> </ul>	<i>'Inter IKEA sets the guidelines regarding circularity, and then lets the franchisees implement it in practice.'</i>
Project Motivations	<ul style="list-style-type: none"> <li>• Inter IKEA sells franchising rights and products to retailers. Inter IKEA controls entire value chain, which facilitates controlling and cooperation between IKEA entities.</li> </ul>	<i>'The franchisor is Inter IKEA, who also sells products to retailers.'</i>
Innovation at IKEA	<ul style="list-style-type: none"> <li>• The main motivation for the pilot projects is not profits, but rather sustainability. A longer payback period is accepted and expected for these types of projects - they will likely not be profitable in the short term.</li> <li>• IKEA's innovation process consists of listening to customers, developing new areas of business and to be flexible/fast acting. We want to quickly develop a new business model and then push out a minimum viable product to try out and gain insights from.</li> <li>• The most difficult parts of the ReTuna project has been that there is little internal expertise when it comes to these kind of innovative projects. It has also been difficult to get everyone on board. There has also been some practical difficulties around sourcing among other things.</li> </ul>	<p><i>'Profits is not in first place. (We) thought about how to make it sustainable and workable in the IKEA world. Projects have to be innovative, profitable, and sustainable.'</i></p> <p><i>'We have a way of working where we are quick to listen to customers, develop new business areas. We want to quickly develop a new business model, develop MVP, test and learn lessons.'</i></p> <p><i>'The hardest thing with ReTuna was breaking new ground. The template and the "what-we-can-think" has been overturned and something new is being done. It has been tough to get everyone involved in the project, which is a test bed for IKEA to learn about circular practices.'</i></p>

<u>Practical Considerations</u>		
Furniture Sourcing	<ul style="list-style-type: none"> <li>• Second hand furniture can be sourced from the “As-is”-area as well as from donations or buybacks from co-workers and customers</li> <li>• Other alternatives are also possible, such as sourcing from estates, online platforms and home pick-up.</li> <li>• A major barrier to reaching target profitability (for the ReTuna project) is the lack of supply of used furniture. The refurbishment and storage area is also small at the moment, which decreases the efficiency.</li> </ul>	<p><i>‘Second hand furniture is sourced from the as-is corner at IKEA, but the hope is to source it online.’</i></p> <p><i>‘Customers have to bring their furniture to the stores themselves. In the future we want to do pick-ups at people’s homes since it’s a strong need.’</i></p> <p><i>‘Main challenges to reaching profitability is the lack of supply of used furniture.’</i></p>
Logistics	<ul style="list-style-type: none"> <li>• Sourcing location, refurbisher and selling location should be in close proximity to one another.</li> </ul>	<p><i>‘It is best to source, refurbish and sell furniture in a close location, such as done at ReTuna. Logistics can’t be too spread out.’</i></p>
Product Selection	<ul style="list-style-type: none"> <li>• Wooden tables, wardrobes and bookshelves are good products to use for the refurbishment project.</li> <li>• Products older than 3 years are less likely to have available spare parts.</li> <li>• Spare parts are only needed in 10-15% of the wooden refurbishment cases (implying that these might be a good choice for pilot testing).</li> <li>• A chair takes 10-15 minutes to refurbish and up to an hour for more complex products such as sofas.</li> </ul>	<p><i>‘Products like tables, chairs, drawers, bookshelves are good. Textile products are trickier because of hygiene issues.’</i></p> <p><i>‘Wooden products have higher profit margins.’</i></p> <p><i>‘Spare parts are only needed in 10-15% of the wooden refurbishment cases. We only keep spare parts for 3&gt; year old products.’</i></p>

<b><u>Market Considerations</u></b>	<ul style="list-style-type: none"> <li>• Products for refurbishment should be chosen after spare part availability.</li> </ul>	<i>'Products should be chosen after spare part availability'</i>
Customers	<ul style="list-style-type: none"> <li>• Taiwanese consumers are generally cost conscious, would rather get some money back than throw away old products.</li> </ul>	<i>'In Taiwan, people are cost-conscious, and people would rather get some money than throw away their old furniture.'</i>
Taiwanese Culture	<ul style="list-style-type: none"> <li>• People in Taiwan are sustainability aware, but are unsure of how to implement sustainability in their daily lives.</li> </ul>	<i>'Sust. Awareness is very high in Taiwan, people care about the climate, and about the people. Problem is that people don't know how. If there is a solution then people will use it.'</i>

### 5.1.1 IKEA Sustainability Strategy

Inter IKEA is responsible for outlining the overall sustainability strategy for all IKEA entities, which franchisees and other parts of IKEA have to follow. This strategy, called the People & Planet Positive agenda, has been in place for approximately 10 years and has the target of limiting resource use and CO<sub>2</sub> emissions in order for IKEA to remain competitive in the long run. The strategy ensures that IKEA has a strong stance on sustainability and that a sustainability perspective is taken for every decision. As sustainability is closely related to the IKEA values, leadership is important in order to drive the sustainability agenda and promote the IKEA values all the way down to the franchisee level. This is important, as the franchisees are ultimately the ones that have to implement the strategies and relate to customers and business partners on a local level. Franchisees have relatively much decision power when it comes to the implementation of strategies through local initiatives, but must make sure not to deviate from the core IKEA values.

*'On a strategic level, Inter IKEA and franchisees are aligned when it comes circularity and sustainability. On an operational level, each franchisee implements this strategy in their business as they see fit.'*

-Circular Supply Chain Project Leader, Inter IKEA

### 5.1.2 Experiences from Similar Projects

The interviews with IKEA staff members provided insights from several similar Refurbish & Resell projects. The ReTuna project in Sweden, introduced in chapter 2.3, was the project most frequently discussed. Experiences from similar projects in Japan and Poland were also gathered. In the following section, the ReTuna and Circular Hub Japan projects are elaborated upon, along with a presentation of the general steps included in the Refurbish & Resell value chain. Table 6.4 below highlights some differences between the two second hand initiatives in Sweden and in Japan.

**Table 5.2:** Comparison of the second hand initiatives in Sweden and Japan.

	<b>ReTuna</b>	<b>Circular Hub Japan</b>
<b>Location</b>	In ReTuna shopping mall located in Eskilstuna, Sweden	In IKEA Kohoku store located in Tokyo, Japan
<b>Operator</b>	IKEA Sweden, part of Ingka Group	IKEA Japan, part of Ingka Group
<b>Established</b>	2020	2021
<b>Furniture Sourcing</b>	IKEA furniture left at a recycling station	Customer returns, showroom products (furniture that would have previously been located in the As-is area)
<b>Refurbishment Partner</b>	Social enterprise 'Samhall'	No partner, refurbishment done in-house
<b>Pricing</b>	50% of full price	-

#### 5.1.2.1 ReTuna Second Hand Store

The IKEA Second Hand Store in Sweden is an IKEA store for second hand products operated by IKEA of Sweden. It is located in ReTuna Återbruksgalleria in Eskilstuna, a shopping mall intended only for recycled or sustainably produced products. The shopping mall is located next to a recycling center, where customers can dispose of old products that can be refurbished or repurposed for a second life. The project has involved parts of Ingka as well as Inter Ikea (IoS). External partners, such as GIAB, Samhall, ReTuna and the municipality have also been important to make the project work.

At the nearby recycling station, any discarded IKEA products are screened and sorted into a certain container for IKEA products. A problem described by the Circular Business Designer at Ingka Group is that a lot of non-IKEA furniture ends up in this container, which increases the processing time for each product. This issue is being handled by clearly labeling products to reduce processing times. After screening and sorting, the used IKEA products are then taken into a repair shop adjacent to the IKEA Second Hand Store and refurbished, after which they are resold in the store.

Since the products are taken in by means of donations, it is hard to pre-evaluate the refurbishment needs of products. For example, not all products have available spare parts and are therefore not possible to repair. The refurbishment and storage area is also small at the moment, which decreases the efficiency and makes it harder to store products. Seeing as the store only opened in November 2020, and is to be seen as a pilot project, reaching profitability is not the main concern in the current situation. However, for similar projects in the future, achieving a steady supply of used furniture fit for refurbishment is a main challenge.

### 5.1.2.2 Circular Hub Tokyo

As a means of adhering to Inter IKEA's commitment to circularity and prolonged product life, all Ingka stores are to implement *Circular Hubs* by 2022. The Circular Hub is an area of the IKEA store where second hand furniture is sold, similar to the *As-is* area of IKEA stores where price-reduced products are currently sold. In talks with the Sustainability Business Partner at IKEA Japan, insight was given into the implementation of Circular Hubs in Japan.

*'Customers should be helped and inspired to contribute to circularity.'*  
-Sustainability Business Partner, IKEA Japan

The Circular Hub areas are set up according to an Ingka standard and is meant to look like the rest of the store. It has podium solutions for products and free-moving walls to ensure flexibility with regards to the number of products that can be stored. The products in the Circular Hub are both IKEA's own products, such as previous display objects or damaged furniture, and products sourced from customer buy-backs. The sourcing from customers is done by letting customers sell back their old IKEA furniture in exchange for a voucher to use in the IKEA Store. The voucher is usually between 20 and 40% of the product's original value, depending on the condition and age of the product, and if the customer is an IKEA Family member.

Before a product is returned to the store, it must be accepted by IKEA. This is done via online channels, where customers send an image and description of their furniture and agree to a price before delivery. Currently, customers usually deliver furniture to the store by themselves, which results in mostly smaller furniture being returned. However, home pick-ups of furniture is an identified need within the customer base and is also being offered as part of IKEA Japan's buyback service.

After a product has been bought back, refurbishment is done in-store. Customers are able to see the refurbishment being done through a glass window. Once a product has been sold, delivery is done as normal, but is slightly more costly as the products aren't disassembled and flatly packaged like normal IKEA products.



### 5.1.2.3 General Insights about the Refurbish & Resell Value Chain

In this section, the steps of the general Refurbish & Resell process are discussed. The insights are derived from interviews with representatives from other Refurbish & Resell initiatives conducted within the IKEA world.

#### Sourcing of Furniture

The procurement of second hand furniture can be done through various sources. The As-is area in the IKEA stores is currently an area for selling damaged furniture at a reduced price, and is one such source of furniture. Furniture can also be sourced from customer donations, either online with home pick-up or at a designated pick-up spot such as a recycling station or an IKEA store. Products must first be screened in order to make sure that they qualify for refurbishment. If there are any hygiene issues such as bed bugs, that product is disregarded. Having a steady supply of second hand products is an imperative aspect for a successful implementation of the Refurbish & Resell business model.

*'... a big issue is the feedstock, i.e the input supply. In order for the business case to make sense, we need to have the refurbishment people working at a high rate, which requires a steady supply of products.'*

-Circular Supply Chain Project Leader, Inter IKEA

#### Refurbishment Process

In Sweden, the refurbishment process is performed using commercial repair kits and regular colors. First, the furniture must be cleaned and disinfected, which in the case of wooden furniture is done by wiping it with a disinfectant solution. Thereafter, any holes or damages are filled with wax and painted over. The refurbishment time differs depending on product and refurbishment needs, but typically takes 10-15 minutes for smaller furniture like chairs and 20-40 minutes for larger pieces such as sofas.

*'Shipping and manpower make refurbishment expensive'*

-Key Account Manager, IKEA for Business

The availability of spare parts is a critical part of the refurbishment process. Wooden furniture only requires spare parts in 10-15% of cases, whereas sofas requires more spare parts than most other products. IKEA products that are older than 3 years are less likely to have available spare parts unless it has a warranty, in which case spare parts must be available for the length of the warranty. Products for refurbishment should be chosen after spare part availability.

#### Logistics

Transportation is one of the most cost imposing aspects of the Refurbish & Resell business model. Therefore, sourcing location, refurbisher and selling location should be in close proximity to one another as to not incur unnecessary costs. Sofas, for example, are only worth transporting a maximum of 100 kilometers to remain profitable. For low-cost products, reverse logistics is especially hard to do profitably.

### Resale

Refurbished products are sold in the As-is or Circular Hub areas of the IKEA stores. Generally, furniture is bought back for 20-40% and resold for 50-80% of the original price, depending on the product. However, according to the Circular Business Designer at Ingka Group, these resale prices can be challenged and prices be set higher, as long as the products are put into the right context, thereby raising the perceived value.

*'How can you increase the value for the customer, to be able to have higher pricing? It's about the value you load the products with.'*

-Circular Business Designer, Ingka Group

For the Refurbish & Resell project, tables, wardrobes and bookshelves are good products that can ensure profitable margins. Especially wooden products have better value in terms of profit margin.

### 5.1.3 Taiwanese Consumer Market

According to the IKEA Taiwan Sustainability Manager, Taiwanese consumers are generally well educated about sustainability issues, but lack the knowledge of how to implement sustainability in their daily life. It is also not a top priority, as family and bettering ones living situation are more important issues for the average Taiwanese person. However, Taiwanese people are likely to be positively inclined towards the idea that their old furniture is being reused instead of disposed of as is the current practice. According to the Sustainability Manager at IKEA Taiwan, people will be willing to deliver old furniture to IKEA stores themselves just for the sake of sustainability.

*'People in Taiwan are sustainability aware, but are unsure of how to implement sustainability in their daily lives.'*

-Sustainability Manager, IKEA Taiwan

In Japan, a country which has many cultural similarities to Taiwan, second hand is a well-established concept, as told by the Sustainability Business Partner at IKEA Japan. However, sustainability awareness has not been very high in Japan historically, although there is a strong movement of sustainability consciousness growing currently. When it comes to purchasing habits, older Japanese consumers tend to care more about product and service quality, and younger people care more about sustainability and price aspects.

Despite sharing many of the characteristics of other Asian markets, the Taiwanese market differs in some ways. According to the Commercial Director at Dairy Farm, who has previously worked in Japan, Taiwanese consumers tend to be more cost conscious, implying that they would be willing to return their furniture for money instead of disposing of it some other way. Compared to Japan, the demand for quality is also not as high in Taiwan.

## 5.2 Customer Interviews

The majority of interviewees mentioned that the most important aspects of buying furniture was style, quality and price. Most of the interviewees bought furniture first hand, and perceived that second hand purchases entailed negatives in terms of quality assurance, transaction costs and logistics. On the other hand, many interviewees appreciated that browsing second hand furniture for sale online was easy and that the variety of goods available was good. Almost all of the interviewees mentioned that Facebook would be their first choice when it comes to second hand platforms.

