



# The Challenges of the Adoption of Online Channel by Microenterprises in Finland

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### **The challenges of the adoption of online channel by microenterprises in Finland**

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#### **Abstract**

The adoption of online channels among microenterprises (MIEs) has created new opportunities to reach broader geographic regions and operate more efficiently. However, the adoption of online channels remains unequal between small and large enterprises. This study investigates the challenges faced by MIEs in Finland's bicycle retail sector when adopting online sale channel. The research aims to understand what technological, organizational, and environmental barriers these businesses encounter and how they respond to them.

The study applies the Technology-Organization-Environment (TOE) framework as the theoretical base. A qualitative approach was used, and data were collected through semi-structured interviews with the owners of three bicycle shops located in different Finnish cities. Thematic data analysis method was used to determine themes and group challenges within the TOE framework.

The findings reveal that while technological factors such as secure online payment systems and platform usability support adoption, limitations in time, financial resources, and digital skills remarkably restrain progress. The owner of MIEs perceived the benefits of online channel, such as increased visibility and customer reach, but often had to rely on self-learning due to a lack of resources. Environmental factors such as limited awareness of public support programs, perceived bureaucracy in accessing assistance, and unequal competition with large companies also formed additional challenges. Informal networks, including family members, friends, and employees, played a vital role in aiding, especially in marketing and technical tasks. Despite these challenges, all businesses reported increased sales after adopting online channel and implemented unique strategies such as product differentiation and faster delivery to avoid price competition.

This study provides practical insights for policymakers and support organisations seeking to encourage digital adoption among MIEs. It focusses on the need for aimed support that is easy to get, well communicated, and tailored to the status of MIEs. Additionally, the findings suggest that support initiatives should focus not only on funding but also on improving access to skills training and lessen bureaucratic barriers.

#### **Keywords/tags (subjects)**

Microenterprise, Microbusiness, online channel, Jyväskylä, Finland

#### **Miscellaneous (Confidential information)**

## Contents

<b>1</b>	<b>Introduction .....</b>	<b>3</b>
1.1	Online Channel .....	4
1.2	Research Questions .....	4
1.3	Structure of The Thesis .....	5
<b>2</b>	<b>Literature Review .....</b>	<b>6</b>
2.1	Microenterprises .....	7
2.2	Adding an Online Channel for MIEs .....	8
2.3	Challenges of Adding an Online Channel for MIEs.....	12
2.4	Solutions to Challenges in Adding an Online Channel for Microenterprises.....	17
2.5	Theoretical Framework .....	21
<b>3</b>	<b>Methodology.....</b>	<b>24</b>
3.1	Research Approach .....	24
3.2	Research Context .....	25
3.3	Data Collection .....	26
3.4	Data Analysis .....	28
3.5	Verification of The Results .....	29
3.6	Research Ethics.....	32
<b>4</b>	<b>Results.....</b>	<b>33</b>
4.1	Technological Factors.....	34
4.2	Organisational Factors .....	38
4.3	Environmental Factors .....	40
<b>5</b>	<b>Discussion.....</b>	<b>46</b>
5.1	Answers to the Research Questions .....	46
5.1.1	Technological Factors .....	47
5.1.2	Organisational Factors .....	49
5.1.3	Environmental Factors.....	50
5.2	Managerial Implications.....	51
5.3	Assessment of the results in the light of earlier literature .....	52
5.4	Limitations of The Research .....	54
5.5	Recommendations for Future Research .....	55
	<b>References .....</b>	<b>57</b>
	<b>Appendices .....</b>	<b>71</b>
	Appendix 1. Interview Questions for MIE Representatives .....	71

Appendix 2. Themes and Codes from Interview Transcripts .....	72
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## Figures

Figure 1. Microenterprise channel expansion phases and managerial responses to poverty-related constraints .....	11
Figure 2. The theoretical framework developed by the author for this study .....	23
Figure 3. Themes of the Technological, Organizational, and Environmental Contexts in the Adoption of Online Channel.....	33
Figure 4. Perceived benefits of Online channel Adoption .....	35

## Tables

Table 1. Illustration of the interview participants and details of their interviews .....	29
Table 2. MIE Strategies for Technological Challenges in Online Adoption.....	37

# 1 Introduction

Online channels, such as e-commerce stores, have become increasingly important for business growth. However, as Vlachos (2011) points out, microenterprises (MIEs) tend to adopt these practices more slowly than larger firms, often maintaining only a minimal online presence. While there has been considerable research on how large companies expand their digital reach, the shift of MIEs to online platforms, referred to as MIE channel expansion, has received far less attention (Sell et al., 2019).

This study aims to explore the challenges faced by MIEs in Finland in adopting an online channel for business operations. The research seeks to understand the key barriers and potential strategies to facilitate digital adoption among MIEs, drawing insights from the real experiences of business owners. This study explores the challenges that MIEs in Finland face when adopting online channels for their business operations. By focusing on the lived experiences of business owners, the research aims to uncover the main barriers to digital adoption and identify practical strategies to support the transition.

To achieve this, the study will:

- Investigate technological hurdles, such as high costs, cybersecurity concerns, and technical complexity.
- Examine internal organizational limitations, including restricted budgets, time constraints, and a lack of digital expertise.
- Analyse external factors, such as competitive pressure, evolving customer expectations, regulatory issues, and the availability of public or private support.

Polkupyörä Tori is an MIE located in Jyväskylä, Finland, specializing in sports-related products and maintenance services. The physical store has been serving customers since 2003, and the business is now looking to grow by expanding into online sales alongside its existing brick-and-mortar operations

As both the author of this thesis and the owner-manager of the business, I am exploring whether adding an online channel would be a practical step alongside the existing physical store. This study aims to look at the main challenges that come with making such a transition. Over the years, the business has grown slowly, something quite common for MIEs. Like many small businesses, it has had to deal with everyday obstacles, including tight finances, limited time, and the ongoing need to learn new skills.

## **1.1 Online Channel**

Web-based channels are playing an increasingly important role in commercial transactions (King et al., 2004). For consumers, shopping online brings clear advantages, such as saving time and effort, as well as the ability to browse and compare products easily (Rohm & Swaminathan, 2004). Offering both web and physical sales channels can give businesses a competitive advantage. When customers can choose how they interact, whether in a physical store or online, it can help expand the customer base and strengthen loyalty (Boehm, 2008).

Expanding into online channels can open up new possibilities for Small and mid-sized companies (Jeansson et al., 2017). Studies have shown that adding online channels can positively influence sales growth (Abebe, 2014), lead to financial gains through increased revenue and reduced costs (Johnston et al., 2007), as well as providing access to wider markets. It can also improve the exchange of information and customer support (Stockdale & Standing, 2004).

However, adding an online channel is not always a smooth process for all companies. The literature frequently points up the difficulties that small and medium sized enterprises (SMEs) face when adopting e-business, referring to various challenges that prevent them from fully utilizing digital technologies (Fillis et al., 2003; Levy et al., 2005; MacGregor & Vrazalic, 2006; Poon & Swatman, 1999). For example, Levy et al. (2005) identify key obstacles such as high setup costs, lack of available funding, and a lack of recognition or experience.