If IKEA sold second hand furniture that are as good as new, most interviewees would be willing to purchase them at prices ranging from 50-75% of the original price. Furthermore, this price was higher than if equivalent furniture had been sold by another store or an independent operator. The stated reason for this is that interviewees generally felt a sense of trust in IKEA, and felt confident that the products would be of good quality.

When it comes to disposing of old furniture, all of the interviewees mentioned that they utilized the municipal garbage disposal service. In essence, this service provides free disposal of bulky items through a pick up service. Interviewees appreciated the convenience and the fact that it is free, however some questioned whether the service disposes of the furniture in a sustainable way. Finally, interviewees were willing to hand over their old furniture to IKEA if they would receive a store voucher for between 5-30% of the original price.

## 5.3 Customer Survey

The customer survey received 153 responses, out of 1953 recipients indicating a response rate of 7.83%. Respondents were inquired about their current purchasing habits and how much they would be willing to pay for refurbished IKEA second hand products.

### 5.3.1 Purchasing Habits and Opinions

On average, the respondents spend around 9,250 Taiwanese dollars (TWD), roughly equivalent to 330 USD, on furniture each year, with older people spending slightly more and younger people spending slightly less. In comparison, the median household income in Taiwan is \$6,882 USD annually (Gallup, 2013).

Table 5.3 shows where consumers from different age groups buy second hand furniture currently. 58% of respondents use street vendors for their second hand purchases, making it the most common purchasing location. Second is local online platforms such as Carousell and Shopee on 40%, followed by Facebook, used by approximately 25% of people. Younger people are generally more inclined to use online platforms than older people, who instead prefer street vendors.

**Table 5.3:** Most common second hand purchasing locations by age group.

Age Group	Facebook	Other Platforms	Street vendors	Never bought
18-24	50%	58%	33%	8%
25-34	30%	45%	61%	6%
35-44	17%	36%	60%	12%
45-54	0%	25%	67%	8%
55-70	40%	0%	40%	20%
<b>All</b>	<b>25%</b>	<b>40%</b>	<b>58%</b>	<b>9%</b>

Out of the 35% that said they were likely or very likely to buy second hand furniture, 31% previously only bought from street vendors. These groups considered the sustainability and price aspects to be especially important when buying second hand furniture. However, they were also more satisfied with the current offerings on the mentioned factors. People that were unlikely or very unlikely to buy second hand furniture were less satisfied by the level of quality from the current offerings. Out of the 9% who answered that they had never previously bought second hand furniture, none were likely to buy second hand in the future either.

The results show that price and quality are the most important factors, with an average rating of 7.4 and 7.2 respectively, followed by convenience and sustainability with 6.5 and 6.1 respectively. The least important factor was product guarantee, which only received an average rating of 4.9. The figures can be found in table 5.4.

**Table 5.4:** Average ratings of the importance of different factors by age group.

Age Group	Factor Importance					Average
	Quality	Convenience	Price	Sustainability	Guarantee	
18-24	7.5	6.8	8.3	7.2	5.2	7.0
25-34	7.6	6.9	8.0	6.5	5.1	6.8
35-44	6.9	6.3	7.0	5.8	4.6	6.1
45-54	6.5	5.7	6.0	5.2	5.3	5.7
55-70	7.0	5.2	4.8	4.8	3.0	5.0
<b>Average</b>	<b>7.2</b>	<b>6.5</b>	<b>7.4</b>	<b>6.1</b>	<b>4.9</b>	<b>6.4</b>

The data shows that younger people tend to rank all factors as more important than people in the older age spans. However, it can be seen that sustainability and price are relatively important factors among younger people. People who buy second hand furniture at street vendors also rate the importance of all aspects higher than people who use online platforms. It can also be seen that people with a higher disposable income consider the quality aspect to be more important.

**Table 5.5:** Average current satisfaction of different factors by age group.

Age Group	Factor Satisfaction					Average
	Quality	Convenience	Price	Sustainability	Guarantee	
18-24	6.1	6.5	6.3	5.6	4.7	<b>5.8</b>
25-34	5.7	5.3	6.0	5.6	3.8	<b>5.3</b>
35-44	4.6	4.7	5.2	4.6	3.3	<b>4.5</b>
45-54	5.1	4.9	4.7	4.8	4.4	<b>4.8</b>
55-70	5.4	5.6	6.6	4.2	2.2	<b>4.8</b>
<b>Average</b>	<b>5.3</b>	<b>5.2</b>	<b>5.6</b>	<b>5.1</b>	<b>3.7</b>	<b>5.0</b>

When asked about how well each factor is met by current second hand offerings, all factors received average ratings around 5 of 10, with the exception of guarantee. Guarantee is the factor that is most clearly not met currently, but is also the least important factor overall. Current satisfaction ratings are presented in Table 5.5.

### 5.3.2 Opportunity Values

As seen in the previous section, customers were asked to rate how important the different factors are to them, as well as how satisfied they are by existent market offerings. The average of each factor, as well as the calculated average opportunity value are presented in Table 5.6.

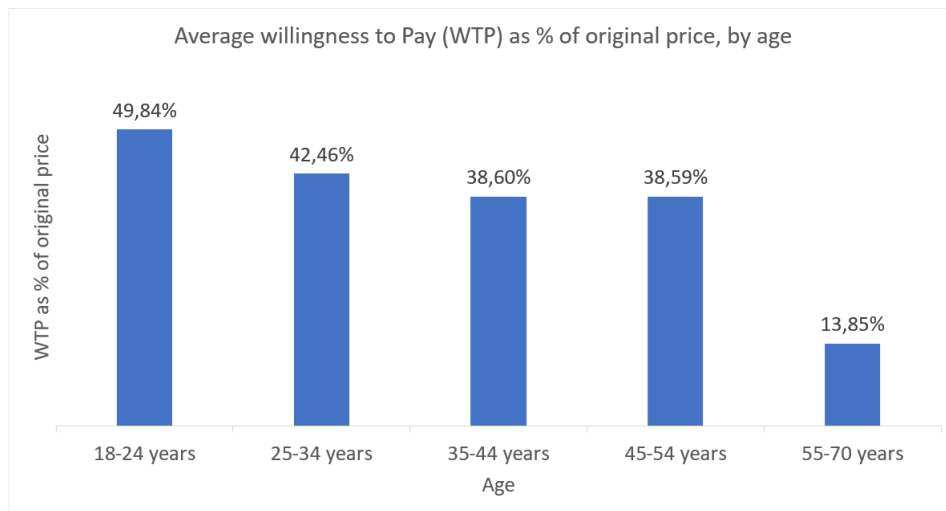
**Table 5.6:** Comparison of importance and opportunity values for different factors.

Factor	Importance	Current Satisfaction	Opportunity Value
Quality	7.22	5.27	9.16
Convenience	6.54	5.18	7.91
Price	7.37	5.65	9.08
Sustainability	6.13	5.10	7.16
Guarantee	4.88	3.71	6.06

### 5.3.3 Willingness-to-Pay

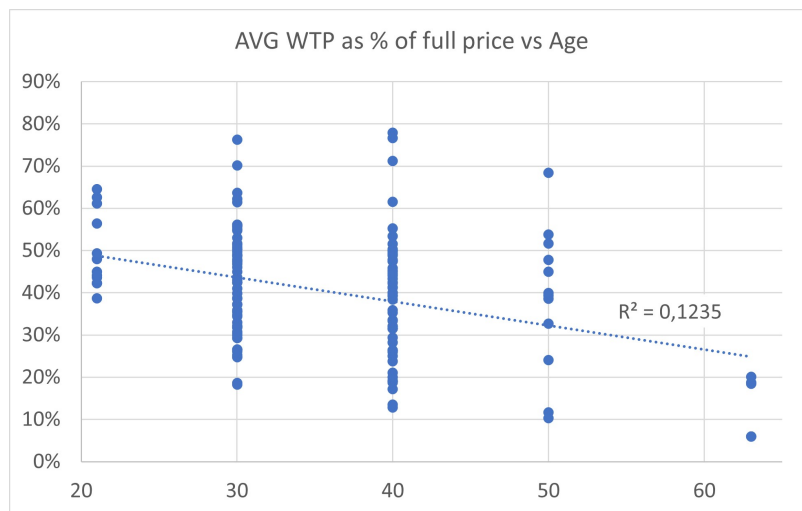
Respondents were asked about their willingness-to-pay for second hand furniture at IKEA with and without delivery included in the price. A majority of the respondents, 40%, replied that they would pay between 40 - 60% of the original price, and 36% said they would be willing to pay 20 - 40%. If delivery was included in the price, people were generally inclined to pay a bit more.

The survey also asked respondents to answer how much they are willing to pay for four representative types of IKEA furniture, if it had been used and refurbished. The average WTP overall was approximately 40% of the original price. Respondents in the younger age spans, 18-24 and 25-34, were willing to pay approximately 50% and 42% of the original price respectively. Respondents in the higher age spans displayed a lower WTP of approximately 39% of the original price for age groups 35-44 and 45-54. People in the oldest age segment, 55-70 years, only had an average WTP of approximately 14%. The average WTP of each age group can be seen in Figure 5.1.



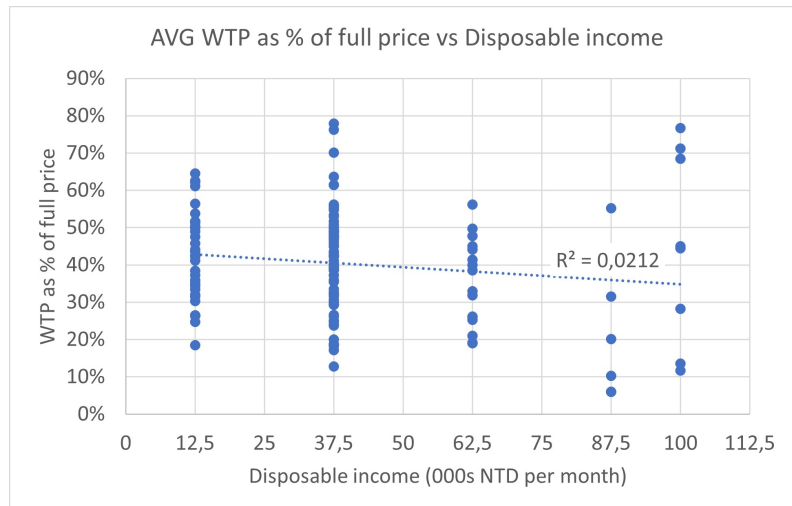
**Figure 5.1:** Average WTP for different age groups.

The data also shows that people with a lower disposable income are generally have a higher WTP for second hand products, with the lowest income groups of 0 - 25,000 and 25,000 - 50,000 TWD/month averaging a WTP of 42% of the original price. Those with a disposable income of 50,000 - 75,000 TWD/month were willing to pay 34% of the original price and those with 75,000 - 100,000 TWD/month only 22%. The outlier is the highest income group with a disposable income of more than 100,000 TWD/month, who were willing to pay approximately 45% of the original price. However, this group only consisted of one person.



**Figure 5.2:** Bivariate analysis of WTP and age.

Bivariate analysis was performed on the WTP variable against age and disposable income respectively. As can be seen in Figure 5.2, there is a small negative correlation between WTP and age ( $r=-0.35$ ), indicating that younger people are willing to pay more than older people. There is also a slight negative correlation between WTP and disposable income ( $r=-0.15$ ), which indicates that respondents who earn less are also willing to pay more (see Figure 5.3).



**Figure 5.3:** Bivariate analysis of WTP and disposable Income.

## 5.4 Pilot Project

The Pilot Project started in May 2021, although the planning process was initiated several months earlier. In the initiation process, different refurbishers in Taipei were contacted and a social enterprise chosen to perform the refurbishment activities. Furniture in the form of wooden wardrobes, tables, and chairs was sourced from the As-is area of the IKEA store, and the resale price set to 80%. The new offering was promoted on the store's Facebook page and through a press release from IKEA Taiwan. In the resale area, a poster with information about the Refurbish & Resell project was set up along with scannable QR codes that link the customer to articles and further information about Refurbish & Resell. Images from the pilot project can be seen in Appendix F.5.

At the publication of this report, the pilot project has only been running for a couple of weeks and the final results remain to be seen. The results are likely to be affected by the global pandemic which may negatively affect the amount of IKEA visitors and customer's purchasing behavior.





# 6

## Discussion

The discussion chapter consists of an analysis of identified opportunities and challenges for IKEA globally and IKEA Taiwan; a proposed triple layered business model and a discussion of its subparts; In the final section, a cross-comparison between different IKEA initiatives is presented.

### 6.1 Opportunities and Challenges for IKEA Globally

IKEA is in a unique position to leverage the Refurbish & Resell model, due to already being a significant actor within the furniture market. Significant opportunities and challenges for IKEA as a whole have been identified throughout the research process, and points that have been deemed relevant are presented below.

*'In the long run, the leadership wants to see this new venture be profitable.'*  
-Circular Business Designer, Ingka Group

#### 6.1.1 Global Opportunities

The opportunities for Refurbish & Resell initiatives globally are summarized below. The opportunities consist of franchisee independence, sustainability-associated brand, and prior Refurbish & Resell experience.

##### **Franchisee Independence**

IKEA has a franchise system which encourages internal innovation by allowing franchisees to implement the global goals as they see fit on a local level. Throughout the staff interviews, it was made clear that Inter IKEA was not pushing a simple template of how circular business models ought to look to its franchisees, but rather set the larger goals and then let individual franchisees implement them as they see fit. In IKEA Taiwan's case, it lets them tailor the Refurbish & Resell business model for their specific market, increasing chances for success. The degree of hierarchical authority, discussed in chapter 2.7.1, is rather low in this case, allowing IKEA Taiwan to act autonomously and shape the offering based on their specialized knowledge of the Taiwanese market.

### **Strong Brand Associated with Sustainability**

As was noted in the theory section, CSR work may improve economic performance in some cases. This view was further confirmed during the staff interviews, as it was made clear that IKEA's corporate stakeholders do not consider that CSR and economic profit are mutually exclusive, but may instead enhance one another. According to staff interviews, Taiwanese people perceive IKEA to be a sustainable brand that delivers high quality products. As one of the most important factors that customers perceive when buying second hand was quality, this is a significant advantage that the IKEA brand offers the Refurbish & Resell business model. Similarly, in the customer interviews it was made clear that customers are willing to pay more when a second hand product is offered by IKEA as opposed to if an identical product is being sold by another retailer.

### **Prior Experience with Refurbish & Resell**

While IKEA only has recent experience of operating Refurbish & Resell business models (with the most notable example being the ReTuna Store in Sweden), the fact that IKEA already operates a large part of its value chain in-house is a clear advantage when it comes to implementing a Refurbish & Resell business model. By designing its own furniture, IKEA has plenty of opportunity to design furniture with prolonged end-of-life and refurbishment in mind. For example, by sharing spare parts between different products, the logistics of refurbishment can be significantly reduced.

## **6.1.2 Global Challenges**

Five general challenges for Refurbish & Resell business models have been recognized and are presented below. The challenges are differences in franchisee priorities, internal competition between franchisees, spare part availability, limited profit margins, and potential cannibalization on existing business models.

### **Difference in Priorities Among Franchisees**

According to the staff interviews, different ownership structure among different franchisees can entail different priorities when it comes to developing the IKEA business. In the case of Refurbish & Resell, the Ingka Group has made the most progress when it comes to implementing the business model while other franchisees have not made it as far. While Inter IKEA aims to guide the franchisees with their global agenda, some franchisees may be less disposed towards spending money on trialing new business models such as Refurbish & Resell. Seeing as IKEA Taiwan is not part of the Ingka Group, there is a risk that the Refurbish & Resell initiative may not receive the same priority when it comes to resources and support from HQ, putting more emphasis on IKEA Taiwan's ability to leverage their local network to support the initiative as seen in chapter 2.7.3.

### **Internal Competition Between Franchisees**

While franchisees do not compete directly against each other due to market exclusivity agreements, they may still be unwilling to openly share information with each

other regarding new business models and best practices. This relates to the idea of coopetition, introduced in chapter 2.7.1, whereby subsidiaries balance cooperative and competitive behavior towards other subsidiaries, often battling for corporate support.

#### **Lack of Spare Part Availability**

According to staff interviews, spare parts are only held during the length of the warranty period for any given piece of furniture. This means that products that are older than three years might be more difficult to refurbish due to lack of spare parts. On top of that, some spare parts (such as paint) are not distributed to all markets and can be difficult to get a hold of.

#### **Low Profitability Potential of Refurbish & Resell**

Although with very limited data as of now, the existing Refurbish & Resell trials show that there is limited profit margin with the Refurbish & Resell business model. One key issue is that it is difficult to ensure a steady supply of second hand furniture to refurbish since it is mainly sourced from willing customers. This means that the Refurbish & Resell infrastructure may not be fully utilized, in turn leading to a lower volume of goods to spread costs over.

#### **Potential Cannibalization of Current Business**

While the Refurbish & Resell business model might bring new customers to shop at IKEA, it is more likely that the customer base will largely overlap with IKEA's regular customers. Since the revenue from Refurbish & Resell would likely be lower due to a lower sales price, this would entail lower overall revenue from existing customers.

## **6.2 Opportunities and Challenges for IKEA Taiwan**

While IKEA as a global firm has a good position to leverage the Refurbish & Resell model, that does not necessarily translate to business model success for IKEA Taiwan, as local market conditions can differ substantially between countries. In this section, local market opportunities and challenges are outlined for the Refurbish & Resell business model. These considerations will be taken into account when the proposed business model is presented.

*'Implementing the business model in Taiwan is not as simple as copy-pasting the Swedish version. Local conditions must be taken into account.'*  
-Sustainability Manager, IKEA Taiwan

### **6.2.1 Local Market Opportunities**

The research on the Taiwanese consumer market has resulted in the emergence of four distinct opportunities for a Refurbish & Resell business model, in the form

of low cost of labor, young consumers, brand loyal consumers, sustainability being an inherent part of the local culture, and high price sensitivity among Taiwanese consumers.

### **Low Labor Costs**

Taiwan's labor costs are significantly lower than both Sweden and Japan, as was noted in chapter 2.4, with manufacturing hourly compensation costs in Taiwan being 19% of Sweden's figure and 26% of Japan's. Additionally, the price of IKEA furniture are roughly the same in the three countries. Since refurbishment labor costs is the one of the largest costs in the Refurbish & Resell value chain, IKEA Taiwan has a relatively larger opportunity to capture value and higher economic return compared to Sweden and Japan. One of the interviewed staff members at IKEA of Sweden mentioned that:

'On average it takes us 15 minutes to clean the product, and 5-10 minutes to handle it, meaning that labor costs would arrive at around 80 SEK [\$9.61 USD]. In that case we would need sell the product for over 80 SEK [\$9.61 USD] to achieve economic return. Generally, there is not a business case for products sold for less than 100 SEK [\$12.01 USD]'

This equation would be considerably different in Taiwan however, where the bar for which products would be economically viable to refurbish could be set significantly lower and potential economic returns could be significantly higher.

### **Young Consumer Segments**

The data collected through interviews and the customer survey supports the main themes on Taiwanese consumer habits introduced in chapter 2.4. Quality and price are indeed the most important aspects for Taiwanese consumers' purchasing decisions, with younger people being more price sensitive and more concerned about sustainability. Seeing as the main marketing points for second hand furniture are the sustainability and price aspects, young Taiwanese consumers should be a good target audience. Additionally, younger segments in the customer survey reported higher average willingness-to-pay than other segments, despite them also being the segments with lowest disposable income. There could be several explanatory factors to this, such as a lack of experience with financial handling or discounting for future income, but the results underline the segment's interest in this type of offering nonetheless.

### **Brand Loyal Consumers**

As reported in chapter 2.4, Taiwanese consumers tend to be very brand loyal. This notion is also supported by the customer interviews, where interviewees admitted to feeling a sense of trust in IKEA and the quality that they can deliver. The fact that people have positive associations to the IKEA brand will help in many ways. Firstly, existing customers are more likely to repeat purchasing their furniture at IKEA. Secondly, they are more likely to be inclined to test the new offering because of a high degree of trust to IKEA's delivery of the offering. Consumer loyalty to the IKEA brand will also help alleviate the issue of quality, which is many people's

largest concern with buying second hand furniture as evidenced by both the customer interviews and survey. Thirdly, any marketing campaigns run by IKEA about the new offering is likely to be more effective than if an entirely new market player conducted it.

### **Sustainability as Part of Local Culture**

Although Swedish students exhibit stronger sustainability knowingness and attitudes, the traditional values in Taiwanese society leads to stronger sustainability behavior, as reported in chapter 2.5. Other cultural factors, such as the high degrees of long-term orientation and collectivism that Taiwan showed on Hofstede's cultural dimensions scale in chapter 2.5, emphasize that sustainability behavior is deeply engrained within the Taiwanese society. The long-term orientation indicates that the society is willing to act pragmatically and change its behavior for the sake of solving long-term problems, such as the threat of climate change. Additionally, seeing as climate change is a threat to society as a whole, a highly collectivist society is likely to engage in climate-friendly behavior, as discussed in chapter 2.5. Hence, the cultural aspects of Taiwanese society promote environmentally friendly practices, such as buying second hand furniture.

### **High Price Sensitivity**

From the empirical background in chapter 2.4 and data collection in chapter 5.2 and 5.3, Taiwanese consumers can be considered to have a high degree of price sensitivity, which implies that the perceived value must be higher or the price lower for an offering than if sold in a market with lower price sensitivity. Since the refurbished second hand offering from IKEA will provide products of seemingly similar quality as the first hand furniture but at a lower price, the high price sensitivity of the Taiwanese market can be considered to be an opportunity.

## **6.2.2 Local Market Challenges**

The local market challenges that have been identified are reaching out to older consumers, logistics and transportation, and low second hand demand, developed further upon in the upcoming section.

### **Reaching Out to Older Consumer Segments**

As described in the results chapter, older consumer segments tend to prefer using analog channels for their second hand furniture purchases, as opposed to online channels. Thus, reaching out to these consumers may prove more difficult, as they tend to prefer buying furniture from their local street vendor and don't use certain marketing channels such as social media to the same extent. Additionally, the older consumers rated the importance of the quality aspect higher than other consumers, and expressed some concern with the quality assurance of second hand furniture in the customer interviews. Convincing older consumers that the refurbished second hand products are of the same quality as newly produced products may therefore prove a challenge.

### **Logistics/Transportation**

In chapter 5.2, interviewees attested to logistics and transportation currently being one of the major issues with buying second hand furniture. In chapter 5.3, survey respondents were willing to pay slightly more, ca. 10% for refurbished second hand furniture from IKEA if delivery was included in the price. The fact that most people also don't own a car, and that people tend to buy second hand furniture from street vendors that are generally located in closer proximity to home, underlines the issue of transportation. The data also shows that respondents that purchase second hand furniture from street vendors rate the convenience aspect higher than respondents that purchase from online platforms. Therefore, it can be concluded that Taiwanese consumers in general prefer to buy furniture without having to worry about how to transport it.

The same issue pertains to the matter of sourcing furniture for refurbishment. The current disposal method of calling the communal cleaning squad to pick up furniture outside one's door is used by most people as evidenced by the customer interviews in chapter 5.2. In order to compete with this very convenient method of disposing of old furniture, the incentives would have to be large enough to outweigh the time and cost efforts required by customers to return their furniture to IKEA. In the customer interviews, most interviewees said that they would be willing to return IKEA furniture in return for a coupon that was on average 23% of the original product price. However, three out of seven who said yes would only be willing to do so provided that IKEA took care of the transportation, but in that case the average size of the coupon would only have to be 8% of the original price. If IKEA could provide a way of picking up furniture that was as convenient for consumers as the current disposal method, along with a small coupon, it is likely that many consumers would use it for the sake of their furniture being reused.

### **Lack of Positive Attitude Towards Second Hand**

Throughout the survey and interviews, most respondents did not have a current interest in buying second hand furniture. 65% of survey respondents claimed to be unlikely or neutral in their attitude towards buying furniture second hand, and a vast majority of interviewees rarely or never buy second hand in the current situation. The most distinguishable reason to the avoidance of second hand purchases seemed to be the quality concern. Seeing as the Taiwanese society is regarded by Hofstede as a society with high uncertainty avoidance, the scepticism towards second hand purchases could be explained by an insecurity about whether the quality of second hand products will be able to match the demanded level of quality.

## **6.3 Proposed Business Model**

With the aforementioned opportunities and challenges in mind, a proposed business model for IKEA Taiwan is presented below. First, the most important factors are discussed, followed by the suggested pricing model and the business model analyzed from a traditional, economic perspective. In the subsequent sections, the business model is expanded upon by employing environmental and social perspectives.

*'Products should be sustainable while delivering value to customers in terms of other aspects such as convenience and affordability'*

-Circular Business Designer, Ingka Group

### 6.3.1 Important Factors

Quality and price were the two factors that had the highest opportunity value, with 9.16 and 9.08 respectively. Quality was also mentioned in the customer interviews as a concerning factor when it comes to buying second hand. Furthermore, a majority of interviewees mentioned that they would be willing to pay more if the second hand product was sold by IKEA Taiwan, since they perceived that the company would be able to guarantee a certain quality standard. This would indicate that quality is an important factor to communicate to customers through marketing.

Price also had a relatively high opportunity value (9.06), and it was touched upon during the customer interviews with one of the interviewees mentioning that he felt that negotiating prices was a cumbersome part of the buying second hand products from other private individuals. IKEA Taiwan can reduce such uncertainty by removing the negotiating factor, while using its trustworthy brand to ensure that customers don't feel like they overpaid.

### 6.3.2 Pricing

In order to make the business model profitable, some margin has to be ensured by setting a price higher than the sum of the costs for a certain product. To find the optimal pricing level, time will be required to try out the business model in Taiwan and identify the exact costs and customers' WTP. However, a price can be estimated by analyzing the survey data.

In the data collection, pricing information was retrieved both from similar projects and customers' perception of their own WTP. In the Refurbish & Resell projects in Sweden and Japan, products were generally resold for 50-80% of the original price. In the customer survey, a majority answered that they would be willing to pay between 20-60% of the original price for a refurbished second hand product, with the average being 40.3%. When the same question was asked in the interviews, the perceived WTP was instead 50-75%. A WTP was also calculated by asking survey respondents to state a WTP for four different representative products, which was then averaged to arrive at the final figure.

If IKEA products are bought back from customers for 20-40% of the original price, which is the case in Japan and also in line with the interviewees' perception of a good buyback price, then a selling price of approximately 50% should be enough to cover additional costs from refurbishment and logistics while still being cheap enough to appeal to the price sensitive customer segments. However, higher resale prices should be tested to find the appropriate price level, which may differ between

different types of products. As the business model matures, it is also likely that the offering is perceived as more valuable and the customers will be willing to pay more as a result of the service being loaded with additional value, as mentioned in chapter 5.1.2.3.

Since the customer receives their buyback in the form of a discount voucher eligible in IKEA stores, the payback will result in lower profit margins on the products that the customer chooses to purchase with their voucher. Therefore, the margin must also be adjusted with the loss of income on other IKEA products in mind.

### 6.3.3 Economic BMC

In the following section, the implementation of the Refurbish & Resell business model for the Taiwanese market is defined using the traditional Business Model Canvas framework, introduced in chapter 3.2.1.

#### **Value Proposition**

Through the Refurbish & Resell business model, customers can access furniture that is cheaper than what new furniture at IKEA costs. Prices in previous IKEA second hand pilot projects have been set at around 50% of the original price. This enables significant cost savings for customers who don't mind that their furniture has been previously used. Quality-wise, the products on offer through the Refurbish & Resell business model is of higher quality than corresponding products in the As-is area, which consists of previous showroom products and customer returns that have not been refurbished in any significant way. According to the staff interviews, the ambition with the Refurbish & Resell offering is to offer products that are 'as good as new'.

#### **Key Partnerships**

Several partners, both internal and external, have been identified as critical for the business model to be successful.

- **Inter IKEA**

Inter IKEA owns the overall IKEA concept, including product design, branding and supply chain. Beyond that, Inter IKEA also acts as an intermediary in exchanging best practices between franchisees and as a policy setter when it comes to the group's overall sustainability agenda. Working closely with Inter IKEA will therefore be of utmost importance for the business model to be successfully implemented. Specifically, cooperation with Inter IKEA is needed for discovering best practices, ensuring a stable supply of spare parts and designing furniture with future refurbishment and end-of-life-prolongation in mind.