## **1.2 Research Questions**

As MIEs are small business units that encompass fewer than 10 employees according to the European Union regulations, the business is generally built up by an entrepreneur who is doing all

kinds of duties related to the enterprise, and usually, the characteristics of the owner shape the business and reflect the attitude of the owner. It is known from the literature that MIEs suffer a scarcity of resources and face many challenges to grow and develop or even to run daily operations compared to larger enterprises. These kinds of difficulties push the owner-managers to be more innovative in thinking of new ways of doing business and bringing up ideas to facilitate the pressure of work and the constraints of resources.

One way MIEs innovate is by embracing modern technology, especially digital channels. This approach helps them increase their income by reaching customers in new regions and providing services that fit customers' schedules and needs. However, the adoption of the online channel to an existing physical store is often not a smooth process, especially for MIEs, as it requires competency in technology, plenty of time, and financial support in addition to the challenges that appear during the implementation process. This research will focus on studying MIEs in different regions of Finland within the sports store industry to identify the challenges they face when adopting an online channel. The main research questions are as follows:

1. What are the main challenges facing MIEs when adopting an online channel in Finland?
2. What strategic approaches are used by MIEs to overcome the challenges?

A qualitative approach was selected to address the research questions and to gain a deeper understanding of the environment where decisions are made, and actions take place (Myers, 2009). Semi-structured interviews are utilized as they frequently generate findings that have relevance beyond the specific focus of the research question (Mack et al., 2005). Following the analysis of the interview transcripts, the research questions will be addressed and subjected to critical discussion.

### **1.3 Structure of The Thesis**

Chapter 2 reviews existing literature based on key terms relevant to the research, including online channels and MIE concepts, explaining each. It ends by introducing the theoretical framework based on the reviewed literature to address the research questions.

Chapter 3 looks at the method employed for empirical research. It introduces the qualitative research approach and highlights semi-structured interviews as the primary method for data collection. It also offers a clear and detailed explanation of how the collected data was analysed. Finally, the chapter assesses the trustworthiness of the collected data by examining its reliability and validity.

Chapter 4 presents the results of the study, focusing on the challenges Finnish MIEs face when adopting an online channel. It begins with background information on the participating enterprises, including their size, industry, location, and operational history. The findings highlight common barriers faced by the MIEs during the adoption process. These challenges are examined in terms of their impact on the effectiveness and efficiency of the adoption process. In addition, strategies used by MIEs to navigate and manage these barriers are outlined. The chapter concludes with a summary of key insights, offering a detailed understanding of the realities of online channel adoption within the context of Finnish MIEs.

Chapter 5 examines the research objectives and findings, progressing to a discussion by comparing them with prior literature. The same chapter offers managerial insights and recommendations extracted from the findings, potentially benefiting MIEs owners, managers, and other professionals in the field. Lastly, the chapter concludes with suggestions for future research efforts.

## **2 Literature Review**

This chapter begins with a comprehensive definition of key concepts crucial to the research, laying the groundwork for understanding the complexities of MIE adoption of online channels. The literature reviewed, mainly from scientific academic articles, books, reports, and blogs, will provide a rich foundation for this exploration. Firstly, the term 'MIE' will be defined within the context of the European Union region, elucidating its role and significance for the local economy and society. Subsequently, the literature on adopting online channels by MIEs will be explored, along with the opportunities brought about by this adoption. Following this, an examination of the challenges faced by MIEs, both as small firms in general and as adopters of online channels, will be undertaken. Potential solutions to overcome these adoption challenges will also be discussed based on relevant literature. Finally, leveraging insights gained from the literature review, an appropriate theoretical framework will be proposed to guide the subsequent empirical investigation

## 2.1 Microenterprises

Examining small businesses is crucial as 95% of global businesses are SMEs or MIEs (UNHCR, 2017). The number of micro firms in several countries is considered greater than any other category (Fillis et al., 2003). The role of MIEs is excellent as they offer various benefits, including generating income, creating employment opportunities, facilitating skills development, and fostering self-empowerment (Makoza, 2011, as cited in Osman et al., 2019). It is widely known that MIEs form a dynamic category of companies distinguished by a high proportion of young businesses with elevated growth rates and heightened business closures (Falk et al., 2014). In Europe, SMEs account for over 99% of all businesses, and 90% are in the MIEs category (Achtenhagen et al., 2017). In Finland, 95.5% of all businesses are rated as MIEs (Yrittäjät, 2024).

Academic research on MIEs is limited (Kelliher & Reinl, 2009); thus, there exists a gap in the literature regarding the practical aspects of operating MIEs (Helen Samujh, 2011). In the realm of SMEs literature, the primary focus often leans towards SMEs, neglecting a detailed examination of MIEs (Sell et al., 2019). This bias is justifiable as SMEs and MIEs share common attributes, operating on a local scale, having a regional focus, and maintaining flat organizational structures. Although similarities exist, these characteristics are more pronounced in MIEs, notably the pervasive resource scarcity shared by SMEs and MIEs. Consequently, it is reasonable to assume that any resource restrictions affecting SMEs would similarly impact MIEs (Sell et al., 2019). It is commonly recognized that MIEs face resource constraints that force them to operate within economic and competence constraints (Kelliher & Reinl, 2009). Owner-managers play a significant role in shaping MIEs, as highlighted by Burns (2011), who emphasizes their influence on the organization's direction and development. Kelliher and Reinl (2009) further emphasize the pivotal role of owner-managers, noting that they define the overarching vision and guide the progress of the MIEs. Additionally, Forsten-Astikainen (2018) explores how the personality of the owner-manager permeates the MIE culture, reflecting their values and leadership style. Previous research shows that managers of MIEs are responsible for carrying out and performing various types of work and playing different roles in their firm (Blili & Raymond, 1993; Cragg & King, 1993). In times of challenges, unforeseen changes, or crises, a micro-entrepreneur must address and resolve them independently (Taipale-Eräväla & Muhos, 2018).

Given that this research is taking place within the European Union, adopting its definition of an MIE is appropriate. This particular definition has been carefully formulated to correspond with the distinctive features of the European business landscape. By the European Union's specifications, an MIE is defined as a business with fewer than 10 employees and an annual turnover or balance sheet total of less than €2 million (European Commission, 2003). It is essential to highlight that small businesses are neither inherently miniature versions of large corporations nor exhibit similarities (Matlay, 2000 as cited in Karjaluoto & Huhtamäki, 2010). Schaper et al. (2005) observe that the SMEs sector is heterogeneous, including micro, small, and medium-sized companies, each potentially displaying unique features.

Many MIEs either fail over time or never begin the journey of growth that reflects their potential to create value (Ireland et al., 2001). One reason for this is that many start-ups enter well-established markets with conventional business models or concentrate mainly on local markets, which limits their chances for significant growth (Davidsson et al., 2010). MIEs often follow more traditional approaches, lack formal systems and routines, and use informal methods to manage their business growth, exercise direct control, and operate within a structure concentrated on one person, more often the owner or manager of the business (Kelliher & Reinl, 2009; Parry, 2007). Nevertheless, the flat organizational structure and the focus of expertise permit MIEs to maintain flexibility and adapt quickly to environmental fluctuations and customer demands; this agility enables them to respond rapidly to changing circumstances (Sell et al., 2019).