- **Store Management**

Store management should be involved to a high degree since the Refurbish & Resell business model will invariably be implemented in existing store space. Store management may have their own priorities that are separate from IKEA



Taiwan's corporate office, and achieving buy-in from them is critical since they will be a part of running sales, marketing and logistics related to the Refurbish & Resell business model.

- **Refurbishment Partner**

A refurbishment partner is vital for initial business model success since IKEA Taiwan does not currently have the equipment or facilities to conduct in-house furniture refurbishment in an efficient manner. In the long term however, it may be preferable to do the refurbishment in-house to reduce costs. When it comes to choosing the right refurbishment partner, certain factors for success have been identified:

- **Possession of Skills and Tools Necessary for Furniture Refurbishment**

In previous Refurbish & Resell pilot projects, it was highlighted that having an experienced and properly equipped refurbishment partner was key. For wooden furniture, which is one of IKEA's most important product categories, the right tooling consists of files, waxing tools, and painting tools. Tools and skills for upholstering is also necessary.

- **Geographical Proximity to IKEA Stores**

In order to minimize costs both in terms of money and time, as well as reducing carbon emissions, the refurbishment partner should be located in close proximity to the IKEA stores where the business model will be implemented.

- **Spare Capacity to Handle Unforeseen Swings in Input**

Since the input to the Refurbish & Resell business model will mainly consist of customer returns, and the fact that this input will be likely be unreliable, it is important that the refurbishment partner is able to handle large swings in demand.

- **Low Cost**

Refurbishment costs will likely be the biggest cost item in the whole process, and it is therefore vital that the refurbishment partner is able to offer low prices.

- **Storage Capability**

Depending on how much storage space will be allocated to the Refurbish & Resell operation, the refurbishment partner might need to store finished furniture locally before they are transported to IKEA stores.

- **Logistics Partner**

In order to transport the second hand products to take care of transport to and from the refurbishment partner, a logistics partner will be vital. In the long term, this partner may be responsible for customer pick-up as well. The

logistics partner used for current deliveries related to the core IKEA business should be a good choice, as the partnership already exists.

- **Local Government**

All of the customers interviewed reported that they used the municipal garbage collection system to dispose of their old furniture. As home pick-up of unwanted items is free for local residents, it will be difficult for IKEA to compete with this service. Ideally, IKEA Taiwan would instead set out to form a cooperation with the municipality in order to source second hand IKEA furniture from the current garbage disposal flow. However, there are currently restrictions about commercializing waste products in Taiwan that must be taken into account. Such restrictions include strict limitations profiting from municipally collected waste, as was reported during IKEA Taiwan staff interviews.

### **Key Activities**

The main activities of the Refurbish & Resell business model are logistics, refurbishment, sales, and marketing, all of which are elaborated upon below.

- **Logistics**

The major steps of transportation in the proposed business model are to and from the refurbishment partner, and potential home pick-up and home delivery of second hand furniture. This activity is core to the business model, and will likely be costly since refurbished furniture are already assembled and therefore not flat-packed. Furthermore, it may be hard to guarantee a cost effective filling rate of the vehicles since input furniture is customer-sourced and flows are therefore hard to predict. This indicates that it would preferable to choose higher value, lower bulk products for refurbishment. In the long term, it may however be preferable to do the refurbishment in-house, in order to avoid the costs of logistics.

- **Refurbishment**

Refurbishment is the core activity where second hand furniture is repaired, painted or cleaned. The refurbishment is performed by the refurbishment partner. In the long term, it could be beneficial for IKEA Taiwan to internalize the refurbishment process in order to save costs and increase efficiency. Costs for this activity will vary greatly depending on the state of the input furniture. Furthermore, the degree of variance in furniture type, condition and color will differ, which may make it difficult to achieve economies of scale.

- **Sales**

Sales is conducted in existing IKEA stores around Taiwan, preferably in a separated area such as a “Circular Hub”, where it is clear to the customers that the furniture is of second hand origin. This activity will depend heavily on cooperation with store management, as the sales process will utilize existing IKEA store infrastructure.

- **Marketing**

Marketing will likely be key in bringing customers' attention to the Refurbish & Resell business model, since it is a novel concept in Taiwan. Marketing in-store and online through existing channels is a preferable choice since it will not bring additional costs that would come with establishing new channels. A clear distinction that was seen in the survey results was that that older people prefer to purchase second hand furniture through street vendors or markets, and that younger people tend to use online platforms for their second hand purchases. This is in line with the argument made in chapter 2.4, where young Taiwanese consumers were described as tech savvy, spending a lot of time online. Reaching out to young consumers via social media and other online channels should therefore be an effective way of marketing.

**Key Resources**

The most important assets necessary for delivering the value proposition are store space, customer network and the IKEA brand. Sales area is the necessary store space where the products are being sold. Customer network is the current IKEA Family network that IKEA Taiwan is able to leverage to spread their marketing message. Lastly, branding relates to the way that Taiwanese consumers perceive IKEA Taiwan. During the customer survey, the majority of respondents answered that they were willing to pay more for second hand furniture at IKEA because of brand trust, compared to other second hand stores.

**Customer Relationships**

Although customers should be able to purchase refurbished furniture by means of walk-in, meaning a short-term transactional relationship, the main aim should be to create recurring, trust-based relationships with customers. The reasoning is that customers ideally should engage in a long-term exchange with IKEA where they both part-take in the sourcing and purchase of second hand furniture. A high engagement from customers is to be encouraged, where customers feel like they are doing something for the greater good and contributing to the betterment of their society by supporting circular practices. This thinking fits well with long-term and collaborative culture and high brand loyalty of Taiwanese society . Developing a relationship over time by consistently delivering high quality products will also help alleviate the quality concern that many customers have about second hand furniture.

**Channels**

The channels through which communication with the consumer segments is to be done can be broken down into physical and online channels. The main physical channel will be the IKEA stores. Here, awareness about the new offering can be achieved among existing IKEA customers by providing information about the Refurbish & Resell project and its circular aspects. Since people are already browsing the IKEA store for furniture, the Refurbish & Resell store space should easily catch customers' attention.

The IKEA website is an online channel and another way to reach out to existing IKEA customers. Through this channel, customers should be able to receive information about the circular offering and browse available products. Additionally, the IKEA website should be a coordination point for sourcing of furniture, allowing customers to get their furniture approved for refurbishment and to organize drop-off or pick-ups of said piece of furniture. Another online channel for reaching out to existing customers is via emails to IKEA Family members, notifying them about the sustainability work of IKEA as well as when newly refurbished furniture has arrived to their local store. Additionally, there are several channels that can be used for paid online marketing. Social media and online ads should be especially good, as the target segment of young consumers, and especially green consumers, is easy to reach via social media such as Facebook and Instagram and all target segments are reachable through targeted ads.

### **Customer Segments**

As previously defined, the customer segment with the greatest potential for the Refurbish & Resell offering is the young consumer segment because of their high sustainability awareness, price sensitivity, and higher than average willingness-to-pay. Other segments that can be targeted are sustainability aware people in general, which outside of young consumers tend to be people with higher educations, and current IKEA customers because of the high brand loyalty of Taiwanese consumers.

### **Cost Structure**

The costs incurred by the Refurbish & Resell business model can be divided into three parts; sourcing, refurbishment, and sales. Costs related to sourcing are pre-inspection of furniture and reverse logistics cost. For the refurbishment part, refurbishment cost, spare part ordering, logistics, and storage of furniture. As was noted in 6.2.1, IKEA Taiwan will likely incur lower refurbishment costs compared to other comparable Refurbish & Resell initiatives since Taiwan's cost of labor is relatively low. Sales costs relate mostly to marketing, as the costs derived from the resale of furniture are already mostly covered by the existing sales structure of IKEA stores. It should be noted that all logistics costs will be higher than for regular IKEA products, as the furniture will be transported fully assembled instead of in flat-packs per usual.

### **Revenue Streams**

The business model's revenue will solely come from sales of second hand furniture. The pricing, discussed in section 6.3.2, can be set at approximately 50% of the product's original price. The pricing is subject to change, and should be adapted as new information about cost structures and customer WTP emerges over time.

**Table 6.1:** Implementation of the Business Model Canvas

BMC Component	Analysis
Value Proposition	<ul style="list-style-type: none"> <li>• Sales of recycled and refurbished furniture to a reduced price</li> </ul>
Key Partnerships	<ul style="list-style-type: none"> <li>• Inter IKEA</li> <li>• Store Management</li> <li>• Refurbishment Partner</li> <li>• Logistics Partner</li> <li>• Local Government</li> </ul>
Key Activities	<ul style="list-style-type: none"> <li>• Procurement of used furniture <ul style="list-style-type: none"> <li>– Product returns, donations</li> <li>– Used leasing, showroom, and As-is products</li> </ul> </li> <li>• Logistics</li> <li>• Refurbishment and inspection of used furniture</li> <li>• Marketing and sales of refurbished furniture</li> </ul>
Key Resources	<ul style="list-style-type: none"> <li>• Tangible resources <ul style="list-style-type: none"> <li>– Physical store space</li> <li>– Used or damaged furniture</li> </ul> </li> <li>• Intangible resources <ul style="list-style-type: none"> <li>– Customer network (IKEA Family)</li> <li>– IKEA Brand</li> <li>– IKEA Supplier network</li> </ul> </li> <li>• Human resources <ul style="list-style-type: none"> <li>– IKEA Customer Service Dept.</li> <li>– IKEA Marketing Dept.</li> <li>– IKEA Corporate Circular Experts</li> </ul> </li> <li>• Financial resources</li> </ul>
Customer Relationships	<ul style="list-style-type: none"> <li>• Short-term, transactional relationship</li> <li>• Recurring, trust-based relationships to inspire high engagement</li> </ul>
Channels	<ul style="list-style-type: none"> <li>• Physical Channels <ul style="list-style-type: none"> <li>– IKEA Store <ul style="list-style-type: none"> <li>* Circular Hub</li> <li>* Drop-in delivery of used furniture</li> </ul> </li> </ul> </li> <li>• Online Channels <ul style="list-style-type: none"> <li>– IKEA Website <ul style="list-style-type: none"> <li>* Marketing/Attention</li> <li>* Browsing</li> <li>* Pick-up/Delivery coordination</li> </ul> </li> <li>– Online Marketing <ul style="list-style-type: none"> <li>* IKEA Family emails</li> <li>* Social media</li> <li>* Online ads</li> </ul> </li> </ul> </li> </ul>

Customer Segments	<ul style="list-style-type: none"> <li>• Young consumers</li> <li>• Environmentally conscious consumers</li> <li>• Current IKEA customers</li> </ul>
Cost Structure	<ul style="list-style-type: none"> <li>• Sourcing <ul style="list-style-type: none"> <li>– Inspection</li> <li>– Logistics</li> </ul> </li> <li>• Refurbishment <ul style="list-style-type: none"> <li>– Refurbisher salary</li> <li>– Spare parts</li> <li>– Storage</li> </ul> </li> <li>• Sales <ul style="list-style-type: none"> <li>– Marketing</li> <li>– Sales &amp; Service cost</li> </ul> </li> </ul>
Revenue Streams	<ul style="list-style-type: none"> <li>• Sales of used furniture</li> </ul>

### 6.3.4 Environmental Life Cycle BMC

In this section, the Refurbish & Resell business model is analyzed using the Environmental Life Cycle part of the Triple Layered Business Model Canvas in order to detail how the business model can align with IKEA's overarching environmental goals.

#### Functional Value

The functional value of the circular business model can be defined as the extended use of IKEA products, increasing the value of the product while reducing the dependence on production from raw materials. In the customer interviews, the average lifetime of a sofa was 13 years. If the sofa is refurbished and reused for an additional 13 years, that is the functional value of the specific product. Realistically, refurbished furniture may not have the same lifetime as a newly produced product, but the functional value is nonetheless regarded as the increase of the product's total lifespan.

#### Supplies and Outsourcing

There will not be significant added environmental impact from the supporting services necessary for the business model. IKEA stores have significant energy, water and waste usage, but the marginal impact attributable to implementing a Refurbish & Resell business model is likely to be small. Beyond the refurbishment and logistics, IKEA Taiwan are suggested to conduct other activities in-house.

**Table 6.2:** Environmental Life Cycle Business Model

BMC Component	Analysis
Functional Value	<ul style="list-style-type: none"> <li>• Prolonged lifetime of IKEA products</li> <li>• Postponed end-of-life</li> </ul>
Supplies and Outsourcing	<ul style="list-style-type: none"> <li>• Energy, water and waste from the IKEA stores</li> <li>• Marginal added environmental impact</li> </ul>
Production	<ul style="list-style-type: none"> <li>• Refurbishment activities <ul style="list-style-type: none"> <li>– Repairing</li> <li>– Repainting</li> <li>– Cleaning</li> </ul> </li> <li>• Small added environmental impact</li> </ul>
Materials	<ul style="list-style-type: none"> <li>• Input material (Second hand furniture)</li> <li>• Spare parts</li> <li>• Material to build store space</li> <li>• Marginal added environmental impact</li> </ul>
End-of-Life	<ul style="list-style-type: none"> <li>• A product's life span can be extended several times over</li> <li>• Added environmental benefits</li> </ul>
Distribution	<ul style="list-style-type: none"> <li>• Logistics <ul style="list-style-type: none"> <li>– Reverse logistics (customer to store)</li> <li>– Transportation between refurbisher and IKEA store</li> <li>– Home delivery</li> <li>– Intake of spare parts</li> </ul> </li> <li>• Larger environmental costs from transportation compared to normal IKEA products</li> </ul>
Use Phase	<ul style="list-style-type: none"> <li>• Customer use <ul style="list-style-type: none"> <li>– Purchase of refurbished furniture</li> <li>– Sellback of old IKEA furniture</li> <li>– Repairs</li> <li>– Ultimate disposal of furniture</li> </ul> </li> <li>• Marginal added environmental impact</li> </ul>
Environmental Impacts	<ul style="list-style-type: none"> <li>• Production</li> <li>• Distribution</li> <li>• (Materials)</li> </ul>
Environmental Benefits	<ul style="list-style-type: none"> <li>• Increased product lifetime <ul style="list-style-type: none"> <li>– Longer product usage</li> <li>– Decreased need for new production</li> </ul> </li> </ul>

### **Production**

Although the scope of this business model does not entail any production from raw materials, the processing of second hand products, especially the activities relating to the refurbishment process, can be viewed as production. During refurbishing, there is a small environmental impact from repairing, repainting, and cleaning the products, mostly in the form of water usage.

### **Materials**

First and foremost, the input material used in the business model is second hand furniture that would most likely end up in a landfill or be incinerated otherwise. Secondly, spare parts are used to repair damaged products. Some materials are also used to erect the second hand space in the IKEA store. All-in-all, the environmental impact of the input materials are close to negligible.

### **End-of-Life**

The purpose of the Refurbish & Resell business model is, as described above, to extend the lifespan of IKEA products. Therefore, the products' end-of-life will be extended past their original date, which is when the products are discarded or bought back by IKEA. Once a refurbished product reaches its "second" end-of-life, the customer has the possibility of returning it once more for refurbishment and resale, which would extend the product life even further. After several uses, depending on the product, it will not be refurbishable anymore, at which point it will be disposed of through conventional means.

### **Distribution**

The logistics of furniture will incur larger environmental costs than for original IKEA products, as they for the most part will not be disassembled during transportation and will therefore require more space than a flat-pack would. As there are several steps of transportation in the business model: reverse logistics from customer; to and from the refurbisher; and home delivery to final customer, the impact of logistics is likely to be the largest environmental cost in the business model. The logistics of spare parts, which will likely have to be ordered from suppliers outside of Taiwan, will also incur additional environmental costs.

### **Use Phase**

The customer's partaking in producing the functional value can be divided in two parts - the buyback of furniture and the purchase and use of refurbished furniture. For an IKEA product to be refurbished, a customer is required to contact IKEA about a buyback and organize the delivery of that product to IKEA, whether it is by own means or arrangement of a pick-up time with IKEA's logistic partner. If the customer needs to deliver the furniture themselves, they will likely do it by car more often than public transport, incurring environmental costs for driving to and from the IKEA store.

Once a product has been refurbished, it will be resold to another customer, who will either bring it back home by hand or have it delivered. Since the customer was al-



ready at IKEA prepared to buy furniture, the additional cost of buying a refurbished product as opposed to a brand new one is marginal. During the product lifetime, the customer may need to repair the product by acquiring spare parts, either by additional trips to IKEA or by delivery. Finally, once the product has reached its second end-of-life, the customer must dispose of the product by conventional means or by returning it to the IKEA store. All-in-all, the energy and resource requirements for customers in the circular use of furniture is higher than for original purchases, but not substantial.

### **Environmental Impacts**

The environmental costs relate mainly to the additional CO<sub>2</sub> emissions from logistics, but also to the energy consumption of refurbishment, marketing, and all related activities. Specific CO<sub>2</sub> figures have not been estimated for this project. These emissions can be reduced by doing refurbishment in-house, rather than outsourcing, thereby partially eliminating logistical requirements.

### **Environmental Benefits**

The environmental benefits of the business model are derived from the increased use of products and the decreased need for producing new products from raw materials, resulting in reduced CO<sub>2</sub> emissions and material usage. The CO<sub>2</sub> figures for this research project have not been estimated, but as material usage and production of new products represents a significant emission source within the IKEA Taiwan value chain, there is likely to be significant emission savings attributable to refurbishing old furniture as opposed to fresh production. This indicates that the business model is appropriately aligned, and can positively contribute to IKEA's environmental goal of becoming climate positive.

## **6.3.5 Social Stakeholder BMC**

In the Social Stakeholder part of the Triple Layered Business Model Canvas, the social impacts of the Refurbish & Resell business model on different stakeholders is examined in order to detail how the business model aligns with IKEA's social goals.

### **Social Value**

Through the Refurbish & Resell business model, IKEA Taiwan can allow its customers to furnish their homes with cheaper, better quality and more environmentally friendly furniture.

### **Local Communities**

As IKEA Taiwan stores are generally located in major urban centers, these are naturally the communities that it will serve. The social relationships will consist of business partners in the nearby area and the consumers that supply and purchase second hand products. The refurbishers and logistics companies that are contracted by IKEA Taiwan will benefit from the new offerings, positively affecting the local communities.

### **Governance**

IKEA Taiwan is an IKEA franchisee subsidiary that is run as a profit-driven organization. It operates in a fairly autonomous fashion although knowledge sharing between subsidiaries and with headquarters is common. The Refurbish & Resell project will be governed by IKEA Taiwan business units first and foremost.

### **Employees**

IKEA employs a lot of young people at the start of their career, with the average age among survey respondents (most of them working at IKEA Taiwan) being 34.8 years. During the pilot project, a social enterprise was chosen to do the refurbishment work, which helped create job opportunities for members of society that would otherwise find difficulty in finding a job.

### **Societal Culture**

The Refurbish & Resell business model can impact society at large by increasing awareness about circular economy. The business model may also give rise to competitors implementing similar second hand offerings, which would further compound the growth of awareness and popularity of circular economy practices. IKEA Taiwan is already an active participant in several Taiwanese sustainability forums, and may use these channels to positively influence other actors on the Taiwanese market.

### **Scale of Outreach**

The scale of outreach for the Refurbish & Resell business model within IKEA Taiwan is limited to Taiwan, but other IKEA entities are implementing similar business models across the world and thereby creating global outreach.

### **End-User**

The end-user is mainly represented by the customer who buys the second hand product, but can complementarily be considered to be the person returning their furniture for refurbishment. Both of these types of end-users may feel positive gratification for participating in a business model that brings environmental benefits.

### **Social Impacts**

The business model may impact current second hand retail locations negatively, many of which are independently run in Taiwan. As IKEA Taiwan benefits greatly from branding and economies of scale, these actors may not be able to compete with the offering. One opportunity to mitigate this impact would be to actively cooperate with social enterprises as part of the Refurbish & Resell value chain. Within the pilot project, a social enterprise was chosen as the refurbishment partner. Similarly, during the ReTuna project in Sweden, Ingka Group contracted a social enterprise (Samhall) to take care of the refurbishment process.

### **Social Benefits**

By creating awareness about sustainability and circular economics, IKEA Taiwan has an opportunity to push the agenda and encourage consumers, companies and government actors to engage in more sustainable practices.

**Table 6.3:** Implementation of the Social Stakeholder Business Model Canvas

BMC Component	Analysis
Social Value	<ul style="list-style-type: none"> <li>• Individuals can buy cheap and environmentally friendly furniture that is “as good as new”</li> </ul>
Local Communities	<ul style="list-style-type: none"> <li>• Impact on local individuals <ul style="list-style-type: none"> <li>– Access to cheap, qualitative, and environmentally friendly furniture</li> </ul> </li> <li>• Impact on local businesses <ul style="list-style-type: none"> <li>– IKEA partners will benefit (refurbishers, logistic companies)</li> <li>– Competitors might be negatively impacted</li> </ul> </li> <li>• Net positive social benefits</li> </ul>
Governance	<ul style="list-style-type: none"> <li>• Increased social benefits through knowledge sharing</li> </ul>
Employees	<ul style="list-style-type: none"> <li>• Increased social benefits through creation of job opportunities</li> </ul>
Societal Culture	<ul style="list-style-type: none"> <li>• Increased awareness about circular economy</li> <li>• Increased competition of environmentally friendly furniture offerings</li> </ul>
Scale of Outreach	<ul style="list-style-type: none"> <li>• Greatest impact on the Taiwanese market</li> <li>• Positive spillover effects to other IKEA locations through knowledge sharing</li> </ul>
End-User	<ul style="list-style-type: none"> <li>• Purchasing customer <ul style="list-style-type: none"> <li>– Buys and uses circular offering</li> </ul> </li> <li>• Buyback customer <ul style="list-style-type: none"> <li>– Returns furniture for refurbishment</li> </ul> </li> <li>• Both end-user types may experience positive gratification from participating to environmental benefits</li> </ul>
Social Impacts	<ul style="list-style-type: none"> <li>• Competitors going out of business</li> </ul>
Social Benefits	<ul style="list-style-type: none"> <li>• Local Communities</li> <li>• Governance</li> <li>• Employees</li> <li>• Societal Culture</li> <li>• Scale of Outreach</li> <li>• End-User</li> </ul>

### 6.3.6 Circularity within the Business Model

In chapter 3.2.3, eight different archetypes of circular business models were introduced. Which archetype the business model belongs to depends largely on the methods the business models employ to deliver sustainability, and which part of the business model that the major innovation belongs to. In the case of the business model proposed in this thesis, the major innovation can be considered a change in the value proposition, encouraging a change from the linear consumption of goods to a more sustainable, circular use of goods that results in an extended lifetime for each product and sustainability benefits for not only the environment, but also the social and economic aspects. The archetype that seems most fitting is therefore the “Encourage Sufficiency” archetype in the Social grouping, as the business model promotes product longevity, as well as consumer education about sustainability issues, product demand management, and responsible product distribution.

## 6.4 Cross Comparison of Refurbish & Resell Initiatives

In the results, two early IKEA second hand initiatives were presented in the forms of the ReTuna Second Hand Store in Sweden and the Circular Hub in Japan. Based on insights from staff interviews and other data collection, a comparison between the two initiatives and the IKEA Taiwan recommendation is presented in Table 6.4. The comparison is based on the economic BMC detailed by Osterwalder (2004).

**Table 6.4:** Comparison of different IKEA second hand initiatives.

	ReTuna Second Hand Store	Circular Hub Japan	IKEA Taiwan (proposed)
<b>Value Proposition</b>	<ul style="list-style-type: none"> <li>• High quality furniture for a reduced price</li> </ul>	<ul style="list-style-type: none"> <li>• High quality furniture for a reduced price</li> <li>• Store voucher of 20% of original value for returning used furniture</li> </ul>	<ul style="list-style-type: none"> <li>• High quality furniture for a reduced price</li> </ul>
<b>Partners</b>	<ul style="list-style-type: none"> <li>• ReTuna Second Hand shopping mall</li> <li>• Local municipality recycling service for sourcing furniture</li> <li>• Social enterprise for refurbishment</li> </ul>	<ul style="list-style-type: none"> <li>• IKEA Kohoku Store takes care of returns, refurbishment and sales</li> </ul>	<ul style="list-style-type: none"> <li>• IKEA Hsinchuang store</li> <li>• Social enterprise refurbishment partner</li> <li>• Logistics supplier</li> </ul>

<b>Key Activities</b>	<ul style="list-style-type: none"> <li>• Sourcing of furniture done at recycling center near store, or from IKEA Västerås' As-is section</li> <li>• Refurbishment by contracted social enterprise workers, located next to the IKEA second hand store</li> <li>• Sales through the IKEA second hand store</li> </ul>	<ul style="list-style-type: none"> <li>• Customer-returned furniture are pre- approved online and dropped of at IKEA Kohoku Store in exchange for a store voucher</li> <li>• Furniture is also sourced from As-is section of Kohoku Store</li> <li>• Both refurbishment and resale performed in the Circular Hub section of IKEA Kohoku Store</li> </ul>	<ul style="list-style-type: none"> <li>• Sourcing from customer returns through IKEA Hsinchuang As-is section</li> <li>• Sales of second hand furniture through designated area in IKEA Hsinchuang As-is section</li> </ul>
<b>Key Resources</b>	<ul style="list-style-type: none"> <li>• Stand-alone store space with refurbishment facilities</li> <li>• Designated IKEA recycling location outside of store</li> <li>• Customer network</li> <li>• Branding</li> </ul>	<ul style="list-style-type: none"> <li>• In-store sales area with refurbishment facilities</li> <li>• Sourcing available through nearby customer returns section</li> <li>• Customer network</li> <li>• Branding</li> </ul>	<ul style="list-style-type: none"> <li>• Store space</li> <li>• Customer network</li> <li>• Branding</li> </ul>
<b>Customer Relationship</b>	<ul style="list-style-type: none"> <li>• Short-term transactional</li> </ul>	<ul style="list-style-type: none"> <li>• Short-term transactional</li> </ul>	<ul style="list-style-type: none"> <li>• Short-term transactional</li> <li>• Recurring, trust-based</li> </ul>
<b>Customer Segment</b>	<ul style="list-style-type: none"> <li>• No specific segmentation</li> <li>• Swedish consumers are generally highly sustainability aware</li> </ul>	<ul style="list-style-type: none"> <li>• Young people</li> <li>• Japanese consumers are generally highly quality-sensitive</li> </ul>	<ul style="list-style-type: none"> <li>• Young people</li> <li>• Taiwanese consumers are generally highly price-sensitive</li> </ul>
<b>Channels</b>	<ul style="list-style-type: none"> <li>• Online &amp; in-store communication</li> </ul>	<ul style="list-style-type: none"> <li>• Online &amp; in-store communication</li> </ul>	<ul style="list-style-type: none"> <li>• Online &amp; in-store communication</li> </ul>

<b>Costs</b>	<ul style="list-style-type: none"> <li>• Refurbishment process (labor, spare parts, facilities etc)</li> <li>• Logistics</li> <li>• Marketing costs</li> <li>• Store space rent and other fixed costs</li> </ul>	<ul style="list-style-type: none"> <li>• Refurbishment process (labor, spare parts, facilities etc)</li> <li>• Logistics</li> <li>• Marketing costs</li> <li>• Store space rent and other fixed costs</li> </ul>	<ul style="list-style-type: none"> <li>• Refurbishment process (labor, spare parts, facilities etc)</li> <li>• Logistics</li> <li>• Marketing costs</li> <li>• Store space rent and other fixed costs</li> </ul>
<b>Revenues</b>	<ul style="list-style-type: none"> <li>• Sales revenue of second hand furniture</li> </ul>	<ul style="list-style-type: none"> <li>• Sales revenue of second hand furniture</li> </ul>	<ul style="list-style-type: none"> <li>• Sales revenue of second hand furniture</li> </ul>

# 7

## Conclusion & Recommendations

This section includes some concluding remarks as well as recommendations for the implementation of the Refurbish & Resell business model for IKEA Taiwan in the short and the long term.

### 7.1 Conclusion

This paper has suggested a practical way to implement a Refurbish & Resell business model for IKEA Taiwan, thereby adding to the literature of case studies within circular business model implementation. In conclusion, successful implementation of a Refurbish & Resell business model in Taiwan requires taking several factors into account. Largely, the business model used within the ReTuna and IKEA Japan Circular Hub projects can be emulated, with adjustments for the local market. The business model can positively contribute to IKEA's economic goals by increasing revenue, environmental goals by reducing carbon emissions from new product manufacturing and social goals by increasing awareness about sustainability. In other words, the business model can enhance IKEA's existing CSR work through further internalizing existing externalized costs and take more responsibility for stakeholders outside the firm, while also generating economic returns.