## **2.2 Adding an Online Channel for MIEs**

Advancements in information technology open opportunities for businesses to adopt online channels as a gateway to expansion and growth, but the adoption process differs according to the business category. For example, the adoption process is a matter of time for larger enterprises, as they have more resources than MIEs. Researchers have pointed out the gap in specific studies on the expansion of MIEs; existing research primarily concentrates on SMEs or larger companies (Heshmati, 2001)

The concept of online channels covers both e-commerce and m-commerce. E-commerce refers to carrying out transactions over computer networks, like buying and selling products, services, or information (Turban et al., 2006). On the other hand, m-commerce includes any transaction that

involves transferring ownership or the right to use goods and services, carried out through mobile access to computer networks using an electronic device (Tiwari et al., 2006). The combination of e-commerce, m-commerce, and physical stores is commonly referred to as a multi-channel retail environment (Zhang et al., 2010).

Vlachos (2011) notes that MIEs tend to lag behind larger firms in adopting e-business applications, often using them minimally and maintaining a limited online presence. On the other hand, Mustafa and Beaumont (2004) observed that MIEs are particularly eager to use digital channels as a way to expand their reach beyond local markets. Barnes et al. (2012) argue that using digital channels offers cost-efficiency, making them suitable for MIEs. Barnes et al. (2012) propose that MIEs, when investing in Web 2.0 technologies, are motivated by cost reduction, growth opportunities, innovation in the form of new services and work methods, and considerations for achieving work-life balance for the owner-manager. Sell et al. (2019) point out that adopting online channels is frequently encouraged as a way for small enterprises to tap into new markets and customer segments, thereby opening up opportunities for business growth. However, the process of MIEs going online or expanding their sales channels, as discussed by Sell et al. (2019), remains an under-researched topic and differs from the existing literature focused on larger enterprises.

When beginning the transition from a single channel to a multichannel approach, several important factors need to be considered. Weill and Vitale (2001) highlight four key considerations that are essential when shifting toward online channels: (1) developing a clear and structured business model, (2) determining the touchpoints where customers will engage with the business, (3) identifying and understanding the target customer segments, and (4) ensuring that the organization has a suitable IT infrastructure to support online operations.

According to Payne and Frow (2004), electronic channels facilitate greater self-service, enabling consumers to access information and place orders at the most convenient time and location that aligns with their demands. Although electronic channels present opportunities, certain small businesses might view their utilization as a reactive measure in response to competitors' actions rather than proactively accepting them as a means to enhance value-adding services, as Daniel and Wilson (2002) stated.

Zhang et al. (2010) suggest that enterprises should design a system that allows them to integrate multiple channels rather than treating each channel separately. Enterprises need to balance between channels in terms of what to offer and to what degree, considering their unique characteristics (Zhang et al., 2010). Such balance is distinctive, and every organization needs to achieve it (Avery et al., 2012; Wagner et al., 2013).

Simpson and Docherty (2004) note that the perceived advantages of e-business play a significant role in influencing a company's willingness and motivation to adopt and effectively utilize electronic channels in their operations. Many studies have identified that one of the biggest obstacles preventing small businesses from adopting new technologies is simply a lack of awareness about the potential benefits. (Al-Qirim, 2006; Fillis & Wagner, 2005; McCole & Ramsey, 2005; Ramsey et al., 2003; Taylor & Murphy, 2004).

Electronic channels allow customers to access information and purchase goods or services conveniently, at their preferred time and location (Frow & Payne, 2004). However, some smaller businesses may view adopting electronic channels as a reaction to competitive pressures rather than a proactive strategy for creating additional value through service (Daniel & Wilson, 2002). Karjaluoto and Huhtamäki (2010) describe four distinct stages that MIEs typically go through when adopting digital channels. (1) Informational, which represents the least utilization level where the website serves as a brochure; (2) Communicational, where the website permits communication; (3) Transactional, which includes basic e-shop functions without online payment capabilities; and (4) Integrated part of business, which includes the integration of internal and external systems, utilizing the digital channel for both marketing and conducting business. In this research, the emphasis is exclusively on MIEs functioning at the highest level as identified by Karjaluoto and Huhtamäki (2010).

The utilization of digital technology within the MIE generally depends on the capabilities and motivation of the entrepreneur (Karjaluoto & Huhtamäki, 2010). These results are consistent with the findings of Nikunen et al. (2017), who emphasize the importance of the human capital of owner-managers as a critical factor influencing the adoption of digital channels.

Frequently, it was noted that there was an absence of strategic planning supporting the utilization of digital channels (e.g., Bollweg et al., 2018; Henninger et al., 2017). According to Henninger et al. (2017), the process studied in MIEs conducted channel expansion demonstrates a learning process in which the managers were engaged in reflection and learning operation. Sell et al. (2019) point out that the decision to expand into new online channels often came from outside pressures, particularly from customers or suppliers. Sometimes, MIEs felt they had little choice, facing the risk of losing suppliers or missing important opportunities. In other cases, the idea to expand grew more organically through conversations with customers, where listening to their needs opened up new possibilities. Sell et al. (2019) characterized the process of channel expansion in MIEs as a flexible learning journey made up of five phases: identifying, deciding, designing, acting, and evaluating. This process unfolds within the constraints of what they call a "poverty triad," referring to limited time, financial resources, and competence. This process highlights how micro-entrepreneurs manage the demands of their busy day-to-day operations, often involving constant multitasking, while simultaneously working on strategic efforts to expand their sales channels (Sell et al., 2019). Figure 1 illustrates the different phases of the MIE channel expansion learning process and the manager's response to challenges and constraints of the identified poverty triad.

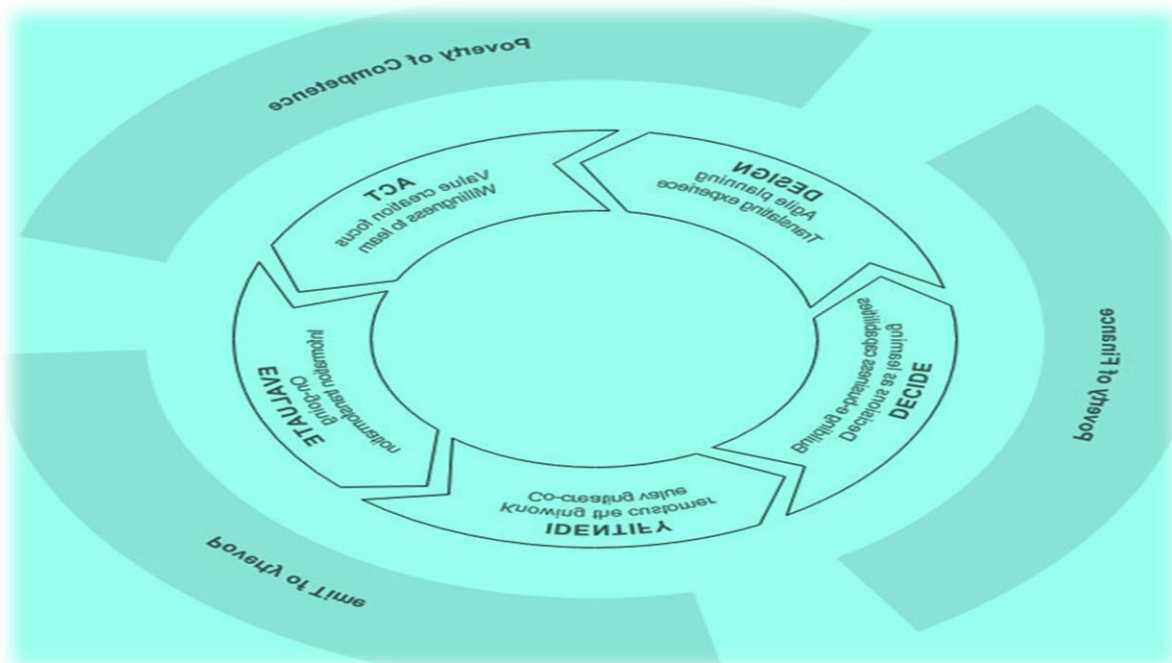


Figure 1. Microenterprise channel expansion phases and managerial responses to poverty-related constraints (Sell et al., 2019, p. 84)