As shown throughout the market research sections of this study, there is a clear demand for IKEA Taiwan to provide this offering, especially among younger people. Furthermore, IKEA Taiwan can tap into the knowledge and experience of other IKEA entities who have implemented the business model. Price and quality are the factors in which IKEA Taiwan has an opportunity to create a competitive edge, with straightforward pricing and brand-enhanced quality guarantee.

IKEA Taiwan also has significant opportunities to reduce their CO<sub>2</sub> emissions through this business model. Although CO<sub>2</sub> emissions are not studied extensively within this study, a majority of emissions within the value chain come from the production stage, which can be circumvented through the Refurbish & Resell business model. In the long term IKEA Taiwan can be an important part of driving the circularity agenda, especially since the Taiwanese government has circularity and sustainability as part of their focus area. There is also a significant opportunity to address social concerns by working together with social enterprises throughout the refurbishment process, as well as raising awareness of sustainable practices within local communities.

There are however several challenges that must be overcome for the business model to be successful. Securing a steady supply of input furniture was mentioned as one of the biggest hurdles facing the ReTuna project, and this will likely present a challenge for IKEA Taiwan as well. Furthermore, second hand purchasing is still not common among parts of the population, with many of the customers surveyed never having bought second hand products. In the short term, this will be difficult to address, but IKEA Taiwan can have a significant impact on this awareness as an existing influential actor on the Taiwanese furniture market.

## 7.2 Theoretical Implications

This paper has exemplified how the Triple Layered Business Model Canvas can be used to analyze a circular business model. Furthermore, it has highlighted findings that relate to the Taiwanese furniture market, namely that higher income may not necessarily mean a higher WTP when it comes to buying second hand furniture. IKEA Taiwan was found to have the unique advantage of relatively low refurbishment labor costs compared to final selling price of its second hand products, which may indicate that second hand business models are especially attractive to mid-high price segment brands that conduct business in countries with a relatively low labor cost.

## 7.3 Application of the TLBMC

The Triple Layer Business Model Canvas (TLBMC) has been used in this study to develop a high level business model analysis. In order to assist further research, the authors have outlined several advantages and challenges related to the application of TLBMC for business cases.

### 7.3.1 Advantages

The TLBMC was not intended to solely be used for circular business models, but is rather a tool to support creative exploration of possible innovations within any business model (Joyce and Paquin, 2016). Furthermore, the application of the TLBMC is not limited to novel business models, but also for analyzing and exploring opportunities within existing business models. In the case of Refurbish & Resell, the business model was not entirely novel, and had in fact been used in previous trials within IKEA.

While the economic layer of the TLBMC has been used extensively in previous studies, examples of using the social and environmental layers remain scarce. In consideration of the usefulness of this framework, the key question is whether or not it has provided insights that would otherwise not have been generated. The environmental components of the Refurbish & Resell business model had been well



explored previous to this study and did thus not provide any significant benefit beyond providing a clear picture of the environmental aspects of the business model to both the authors and readers. However, the social layer provided some interesting insights that may have not been considered if it was not for the TLBMC. The framework provided a basis for stakeholder analysis, where effects on stakeholders such as local government, local community and competitors were considered. For this research paper, the impact on competitors (mainly independently owned second hand furniture street vendors and retail stores) as well as the potential impact on societal awareness around second hand were two insights that would not have been generated without the TLBMC framework.

### 7.3.2 Limitations

The TLBMC is useful for analyzing a business model in a comprehensive way, however the framework does have some limitations. The limitations identified here are mostly about the environmental layer of the TLBMC.

The environmental layer is focused around quantifying and highlighting the environmental impact of the business model. In the case of Refurbish & Resell however, there was no clear data to refer to, which lowered the value of the framework. Furthermore, the framework seems less suitable for circular business models, as the *Functional Value* component (defined as a quantified use basis for comparing marginal environmental effects, e.g. “one can of soda once daily multiplied by the amount of consumers over a year”) was difficult to formulate since the consumption period of furniture in the Refurbish & Resell business model varies, and could potentially be extended indefinitely with adequate refurbishment. This problem carries over to the *Use Phase* component, where the environmental impact of the use phase of non-electronic furniture are not significant to begin with. In the authors’ opinion, the environmental layer is more apt for use on linear business models with quantifiable and clear life cycle stages, e.g. manufacturing of consumables.

The social layer is highly useful for analyzing the impact on different stakeholders, but suffers from the same issue of lacking a clear quantifiable measurement to allow for distinct comparisons between different components, layers, and business models. Considering the traditional business model canvas is quantified in terms of revenues and costs, quantifying both the social and environmental layers in monetary terms would be beneficial to achieve some degree of consistency and comparability between layers. The way of measuring different components of the TLBMC should be determined early in the research process so that it can be considered already in the early data collection stages.

### 7.3.3 Final Thoughts on the TLBMC

In conclusion, the TLBMC is a great tool to use for business model creation for businesses that want to include environmental and social sustainability into their business model design because of its simplicity, ease-of-use, and recognizability. The additional layers also have the benefit of strictly being complements to the economic business model canvas. This means that a business model that was created with the traditional business model in mind can be expanded to include the environmental and social layers, while keeping the original business model intact. However, this also means that there is no clear vertical alignment between the different layers and it can be somewhat hard to see how the respective components correlate. It is possible that the TLBMC is more appropriate in cases where each layer is to be analyzed independently. The authors would recommend using the TLBMC to any researcher or business that wants a straight-forward way to examine a business model's environmental and social impact, while emphasizing the importance of clearly defining how to measure the impact of each component, preferably in quantifiable terms.

## 7.4 Short-term Recommendations

In the short term, the main objectives should be to get the circular business model up and running by developing a minimum viable service. The pilot project is a good starting point.

As was discovered during the market analysis phase, customers already have convenient ways of disposing their old furniture for free in Taiwan through the municipal recycling service. While competing directly with a free service will be difficult, IKEA Taiwan can ensure a steady input supply by providing incentives for customers to return their old IKEA furniture. Firstly, IKEA Taiwan should provide a user-friendly way for customers to send a picture of their furniture before dropping them off, in order to make sure that the furniture is able to be repaired. Secondly, IKEA Taiwan should promptly provide a value of the voucher that the customer will receive upon successful return. A refurbisher partnership is already established as part of the pilot project, and if the service is deemed satisfactory, the contract should be continued.

For creating customer awareness about the new offering, marketing should first and foremost be done on online platforms such as social media, the IKEA website, and emails to existing customers. It should also be promoted in the store, ensuring that all visitors to the IKEA stores at least acquire knowledge about the circular offering and preferably visit the designated store area. When it comes to branding, "Circular Hub" is a good name for the area as it is already an established concept in the Ingka Group franchises. Use of podium solutions and free-moving walls to ensure flexibility depending on supply. Different pricing figures can be tested to find an appropriate pricing model. The initial recommendation is to put the pricing around 50% of the original sales price, as long as a profit margin is ensured.

## 7.5 Long-term Recommendations

In the long term, if the demand for refurbished second hand products is high enough, home pick-ups of furniture could be introduced to allow for an increased supply of incoming products and to be able to effectively compete with the municipal recycling service. The screening of products should still be done online, but should be expanded upon by allowing customers to use a smartphone application to post furniture for screening and book pick-up times. As the circular business model matures, it would likely be advantageous to internalize the refurbishment to increase efficiency and decrease costs.

With time, the Refurbish & Resell model should be an established concept and customer awareness high. Then, marketing about the specific offering is not as important, and could possibly rely heavily on spreading by word-of-mouth. However, customers should still be able to receive updates about new products in the Circular Hub, how many products have been saved, and the environmental benefits the new concept has resulted in.

At this stage, a pricing model for different types of products will have been set and their respective demand identified. Then, sourcing and sales of products can be performed based on which products fit best with regards to profit margin. In order to allow for increased sales of refurbished second hand products, the designated store space should be expanded as well. The pricing level is likely to depend on product type, although 50% of original price is a good guideline.



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# A

## Interview Questions to IKEA employees

### A.1 Sweden/Globally

#### General Information

1. What is your title and job description?
2. What responsibility lies at Inter IKEA?
3. What responsibility lies at the retailers?
4. How do the different organisations collaborate?

#### Sustainability Strategy

1. How would you describe IKEA's sustainability strategy?
2. What are the motives for pursuing sustainability at IKEA?
3. What sustainability responsibility lies with Inter IKEA?
4. What sustainability responsibility lies with the retailers?
5. How do the different organizations work to coordinate the efforts?

#### Circularity Strategy

1. How would you describe IKEA's circularity strategy?
2. What are the motives for pursuing a circular IKEA?

#### Second Hand Process

1. What does the IKEA second hand process look like in Sweden?
2. How does the IKEA second hand process fit into the larger IKEA sustainability strategy?

## A.2 Taiwan

### General Information

1. What is your title and job description?
2. What does your relation to Inter IKEA look like? How is the division of responsibilities?

### IKEA Taiwan Sustainability & Circularity Strategy

1. Do you have sustainability goals for IKEA Taiwan and what do they look like?
2. What are the main motivations of pursuing sustainability?
3. How do you cooperate with Inter IKEA to reach these goals? Do they have expectations on you?
4. With regards to circularity, what strategy does IKEA Taiwan employ?

### Information about the Taiwanese Second Hand Market

1. Where do Taiwanese consumers currently find second hand furniture?

### Information about Taiwanese (Furniture) Consumer Market

1. What are the biggest customer/consumer segments for IKEA Taiwan?
2. How do the customers feel about IKEA Taiwan and sustainability, do they understand the sustainability profile that IKEA wants to assert?
3. How do Taiwanese customers view the notions of sustainability and circularity, and to what degree do these notions impact their consumer behaviour?

### Pilot Project Specific Questions (Information about Supplier, Refurbishment and Service Partners, etc.)

1. Where can we source used furniture that are suitable for refurbishment and resale as second hand products?
2. Do you currently have a logistics partner that would be suitable for the second hand pilot project?
3. What would the transportation services cost be (eg. a chair)?
4. Do you currently have a refurbishment partner that would be suitable for the second hand pilot project?
5. What would the refurbishment cost be (eg. a chair)?
6. Have you considered the different options for procuring used furniture, and what do you believe to be the best options from a consumer perspective and from IKEA's perspective? Examples:
  - (a) Customers can book pick-up of their old furniture directly from IKEA website.
  - (b) Customers can bring their furniture directly to the IKEA warehouse/refurbisher/recycling center

## A. Interview Questions to IKEA employees

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Person	Title/Role	Company	Interview Format	Date
██████████	Key Account Manager, IKEA for Business	IKEA Taiwan	Video call	2021-02-08
██████████	Commercial Director	Dairy Farm	Video call	2021-02-09
██████████	Circular Business Designer	Ingka Group	Video call	2021-02-10
██████████	Project Leader, Circular Supply Chain	IKEA of Sweden	Video call	2021-02-15
██████████	Project Leader, Circular Supply Chain	Inter IKEA	Video call	2021-02-24
██████████	Sustainability Manager	IKEA Taiwan	Video call	2021-02-25
██████████	Sustainability Business Partner	IKEA Japan	Video call	2021-04-26





# B

## Staff Interview Results

Number	Category	Count
1	Retuna	14
2	Job description	10
3	Cooperation between IKEA entities	10
4	Refurbishment process	9
5	Sustainability motivations	8
6	Spare parts	7
7	Product selection	7
8	Circular hub	7
9	Franchisee independence	7
10	Logistics	6
11	IKEA sustainability leadership	5
12	Japanese culture	5
13	Sourcing of furniture	5
14	Franchising relationship	4
15	Taiwanese consumer culture	4
16	Green retailing	3
17	Pricing	3
19	Customer perception	3
20	IKEA sustainability	3
21	Project barriers	3
22	Integrated sustainability	3
23	Customer buybacks	3
24	Project motivations	3
25	Project collaboration	3
26	IKEA Strategy	2
27	Procurement	2
28	Taiwanese sustainability culture	2
29	Innovation strategy	2
30	Sustainability goals	2

31 Project outcomes	2
32 Internal barriers	2
33 Refurbishment costs	2
34 Marketing	2
35 Cultural differences	2
36 Choice of refurbisher	2
37 Sustainability focus	2
38 Sustainability strategy	2
39 -	2
40 Customer focus strategy	2
41 Business model	2
42 Customer focus	1
43 Resale	1
44 IKEA culture	1
45 External barriers	1
46 IKEA return policy	1
47 Product design	1
48 Resource use	1
49 Product development	1
50 Customer relationship	1
51 Circular strategy	1
52 Organizational culture	1
53 Branding	1
54 Transportation cost	1
55 Government support	1
56 Local communities	1
53 Branding	1
54 Transportation cost	1
55 Government support	1
56 Local communities	1
53 Branding	1
54 Transportation cost	1
55 Government support	1
56 Local communities	1
53 Branding	1
54 Transportation cost	1
55 Government support	1
56 Local communities	1
<b>Grand Total</b>	<b>193</b>

Categories derived from the staff interview content analysis, sorted by most mentioned.