## 2.3 Challenges of Adding an Online Channel for MIEs

MIEs, in contrast to larger enterprises, operate within a distinct set of conditions and constraints, encompassing factors such as resources, competencies, goals, and value networks; as a result, they significantly influence the approach and potential for channel expansion among MIEs (Sell et al., 2019).

It is often stated in the literature regarding e-business adoption in SMEs that numerous barriers prevent small enterprises from using e-business and related technologies (Fillis et al., 2003; Levy et al., 2005; MacGregor et al., 2006; Poon & Swatman, 1999). For instance, Levy et al. (2005) point out numerous e-business barriers, including setup costs, limited financial resources, and a lack of expertise or experience.

In MIEs, the manager's skills typically reflect the overall capabilities of the business. Since hiring external help is usually not an option, these businesses often face limitations in time, expertise, and finances, which can hinder both daily operations and long-term planning (Sell et al., 2019).

In their multiple case study, Karjaluoto and Huhtamäki (2010) state that financial and human resource scarcity is common among MIEs and prevents them from adopting electronic digital channels. Furthermore, they highlighted that several internal and external factors are considered important when inspecting the adoption and development of e-business by MIEs. According to Karjaluoto and Huhtamäki (2010), the relevant factors are divided into three groups: those related to the company and the owner-manager, company resources, and the operating environment.

Sell et al. (2019) pointed out that most challenges faced by MIEs when adopting channel expansion are what is referred to as the poverty triad encircling the five learning stages, as shown in Figure 1. The poverty triad represents the merger of financial, time, and competence poverty (Barnes et al., 2012; Blili & Raymond, 1993; Cragg & King, 1993; Henninger et al., 2017; Karjaluoto & Huhtamäki, 2010; Nikunen et al., 2017; Stankovska et al., 2016; Vlachos, 2011). As per Karjaluoto and Huhtamäki (2010), the limited availability of resources is the cause for the insufficient utilization of digital channels. Microentrepreneurs frequently face challenges in terms of limited expertise, yet are required to manage all facets of their business (Blili & Raymond, 1993; Cragg & King, 1993).

According to Sell et al. (2019), MIE managers typically make decisions intuitively and close to where the work happens, often without deep expertise in information systems or technology. As these businesses expand, they encounter global competition, which increases the need for skills such as language proficiency, knowledge of payment systems, and understanding of legal requirements.

### **Labor Market Regulations**

In Finland, the labor market's inefficiency is notably pronounced within small companies, where numerous employment barriers exist, leading to a rise in practices resembling self-employment (Kuismanen, 2022). Therefore, companies, especially MIEs, often find it more convenient and less risky to obtain work and services from other firms rather than taking on the liabilities of hiring employees (Kuismanen, 2022). As a result, this trend raises concerns regarding its potential impact on the national economy. Less stringent dismissal protection would ease hiring practices, particularly for MIEs, and significantly impact the hiring practices of small businesses (Kuismanen, 2022). Weaker dismissal protection is associated with an increase in both recruitment and dismissals (Kuismanen, 2022).

### **Channel Cannibalisation**

Some studies have shown that the introduction of an online channel may reduce sales through physical stores, as customers shift to the new digital option and abandon traditional purchasing methods (Ansari et al., 2008; Hernant & Rosengren, 2017). For retailers with existing brick-and-mortar investments, this transition can be particularly challenging, as there is a notable concern that online operations might erode revenue from their physical outlets (Biyalogorsky & Naik, 2003; Hernant & Rosengren, 2017).

Conflicts can also emerge in multichannel environments when newly added channels begin to compete with or bypass existing ones (Balasubramanian, 1998; Steinfield, 2004). Such tensions may stem from poor coordination, internal competition, limited collaboration, or customer confusion, all of which can negatively affect overall performance (Deleersnyder et al., 2002; Steinfield, 2004; Ward, 2001). Recent studies continue to highlight channel cannibalization as a perceived risk when companies implement online options alongside traditional channels (Deleersnyder et al.,

2002). Retailers are therefore encouraged to carefully consider how the service quality of new channels aligns with the standards already established in their existing operations, as misalignment could lead to dissatisfaction or reduced trust (Lin, 2012).

### **Competence Scarcity**

The microentrepreneur often has insufficient competence but still has to take care of everything in the business; the scarcity of resources is deepened as a result of channel expansion. (Blili & Raymond, 1993; Cragg & King, 1993). The general focus of competence literature is on large business entities (Barney et al., 2001), where individuals possess specific competencies that allow them to undertake various roles within the organization. Conversely, within small firms, every individual is typically required to fulfill multiple tasks (Taipale-Eräväla, 2015). Managerial abilities are essential for companies to improve additional skills (Lado et al., 1992), such as financial and human resource management, marketing, commercial tasks, and leadership capabilities (Baronet & Loué, 2012). Many small businesses often do not possess the technical expertise required to effectively adopt and manage e-business solutions (Murphy & Taylor, 2004; Thong, 1999).

### **Inventory Management**

Establishing a new digital store besides the physical store brings more challenges to inventory management as the business model now includes an online store and an offline store. Maintaining correct inventory is not an easy job for the store owner. The ability of physical store entities to develop online commerce strategies and their capacity to manage diverse business activities simultaneously have been recognized as potential constraints in advancing online commerce initiatives (Bahn & Fischer, 2003). Napolitano (2013) explains that channel conflicts often occur when resources such as personnel, technology, and funds are constrained or when business goals do not align. In such situations, retailers aiming to reduce inventory may face conflicts over which sales channel should be prioritized for the available stock (Kumar et al., 2012). As a result, managing inventory becomes increasingly complicated as the number of sales channels grows (Agatz et al., 2008; Webb, 2002).