# C

## Customer Interview Results

Date	2021-02-17	2021-02-26	2021-03-09	2021-03-12
Interviewee				
Age	25	36	26	28
Size of household	1	2	3	2
IKEA shopping frequency (times/year)	6	10-20	6	12-24 (furniture: 2)
Annual furniture expenditure (NTD)	3000	10000	100000	4000
Important aspects when buying furniture	Color, material, price	Lifestyle fit, price	Style, comfort	Price, durability, sustainability
Annual second hand furniture expenditure NTD)	0	0	0	2000
Advantages with buying 2nd hand	Economical, can find vintage things	-	Sustainable, cheap	Cheap
Disadvantages with buying 2nd hand	Quality, hygiene	-	Already used, worn, lack of knowledge, inconvenience of pick-up	Lack of availability, time consuming, delivery
Where do you buy 2nd hand	Facebook, 旋轉拍賣	Facebook	Facebook, antique furniture dealers Have to engage in small talk,	Facebook, Carousel
Difficulties buying 2nd hand	Trust, Difference between expectation and result, hard to fit	Lack of knowledge, hygiene	negotiating price, arranging delivery Can easily browse many options, cheaper	Delivery, transaction (trust) Fun to see what people sell, relaxing to browse
Good about existing offering	Negotiable price, two-way communication	-		
Why and when do you buy 2nd hand	Low budget, find vintage stuff	-	When moving to a new place on a small budget	When moving to a new place
Concerns & risks before purchase	If the furniture meets expectations, risk of fraud, no refund	-	Quality	Trustworthiness of seller and product quality

Quality 1-10	7	6	8	6
Convenience 1-10	5	4	7	9
Price 1-10	6	7	6	8
Sustainability 1-10	3	10	5	2
WTP for refurbished products (% of original price)	75%	50%	75%	65%
Different answer if IKEA selling?	Yes	Yes	Yes	If individual person yes, if other well-known brand no
Why?	Can guarantee quality	Reliable source	Brand trust, quality guarantee	-
How dispose of old furniture?	Call the cleaning squad	Cleaning squad	Cleaning squad	Cleaning squad
Good about current way of disposing	Free, convenient	Convenient	Convenient	Cheap
Bad about current way of disposing	Not sustainable, doesn't get reused	Wasteful	Not sure what happens to furniture	-
Length of use before disposing (sofa) (years)	10	10-15	15-20	3, if good quality 8.5
Would you return IKEA furniture in return for coupon?	Yes	Yes	Yes	Yes, if free delivery
How big should the coupon be? (% of original price)	5%	75%	30%	10%

Date	2021-03-12	2021-03-19	2021-03-19	2021-04-07
Interviewee				
Age	65	41	38	43
Size of household	4	2	2	4
IKEA shopping frequency (times/year)	10-20	1	4	2
Annual furniture expenditure (NTD)	0	2000	15000	20000
Important aspects when buying furniture	Design, quality	Fashion, quality, convenience (delivery)	Quality, durability	Pairing, durability, fit with other furniture, comfort
Annual second hand furniture expenditure NTD)	0	0	0	0
Advantages with buying 2nd hand	Economical, good for short-term use, sample house can use to reduce cost	Economical	Cheap	-
Disadvantages with buying 2nd hand	Refurbishment cost may exceed purchasing price	Quality	Unsure of quality, wouldnt buy big stuff	Hard to fit with other furniture, don't know what happened to the furniture before
Where do you buy 2nd hand	Furniture stores	Facebook	Online groups (Facebook)	Shopee
Difficulties buying 2nd hand	Delivery	-	Delivery	Communication, negotiation
Good about existing offering	-	Convenient	Lot to choose from	Environmentally friendly
Why and when do you buy 2nd hand	When moving to a new place	For short-term needs	For smaller things	-
Concerns & risks before purchase	Quality, trustworthiness of seller	Quality, cleanliness	Quality, cleanliness	Quality, hygiene
Quality 1-10	7	7	9	10
Convenience 1-10	2	8	8	5
Price 1-10	9	6	9	5
Sustainability 1-10	2	7	7	1
WTP for refurbished products (% of original price)	-	50%	60%	55%
Different answer if IKEA selling?	No	Yes	Yes	No
Why?	Price is not main concern, quality is	Trusts IKEA brand to ensure good quality	Brand recognition	If quality is the same it doesn't matter
How dispose of old furniture?	Self-refubish and resell or give away. Cleaning squad is an option but never used it.	Cleaning squad	Cleaning squad	Cleaning squad, maybe resell

Good about current way of disposing	Cleaning squad:				Convenient, sometimes they refurbish it so environmental concern is not big issue
	Convenient and free	-		Convenient	
Bad about current way of disposing	-		Not recycled	Have to adapt to times	-
Length of use before disposing (sofa) (years)		25	10	10+	7
Would you return IKEA furniture in return for coupon?	No	Yes	Yes, if free delivery	Yes, if free delivery	
How big should the coupon be? (% of original price)		-	25%	10%	5%

#### Average Coupon size

All yes	23%
Yes, if free delivery	8%
Yes, without free delivery	34%

Avg Quality:	6,7
Avg Convenience:	5,3
Avg Price:	6,2
Avg Sustainability:	4,1
Avg: WTP:	61%



# D

## Survey Questions

### Demographic Information

1. What is your age?
  - (a) Under 18 years
  - (b) 18-24 years
  - (c) 25-34 years
  - (d) 35-44 years
  - (e) 45-54 years
  - (f) 55-70 years
  - (g) Above 70 years
2. What is your gender?
  - (a) Male
  - (b) Female
  - (c) Transgender
  - (d) Non-binary
  - (e) Prefer not to say
3. How many people are there in your household?
  - (a) One
  - (b) Two
  - (c) Three
  - (d) Four
  - (e) Five or above
4. What is your highest level of education?
  - (a) No formal education
  - (b) High School
  - (c) College
  - (d) Vocational Training
  - (e) Bachelors
  - (f) Masters
  - (g) Doctorate / PhD
  - (h) Other
5. What is your approximate level of disposable income?
  - (a) 0 - 25 000 TWD/month
  - (b) 25 000 - 50 000 TWD/month
  - (c) 50 000+ TWD/month
6. Do you have a car?
  - (a) Yes
  - (b) No

7. What is your current employment status?
8. Where do you live/location? (Urban, countryside or cities; Taipei, Tainan)

**Purchasing habits**

1. Approximately how much do you spend on furniture each year?
  - (a) 0 - 10 000 TWD/year
  - (b) 10 000 - 20 000 TWD/year
  - (c) 20 000 - 30 000 TWD/year
  - (d) 30 000 - 40 000 TWD/year
  - (e) 40 000+ TWD/year
2. How likely would you be to buy a used piece of furniture rather than a new one?
  - (a) Very unlikely
  - (b) Unlikely
  - (c) Neutral
  - (d) Likely
  - (e) Very likely
3. How would you rate the following aspects of buying second hand furniture on a scale of 1-10?
  - (a) Quality
  - (b) Convenience
  - (c) Price
  - (d) Sustainability
  - (e) Guarantee

**Questions about circular offering:**

**Willingness-to-Pay**

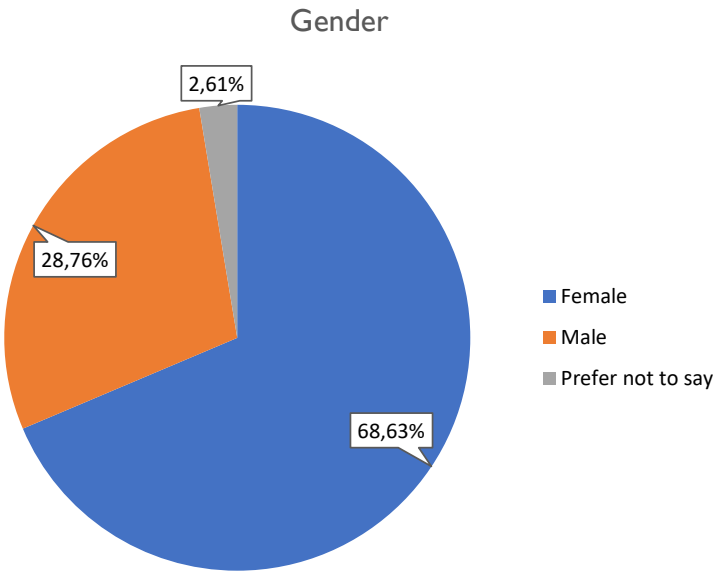
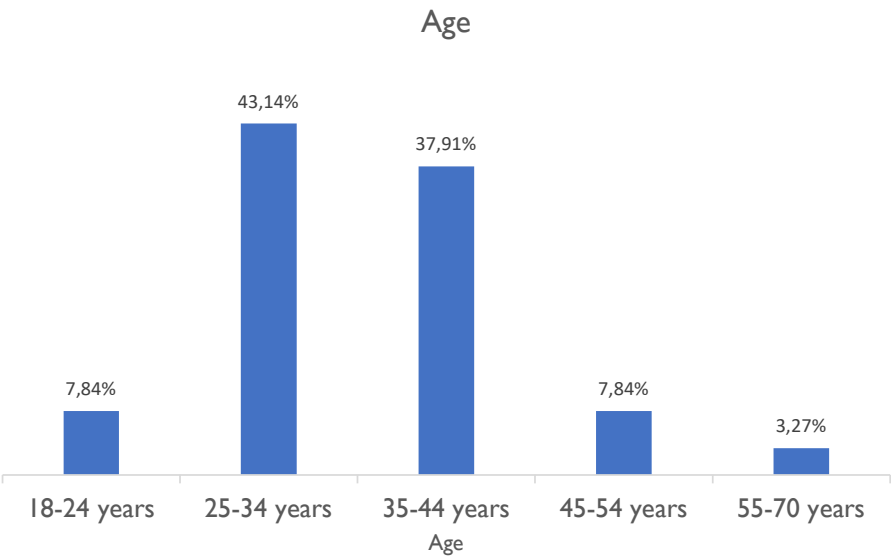
1. How much would you be willing to pay for refurbished second hand furniture from IKEA?
  - (a) 0 - 20 % of the original price
  - (b) 20 - 40 %
  - (c) 40 - 60 %
  - (d) 60 - 80 %
  - (e) 80 - 100 %
2. If home delivery was included as a service, how much would you be willing to pay?
3. How much would you be willing to pay for a refurbished sofa? (include example + picture)
4. How much would you be willing to pay for a refurbished table? (include example + picture)
5. How much would you be willing to pay for a refurbished chair? (include example + picture)