## Shipping and Return of Online Products

Gessner and Snodgrass (2015) explain that logistics operations, including warehousing and transportation, make up a substantial part of the overall costs involved in running e-commerce. The rates of return for online purchases surpass those for in-store purchases (Simone & Sabbadin, 2017). Certainly, customers cannot physically interact with the product before purchasing (Grewal et al., 2004). Sabbadin and Simone (2017) suggest that due to the broader online selection, customers may tend to return items not typically found in the traditional store. In other words, the product often needs to be returned to the warehouse, as traditional retail supply chains are generally not equipped to manage the higher volume of returns that come with online sales (Savisaari, 2016). Retailers need to plan their return policies carefully to keep costs low while still giving customers a great level of service (Bell et al., 2013). One effective way to reduce the number of online returns is by providing clearer and more detailed information on retailers' websites (Simone & Sabbadin, 2017). This kind of return usually happens when the product doesn't match what the customer had in mind (Min et al., 2006). If a retailer sets up a smooth and effective return process, it can save a lot of costs by cutting down on transport, storage, and stock-related costs (Gorsch, 2000; Wallace et al., 2004).

Customers highly value the convenience of return management services, particularly the option to buy items online and return them at physical stores. This feature is of significant interest to customers who engage in integrated shopping experiences (Avensia, 2014; Bell et al., 2013; Brynjolfs-son et al., 2013; Cook, 2014; Cuthbertson & Piotrowicz, 2014; Herhausen et al., 2015; Napolitano, 2013; Oh et al., 2012). Several retailers are presently implementing protocols allowing customers to return digital purchases in-store. This strategy serves as a means to encourage customers who initially made digital purchases to visit physical stores (OsservatorioFedeltà Unipr, 2017).

## Finance Constraints

Expenses for starting e-business activities can include buying hardware and software, training staff, and other setup costs (Rao et al., 2003). Small businesses often have tight budgets (Thong, 1999). Murphy and Taylor (2004) also found that high upfront and ongoing costs can discourage SMEs from adopting e-business. However, some research shows that costs don't always play a big

role in deciding whether to adopt e-commerce (Al-Qirim, 2006). In recent years, the price of setting up an e-business has dropped significantly, and even advanced systems are now affordable for small companies. So, the cost barrier has either disappeared or become much less of a problem (Stone, 2003).

Small enterprises frequently struggle with tight financial limitations (Thong, 1999). Murphy and Taylor (2004) also discovered that the potential for initial setup expenses and the perception of continuous costs are barriers to SMEs in adopting online business activities. This is also connected to regulations because recruitment costs are unpredictable, which Bernanke (1980) explains can prevent a company from making such decisions.

### **Scarcity of Time**

Ramsey et al. (2003) argue that the owner of a small business is consumed by daily responsibilities, resulting in limited time available for the pursuit of e-commerce development. Karjaluoto and Huhtamäki (2010) also mentioned the limited number of employees inside MIEs who are responsible for many tasks, preventing them from focusing on development activities. While the owner-manager of MIEs are busy with running daily activities, they also find themselves occupied by learning new skills associated to the adoption of online channel initiatives, such as coding for websites, managing and enhancing e-commerce platforms, creating engaging online content, and devising plans for social media marketing campaigns (Sell et al., 2019).

### **Online Payment Security and Privacy**

Security issues are notably significant in IT, especially within the field of e-business (Larreina, 2013). A breach of guaranteed security happens when a company or government organization loses important data, private information, or sensitive documents, which raises concerns about safety and confidentiality in e-commerce because using multiple regulations in internet technology can limit control over data, thereby increasing the risk of unauthorized access, and successful enterprises involved in e-business must also address safety issues to ensure secure transactions and data handling, as security breaches could undermine their involvement in electronic business activities (Shaikh et al, 2021).

According to Kergroach (2021), SMEs are increasingly handling larger amounts of data while facing stricter regulations, especially around data protection and privacy. The introduction of the European Union's General Data Protection Regulation (GDPR) in 2018 aims to create consistent data privacy rules across Europe, protecting citizens and changing how organizations manage data.

## **Competitive Pressure**

The advance of electronic marketplaces over the internet promises to reduce the expenses incurred during a transaction, thus leading to an increase in competition among the internet merchants (Bailey et al., 2007). Wang et al. (2011) highlighted that the transition from traditional to digital commerce poses a significant challenge for SMEs, as the globalized digital environment creates more intense competition, making it a more aggressive market than conventional settings. Zhu (2004) further emphasized this point, noting the increased competitiveness of the digital landscape. As a result, Shouk and Eraqi (2015) suggested that SMEs' hesitation to embrace this challenge may lead to their resistance to moving online. There is factual evidence that competing on price for a larger market share harms profitability (Armstrong & Green, 2007). Correspondingly, some scholars briefly attribute competition based on pricing to being a reflection of mismanagement, as it indicates a lack of the ability to set prices autonomously (Larson, 2019).

## **2.4 Solutions to Challenges in Adding an Online Channel for Microenterprises**

The previous chapter examined some of the most prevalent challenges MIEs encountered in adopting online channels. This chapter will explore solutions identified in the reviewed literature to address and overcome these challenges.

### **Competitive Advantages Strategies**

Competitive advantage refers to a company's capability to carry out certain parts of its operations more effectively than its competitors (Galli-Debicella, 2021). According to Porter (1985), a firm's competitive advantages are linked to long-term profitability and performance levels that exceed the industry average. According to the literature, companies can gain a competitive edge in the market by using one of three common strategies: cost leadership, differentiation, or focus (Porter, 1985, 1990a, 1990b).

## **Cost Leadership**

SMEs don't often aim to compete by offering the lowest prices in the market (Galli-Debicella, 2021). Unfortunately, SMEs often struggle to take advantage of economies of scale, which makes it hard for them to reduce their costs and offer lower prices than their competitors to gain market share (Hambrick et al., 1982; Woo & Cooper, 1981). According to Galli-Debicella (2021), there are two situations where SMEs might succeed with a low-cost strategy. First, in industries that are very fragmented, where no single company is big enough to benefit from economies of scale, SMEs can compete by being highly efficient, especially in labour-heavy sectors. Second, if an SME owns unique technology that others can't easily copy, it can help lower their costs and give them an edge over competitors.

## **Differentiation Strategy**

When businesses set themselves apart from competitors, they can often charge higher prices for their products and still keep customers by offering unique value. In the context of Internet commerce, various differentiation strategies have been identified (Bailey et al., 2007). These strategies involve making the shopping process more convenient, creating a better overall customer experience, taking advantage of differences in customer knowledge, and strengthening brand recognition and trust (Alba et al., 1997; Chen & Hitt, 2001; Lee, 1998; Smith et al., 2000). Additionally, Amit and Zott (2001) emphasized the importance of enhancing advanced business models to build a competitive advantage, thereby enabling the capture of untapped business potential. Other critical factors for Internet retailer success include establishing strategic networks (Gulati et al., 2000) and leveraging first-mover advantage to strengthen their market position (Mellahi & Johnson, 2000). Retailers who distinguish themselves through the quality of service they provide to clients can effectively avoid the law of one price (Baylis & Perloff, 2002).

## **Niche Strategy**

Michael Porter initially described niche strategies as "focused" approaches for gaining a competitive advantage (Galli-Debicella, 2021). Over time, SMEs have effectively adopted these strategies to compete successfully against larger competitors (Porter, 1980, 1990a, 1990b). Focus or niche strategies tend to be used more often by SMEs than by bigger companies (Dean et al., 1998; Porter, 1980). SMEs often do better than larger companies at tailoring their products or services to

meet the needs of a specific, smaller group of customers because they can focus more closely on that particular audience group (Galli-Debicella, 2021). Large companies pursuing a niche strategy must target several customer groups to attain their big size, which makes it more difficult to customize products and services to each group (Wright, 1987). SMEs usually succeed by focusing on what their specific customers want, like unique products, easier ways to buy, or better service. Because of this, they can charge higher prices to those customers, while bigger companies compete for shoppers who care more about price (Galli-Debicella, 2021).

For example, small and micro craft beer companies have found their profitable niches, allowing them to compete effectively with bigger, well-known brands (Alonso et al., 2017). Similarly, local bookstores continue to operate despite the widespread dominance of Amazon (Luyt & Heok, 2015). Independent coffee shops also thrive by offering specialty coffee, meeting customer preferences even with popular coffee chains on almost every corner (Carvalho et al., 2016). Although these examples come from different industries, they highlight a common theme: small businesses can succeed by finding and focusing on a profitable niche (Galli-Debicella, 2021).

### **Optimizing Visibility and Website Traffic**

Web traffic plays a crucial role in determining the success of electronic commerce (Hanson, 1999). To mitigate competitive pressure, online businesses must implement strategic approaches aimed at attracting customers to their websites and driving web traffic, which can then be converted into actual transactions. Online retailers can strengthen their market power by establishing more links connecting their websites with others (Bailey et al., 2007). By increasing the number of external links, a company can enhance its visibility, leading to greater traffic to its website. This improved visibility raises the firm's profile and boosts awareness among web users, boosting its online presence (Bailey et al., 2007). According to Stewart (2003), individuals who accessed a website through links on a trusted site were found to transfer some of that trust to the destination site.

Baylis and Perloff (2002) and Clay et al. (2002) argue that factors such as website quality and the efficiency of the logistics system are positively related to the prices a retailer can charge, which aligns with the strategy proposed by Brynjolfsson and Smith (2000b). They suggest that internet retailers should create engaging and compelling websites to minimize the chances of consumers navigating to competing websites.

## Owner-Managerial Characteristics

A well-known feature of MIEs is how central the owner-manager is to the business (Fillis et al., 2003; Ramsey et al., 2003; Schaper et al., 2005). According to Fillis et al. (2004), the owner-manager's drive plays a key role in the growth of e-business within MIEs, as they typically hold most of the decision-making power. Many MIEs also struggle with unclear business plans due to limited resources, a challenge that can be addressed by developing strong entrepreneurial and managerial skills (Chandler & Jansen, 1992).

Managerial factors such as expertise, motivation, attitude, and background are all crucial (Karjaluoto & Huhtamäki, 2010). The owner-manager's knowledge and experience shape how they perceive the opportunities that the Internet offers (Matlay, 2000; Martin & Matlay, 2001). Having a genuine interest in growth and a positive mindset toward e-business naturally supports the adoption and use of online channels (Fillis & Wagner, 2005; Rao et al., 2003).

## Building Networks

Bollweg et al. (2018) asserted that small firms cannot do all the activities by themselves due to limited human and monetary resources; therefore, building strong ties with other small firms adds more value. The scarcity of financial and human resources drives small companies to establish partnerships and collaborate with other businesses (Karjaluoto & Huhtamäki, 2010; Bollweg et al., 2018).

For small firms, doing everything independently can prove challenging; therefore, collaboration with other partners can be highly productive (Karjaluoto & Huhtamäki, 2010). Managers of MIEs are encouraged to be open in sharing their knowledge and to start collaboration with others, rather than avoiding it (Karjaluoto & Huhtamäki, 2010). Instead, entrepreneurs are encouraged to collaborate and build cooperative networks with other small businesses so they can share expertise and support one another (Karjaluoto & Huhtamäki, 2010). Daskalopoulou and Petrou (2010) asserted that networks with other companies are essential for exchanging knowledge and expertise and serve as a key resource for development. By sharing resources and fostering trust among partners within a network, small businesses can expand their talent pool and carry out operations more efficiently, flexibly, and with higher quality and faster turnaround times (Ferrer et al., 2009).

## **Public Sector Support**

Public sector support can serve as a means to alleviate resource scarcity in certain instances (Sell et al., 2019). Stockdale and Standing (2006) suggest that entrepreneurs need guidance, training, and support, especially from public sector organizations, when it comes to matters related to e-commerce. According to Kergroach (2021), governments often struggle to create sufficient demand for the support services they offer. This is largely due to entrepreneurs not being fully aware of these programs, questioning the credibility of public support providers, doubting the actual value of the advisory services, or simply lacking ambition for significant business growth and development. Small businesses require tailored assistance, particularly in the development of digital sales resources, to motivate their engagement in e-commerce. Kujala (2021) suggests that local business associations and government agencies can play a valuable role in supporting and guiding this kind of development.

## **Multichannel Integration**

Zhang et al. (2010) suggested that organizations should build a structure to manage multiple channels collectively better than treating every channel independently. They emphasized that businesses must find the right balance in what they provide through each channel and decide how much individuality each channel should maintain, considering their specific features. Ultimately, achieving such a balance is specific to each organization (Avery et al., 2012; Wagner et al., 2013). The integrated multichannel approach can be realized by offering various benefits, including cost reduction, enhancement of client trust, expansion into new markets, and differentiation through value-added services (Steinfeld, 2004).

## **2.5 Theoretical Framework**

Numerous theories are utilized to understand the adoption of online trading channels, including the Resource-Based Theory (RBT), Rogers' Diffusion of Innovation (DOI) theory, and the Technology-Organization-Environment (TOE) framework, which are among the most common and widely recognized at the organizational level (Molinillo & Japutra, 2017; Parker & Castleman, 2009). While the Unified Theory of Acceptance and Use of Technology (UTAUT), the Technology Acceptance Model (TAM), and the Theory of Planned Behavior (TPB) apply to the individual level, the

DOI and TOE frameworks are useful for understanding technology adoption at the firm level (Venkatesh et al., 2003).

Each of these theories has its limitations when it comes to explaining why SMEs choose to adopt digital technologies (Mkansi, 2022). For example, the Resource-Based Theory (RBT) does not adequately consider how external factors influence the adoption decisions of firms that are not driven by entrepreneurial motives. (Ray & Ray, 2006; Rivard et al., 2006). Similarly, DOI does not adequately explain the dynamics of multiple social systems in small firms (Parker & Castleman, 2009; Simmons et al., 2008) and lacks consideration of environmental and organizational contexts (Haneem et al., 2019; Maduku et al., 2016). The Technology-Organization-Environment (TOE) framework centers on technological, organizational, and environmental factors and has been supported by various empirical studies (Oliveira & Martins, 2011).

Although some researchers have used the TOE theory (Awa et al., 2017; Yoon & George, 2013), it has been criticized for being too focused on grouping factors into categories. This approach can miss the unique social and internal dynamics of each small business (Henderson et al., 2012; Ven & Verelst, 2011). For instance, SMEs often operate within complicated relationship networks shaped by personal connections, trust, and family involvement (Parker & Castleman, 2009). Moreover, SMEs operate in environments prone to constraints such as limited time, information, knowledge (Casseta et al., 2020; MacGregor & Vrazalic, 2007; Ongori & Migiro, 2010), and financial resources (Mkansi, 2022).