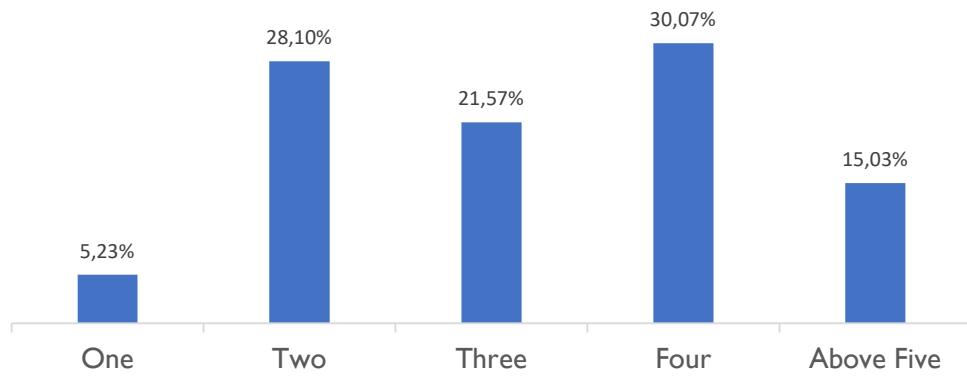


# E

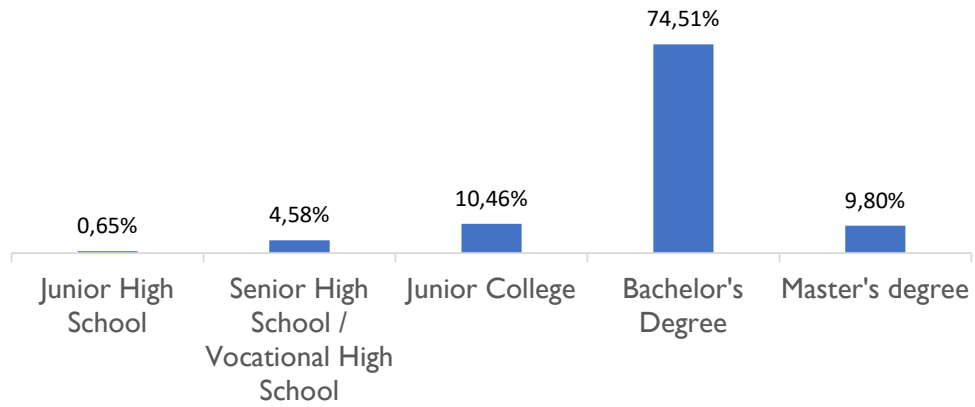
## Customer Survey Results



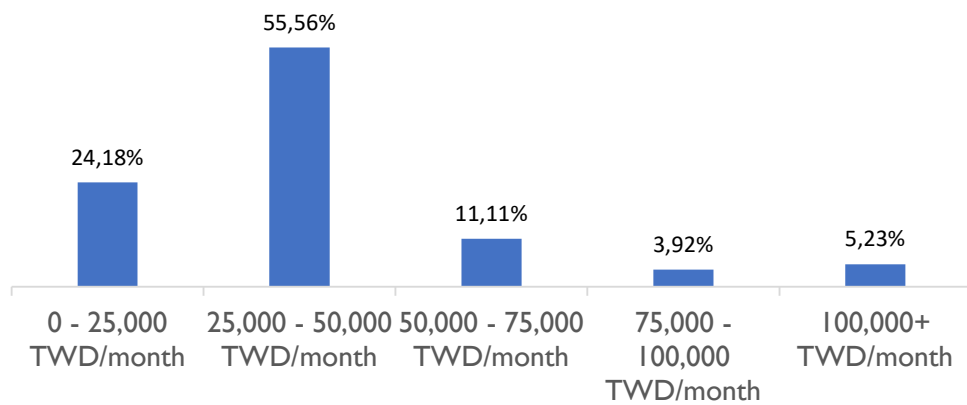
Number of people in household



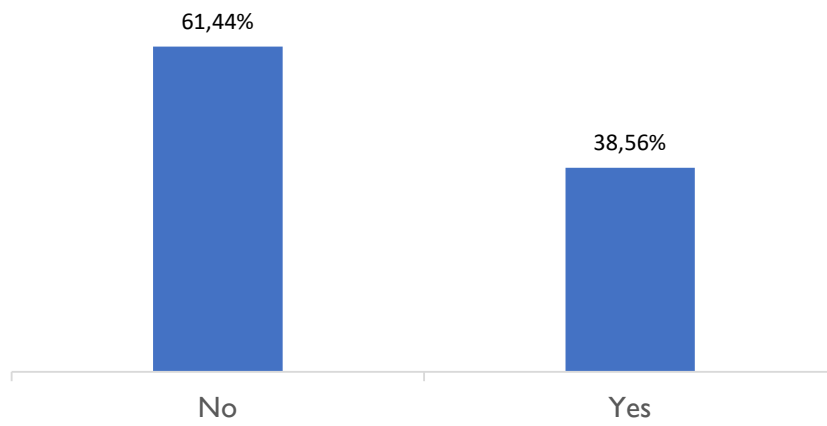
Highest Attained Education Level



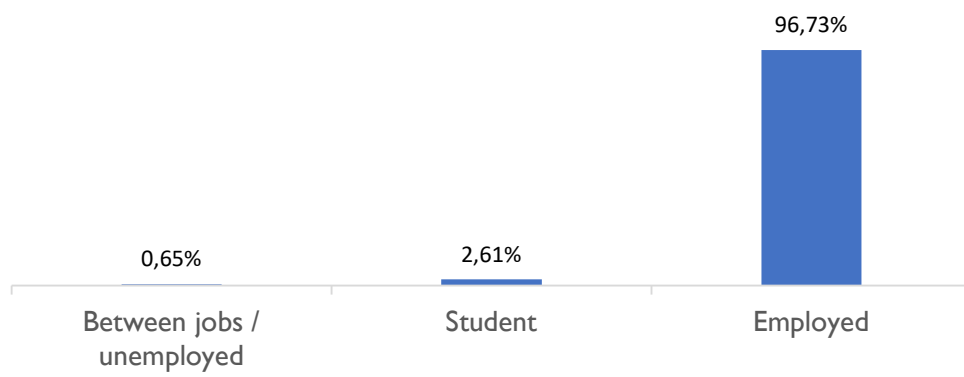
Disposable Income



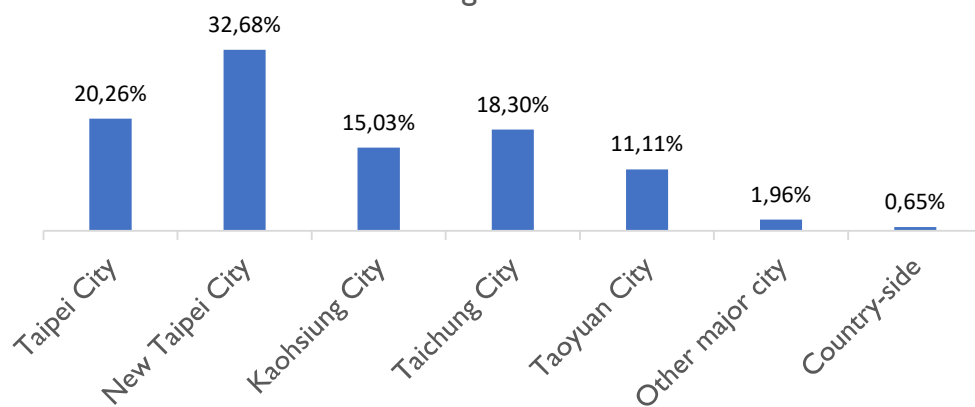
### Car Ownership



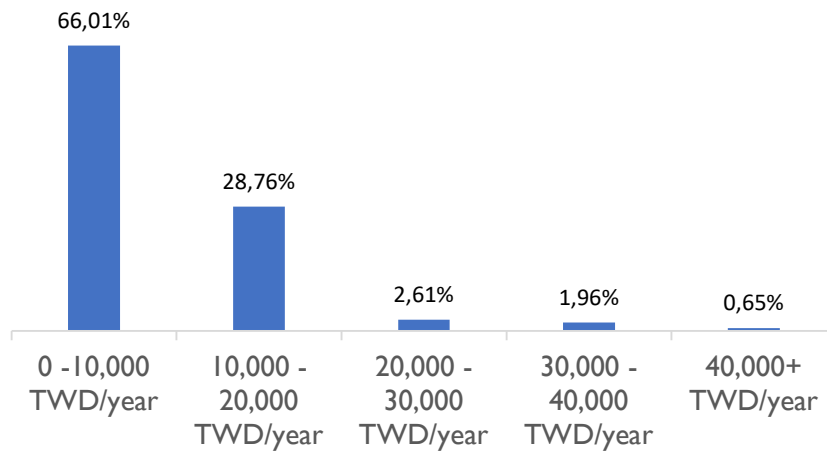
### Employment Status



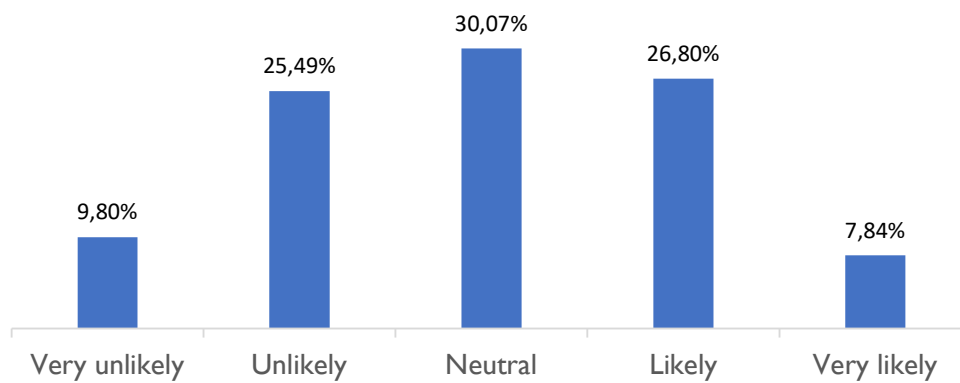
### Living Location



### Annual Furniture Expenditure



### Likelihood of Buying Second Hand

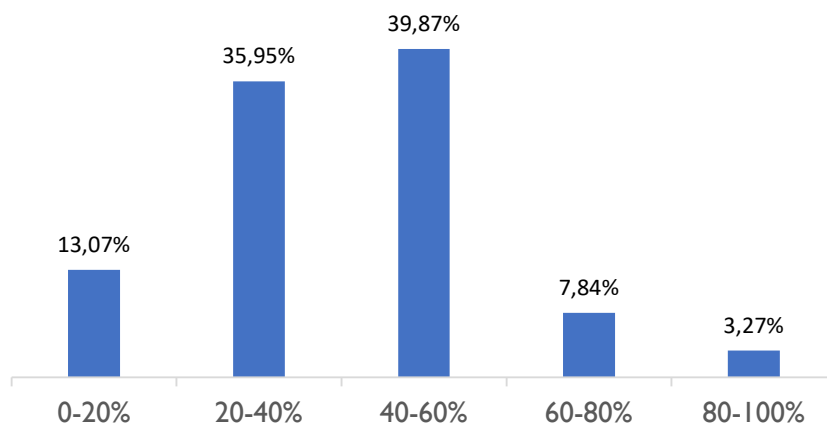


Second Hand Purchase Location	Count
Facebook group or market place	8,50%
Facebook group or market place, Other platforms (e.g Carousell, Shopee, 591, etc.)	7,84%
Facebook group or market place, Other platforms (e.g Carousell, Shopee, 591, etc.), Stores on the streets or markets	5,23%
Facebook group or market place, Stores on the streets or markets	3,27%
Other platforms (e.g Carousell, Shopee, 591, etc.)	16,34%
Other platforms (e.g Carousell, Shopee, 591, etc.), Stores on the streets or markets	10,46%
Stores on the streets or markets	39,22%
Never bought	9,15%

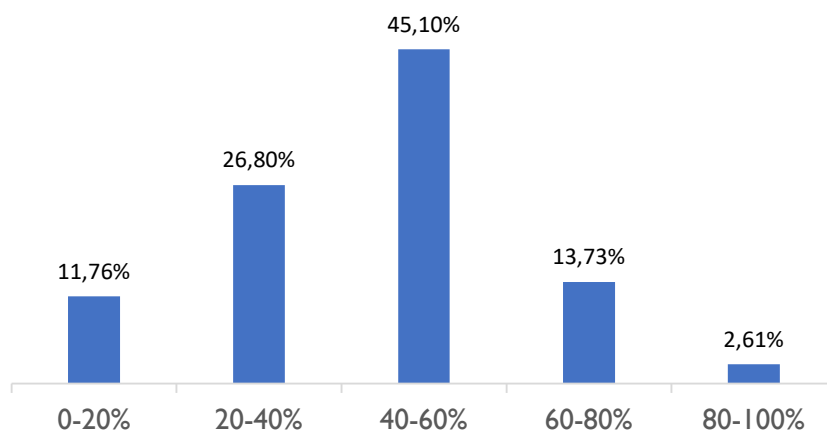
Age Group	AVG Quality Importance	AVG Convenience Importance	AVG Price Importance	AVG Sustainability Importance	AVG Guarantee Importance
18-24 years	7,5	6,8	8,3	7,2	5,2
25-34 years	7,6	6,9	8,0	6,5	5,1
35-44 years	6,9	6,3	7,0	5,8	4,6
45-54 years	6,5	5,7	6,0	5,2	5,3
55-70 years	7,0	5,2	4,8	4,8	3,0
<b>Total</b>	<b>7,2</b>	<b>6,5</b>	<b>7,4</b>	<b>6,1</b>	<b>4,9</b>

Age Group	AVG Quality Satisfaction	AVG Convenience Satisfaction	AVG Price Satisfaction	AVG Sustainability Satisfaction	AVG Guarantee Satisfaction
18-24 years	6,1	6,5	6,3	5,6	4,7
25-34 years	5,7	5,3	6,0	5,6	3,8
35-44 years	4,6	4,7	5,2	4,6	3,3
45-54 years	5,1	4,9	4,7	4,8	4,4
55-70 years	5,4	5,6	6,6	4,2	2,2
<b>Grand Total</b>	<b>5,3</b>	<b>5,2</b>	<b>5,6</b>	<b>5,1</b>	<b>3,7</b>

Perceived WTP as % of Original Price



Perceived WTP inc. Delivery, % of Original Price



Age Group	AVG WTP Sofa (TWD)	AVG WTP Table (TWD)	AVG WTP Chair (TWD)	AVG WTP Bookshelf (TWD)
18-24 years	4642	2491	841	986
25-34 years	4034	2044	752	821
35-44 years	3774	1773	680	765
45-54 years	3773	1781	657	782
55-70 years	1700	520	192	300
<b>Grand Total</b>	<b>3886</b>	<b>1906</b>	<b>706</b>	<b>793</b>

Age Group	AVG WTP Sofa (% of full price)	AVG WTP Table (% of full price)	AVG WTP Chair (% of full price)	AVG WTP Bookshelf (% of full price)
18-24 years	52%	55%	42%	50%
25-34 years	45%	45%	38%	41%
35-44 years	42%	39%	34%	38%
45-54 years	42%	40%	33%	39%
55-70 years	19%	12%	10%	15%
<b>Grand Total</b>	<b>44%</b>	<b>42%</b>	<b>35%</b>	<b>40%</b>

Age Group	AVG WTP (% of Full Price)
18-24 years	50%
25-34 years	42%
35-44 years	39%
45-54 years	39%
55-70 years	14%
<b>Grand Total</b>	<b>40%</b>

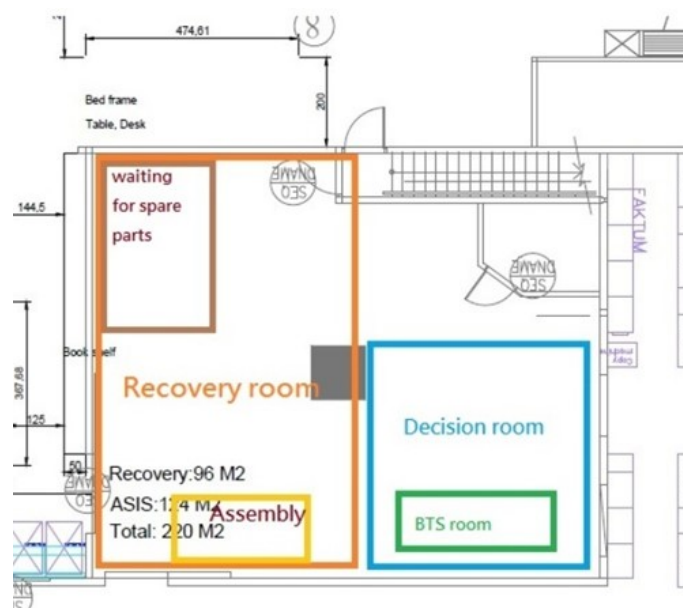




# F

## Pilot Project Images

### F.1 Resell Area



Resell Area of the Hsinchuang Store, next to the As-is area.

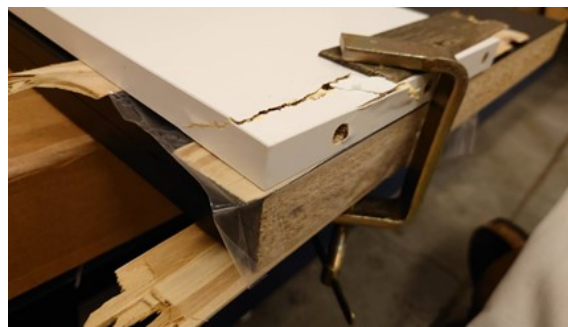
## F.2 Refurbished ALEX Desk





### F.3 Refurbished BRIMNES Wardrobe







## F.4 Refurbished VEDBO Chair



## F. Pilot Project Images

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## F.5 Other Refurbish & Resell projects



IKEA Second Hand Store at ReTuna



Circular Hub at IKEA Kohoku Store



F.6 Communications Materials



Resell Banners at Resell Area



人類與地球  
People and planet



### 家具再生計畫

我們將原本要被廢棄的二手家具蒐集起來，並與社會企業的水工修繕師合作，透過巧手工藝將這些家具的外觀和功能完全翻新，賦予這些家具第二個生命。

這些家具並非不能使用，而是有些微的外觀瑕疵或缺陷，我們想透過這個家具再生計畫，落實資源再利用及循環經濟的精神。

你也可以從這個區域找到獨一無二的 IKEA 翻新絕版品。買家具，愛地球——一舉兩得！

### Resell Project

We collected some 2nd hand furniture and collaborated with a refurbisher from a social enterprise.

By his superb craftsmanship, these 2nd furnitures were refurbished into a 100% new condition with a fresh new look.

We believe by doing so, we can cut down more waste and become a 100% Circular Business by 2030.

You can find some unique products here, and save our planet at the same time!



QR code on Sustainability Tag, introducing Resell Project

家具再生計畫  
Resell Project

衣櫃  
**BRIMNES**  
寬117x深50x高190公分  
白色

~~\$5,990~~  
家具再生價  
**\$4,792**



Resell Price Banner

DEPARTMENT OF TECHNOLOGY MANAGEMENT AND ECONOMICS  
DIVISION OF ENTREPRENEURSHIP AND STRATEGY  
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