This study considers the TOE framework a suitable lens for analysis and advancement, primarily because its three theoretical elements, technology, organization, and environment, encompass key factor areas where challenges to online store adoption emerge. In addition, the TOE framework has proven to be a strong and reliable tool for explaining how businesses adopt online technologies (Ansong & Boateng, 2018; Olaitan & Flowerday, 2016). The framework suggests that key factors influencing online business adoption include technology, both internal systems and external tools, organizational aspects such as size, structure, and leadership, and the surrounding environment, like industry conditions, regulations, and competitors (Molinillo & Japutra, 2017; Tornatzky & Fleischer, 1990). This framework identifies three essential factors influencing IT adoption: technological, organizational, and environmental. Considering the research questions and relevant

literature. I have chosen the TOE framework (see Figure 2) because it effectively captures internal and external factors that influence the adoption of online channel by MIEs in Finland.

To address the central questions of this thesis, **“What challenges do MIEs face when adopting an online channel alongside their physical store?”**, **“What strategic approaches are used by MIEs to overcome the challenges?”** To answer the first research question, I will use the three components of the TOE framework, technology, organization, and environment, to categorize the factors affecting the adoption of online channel based on the reviewed literature. Then, interview questions will be formulated according to the literature review and the identified TOE components.

To answer the second question, it is necessary to identify the challenges of online channel adoption and the solutions used by MIEs from the literature, Identifying the challenges in the context of technology such as cost, technical complexity, and cybersecurity issues, then delving into organizational challenges such as the lack of digital skills, resistance to change, and resource limitations. Identifying these factors through the literature review and interviews with MIEs owners and finally examining external factors such as market competition, network & partnership, and regulatory constraints that affect the digital adoption process, By identifying the challenges and solutions from the literature, as well as analysing the responses of MIEs owners regarding the adoption process, the obstacles they encountered, the solutions they implemented, and the strategic approaches they followed, we can answer the second question.

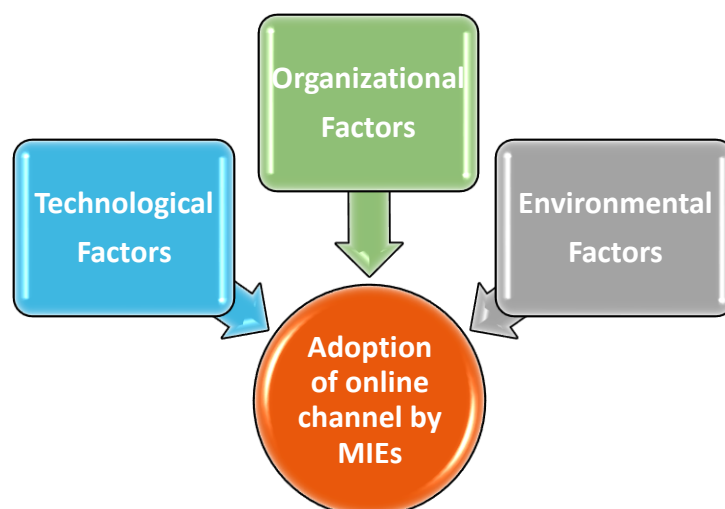


Figure 1. The theoretical framework developed by the author for this study

This study applies the TOE framework to examine how technological, organizational, and environmental factors influence MIEs in Finland's adoption of the online channel. The framework provides a holistic view of technology adoption, considering internal and external factors. By exploring additional enablers and obstacles identified in the existing literature, this research will provide valuable insights into the challenges MIEs in Finland face when adopting the online channel through their websites.

### **3 Methodology**

This study uses a qualitative approach to explore the challenges that MIEs face when adding online channels to their existing physical stores, with a focus on bicycle repair and sales shops in Finland. A multiple case study design was chosen, and data were collected through semi-structured interviews with business owners. According to Yin (2018) and Saunders et al. (2019), case studies are a suitable method in qualitative research when examining complex experiences from different perspectives. Participants were selected through purposive sampling to ensure they fit the focus of the research. Thematic analysis will be used to interpret the data, guided by the Technology-Organization-Environment (TOE) framework. The study aims to answer two main questions: (1) What challenges do MIEs face when adopting an online channel alongside their physical store? and (2) What strategies do they use to manage these challenges? Ethical standards, such as confidentiality and informed consent, will be carefully followed.

#### **3.1 Research Approach**

Qualitative research seeks to develop a comprehensive understanding of a phenomenon from the participant's viewpoint, offering insights that were not predefined (Merriam, 2009; Miles & Huberman, 1994). A qualitative multiple-case study approach was considered suitable for this research to examine the distinctive TOE environments of small firms (Mkansi, 2022). This approach allows researchers to gain in-depth insights from a limited number of observations, emphasizing understanding over extensive quantitative data (Saunders et al., 2019a, 2019b). After establishing the sampling criteria, semi-structured interviews were chosen for data collection from owners and managers (Aalberg et al., 2012). In line with the objectives of this study, a qualitative research method seems more suitable than other approaches, such as quantitative research methods as it offers insights into how MIEs adopt online channel, providing an in-depth understanding of each

selected company's approach to adopting online channel. A qualitative approach allows for deeper insights into the behaviours, attitudes, and decision-making processes of adopting online channels.

## **3.2 Research Context**

This study focuses on the adoption of online channel by MIEs in Finland, based on interviews with owners of three bicycle repair and sales shops in Jyväskylä, Tampere, and Espoo. The topic was inspired by my own experience as the owner of PolkupyöräTori, a bicycle shop in Jyväskylä, which is currently in the early stages of adopting an online channel.

### **Company Background:**

PolkupyöräTori is an MIE specializing in bicycle repair, sales, and rental services. Established in 2003, the company serves a diverse customer base, including daily cyclists, cycling enthusiasts, and occasional riders. Operating with a small team of 3–4 employees, PolkupyöräTori offers high-quality repair services, new and second-hand bicycles, accessories, and rental options. As an MIE, the business encounters specific challenges in expanding its operations, particularly in adopting a digital sales channel to remain competitive in a rapidly evolving market.

### **Industry Overview:**

The bicycle industry in Finland has seen growing demand due to increasing environmental awareness, government incentives for sustainable transport, and the rising popularity of cycling as a mode of commuting and recreation. Bicycle repair and sales businesses play a crucial role in supporting this trend. However, the industry is also competitive, with both local repair shops and large retail chains providing similar services. Digitalization is becoming an essential aspect of business operations, allowing small businesses to reach broader markets and improve customer service.

### **Regional Context – Jyväskylä, Finland**

Jyväskylä, located in Central Finland, is a vibrant city with about 149,000 residents (Wikipedia, 2024). Known as the "Capital of Sport," its compact urban layout makes cycling a popular and efficient mode of transport (Visit Jyväskylä, 2024). The city features an extensive network of dedicated cycle paths, providing safe and convenient travel for both residents and visitors (Jyväskylä.fi,

2024). One highlight is the “Blue Loops,” scenic cycling routes around lakes like Jyväsjärvi, Palokajärvi, and Tuomiojärvi, offering beautiful views and outdoor recreation opportunities. Additionally, the Jyväskylä Region offers over 1,400 kilometers of cycling routes, including gravel and forest roads, catering to various cycling experiences (Jyväskylä.fi, 2024).

### **Market and Digital Adoption**

The market for bicycle repair and sales is influenced by seasonality, with higher demand during the spring and summer months. Many MIEs in the sector have traditionally operated through physical stores, relying on word-of-mouth and local reputation. However, as consumer behaviour shifts towards online shopping and service booking, businesses like PolkupyöräTori must explore online sales channels to remain competitive. The transition to digital platforms presents both opportunities and challenges, including the need for technical skills, marketing expertise, and financial resources.

This research aims to explore how MIEs like PolkupyöräTori can successfully integrate online channels into their operations, considering the constraints and opportunities present in the Finnish business environment.

### **3.3 Data Collection**

The purpose of this research is to study the experience of Finnish MIEs in adopting an online channel as a second sales channel alongside their original physical store, the most effective way to gather information and insights into the adoption process is through conducting interviews with the business owners or those who are responsible for the adoption process.

The data were gathered from three Finnish MIEs through semi-structured interviews, ensuring the collection of rich and targeted insights (Merriam, 2009). A qualitative approach was chosen to gain a deeper understanding of the contextual factors influencing decision-making and business activities (Myers, 2009). The study involved interviews with representatives of the selected MIEs, which were chosen based on industry, size, and location. The case companies operate within the bicycle service industry in Finland. The interviews took place between February 4, 2025, and February 19, 2025.

Prior to the interviews, I sent formal emails outlining the purpose of the interview and assuring the confidentiality of the interviewees' information. All participants were also provided with a list of interview questions in advance to acquaint themselves with the topics (see Appendix 1). This step was intended to allow participants to review the materials, feel more at ease, and help establish the researchers' credibility (Oates, 2006). This process is a crucial aspect of the interview protocol, as relying solely on participants' memory can introduce bias and inaccuracies.

While the sequence of topics varied during each interview, I generally abide by the order of the questions. The interviewer encouraged participants to speak freely, fostering a comfortable environment that facilitated the open sharing of opinions, beliefs, and experiences. To ensure clarity and understanding, questions were clarified or repeated when necessary. The participants had the freedom to decline to answer any question or to withdraw from the interview if they felt that the question was too personal or sensitive.

Some of the interviews were conducted via telephone calls, while others took place face-to-face. Certain interviews were conducted in Finnish and later translated into English in the transcripts, whereas others were conducted in both Finnish and English simultaneously. The choice of language was determined based on the interviewee's language proficiency to ensure clarity and ease of communication. Typically, conducting the interview in the interviewee's native language allowed them to feel more comfortable, leading to more in-depth and insightful responses. The interviews were recorded using a mobile phone to ensure accuracy in transcription. The interviewer was proficient in both Finnish and English, enabling effective communication throughout the interview process.

I have sent emails to 27 MIEs across Finland, all operating within the bicycle retail industry. Of these, three agreed to participate in interviews. The participants were selected from different cities to ensure a diverse range of insights and perspectives, thereby enhancing the variability of the data collected.

To ensure accuracy and avoid any misinterpretation, each interview transcript was sent back to the interviewee for review. This step, known as respondent validation, helps confirm the credibility and reliability of the data collected (Silverman, 2001).

### 3.4 Data Analysis

In qualitative research, collecting data, analysing it, and writing the report often happen at the same time and are closely linked throughout the process (Creswell, 2007). Braun and Clarke (2006) describe thematic analysis as a step-by-step process made up of six clear stages, however, it is, in reality, an iterative and reflective process that requires ongoing transitions between the phases.

Phase 1 – Data Familiarization: I have thoroughly examined transcriptions and audio recordings multiple times to gain a deep understanding of the data. The transcripts are written immediately after each interview by using Microsoft Word software. Then taking notes on the responses of MIEs owners regarding the adoption of online channel, using the TOE framework as a guide.

Phase 2 – Generating initial codes: According to Myers (2013), “a code can be a word that is used to describe or summarise a sentence, a paragraph, or even a whole piece of text, such as an interview” (p. 16). The codes were identified during this phase, and I manually coded the data using Microsoft Excel. The coding was carried out based on the research questions and structured using the TOE framework as a guide.

Phase 3—Identifying themes: Once all the data had been coded, I grouped related codes to form possible themes and subthemes by clustering those that shared similarities (Ozuem et al., 2022).

Phase 4 – Reviewing themes: In this phase, I critically examined the identified themes to ensure they accurately reflected the coded data and aligned with the research questions. This involved refining themes by merging overlapping ones, splitting broad themes into subthemes, or dropping those that were not well-supported by the data.

Phase 5 – Defining and naming themes: I clearly defined and identified all three themes within the TOE framework: Technological factors, Organizational factors, and Environmental factors, guaranteeing that each theme was special and aligned with the research questions.

Phase 6 - Producing the report: After finalizing the themes, I proceeded with the final analysis and writing the report. Both brief and extended quotes were incorporated, each accompanied by unique identifiers to represent different participants (e.g., M1, M2, M3) as shown in table 1. The themes, subthemes, and codes were organized into a thematic matrix table (see Appendix 2), with illustrative quotes included in the results chapter.

Table 1. Illustration of the interview participants and details of their interviews

Code	Industry	Location	Number of employees	Interviewee Title	Date of the interview	Duration of the interview
M1	Bicycle store	Tampere	2	Owner	4.2.2025	33.03
M2	Bicycle store	Espoo	6	Owner	7.2.2025	1:01:54
M3	Bicycle store	Jyväskylä	5	Owner	19.2.2025	46:54

### 3.5 Verification of The Results

In qualitative research, validity and reliability are often understood through the idea of trustworthiness (Mischler, 1990; Stiles, 1993). To truly understand the importance of validity and reliability in qualitative research, it's necessary to start by defining what these terms mean. According to Maxwell (2010, p. 280), validity refers to the "correctness or credibility of a description, conclusion, explanation, interpretation, or other sort of account." Reliability refers to the "application and appropriateness of the methods undertaken and the integrity of the final conclusions" (Noble & Smith, 2015, p. 34).

#### Internal Validity

Maxwell (2010) explains that although no method can completely ensure validity, using specific techniques can reduce threats to validity and strengthen the trustworthiness of research findings. These techniques include recording interviews, collecting detailed data, considering conflicting evidence, checking with participants, using some statistical support, maintaining neutrality, applying triangulation, and ensuring fairness. (Anderson, 2010; Arksey & Knight, 1999; Bisman, 2010; Birt et al., 2016; Gray, 2018; Maxwell, 2010; Mays & Pope, 2000). I conducted interviews using a mobile phone as a recording device. Before the interviews, participants received an email containing the interview questions and an explanation of the study's purpose, along with assurances of confidentiality regarding their responses. This approach aimed to build participants' confidence, familiarize them with the questions, and create a comfortable environment, enabling them to speak freely. Consequently, this contributed to a richer conversation and strengthened the validity of the collected data. Using a recording device instead of making notes or labels enables the raw data to be

examined (Gray, 2018). Following the interview recordings, I transcribed the data in detail using Microsoft Word. The transcription process took several hours, helping me fully understand the data in detail. Arksey and Knight (1999) and Maxwell (2010) explain that creating full verbatim transcripts of interviews, rather than depending on selective interviewer notes, generates what is known as rich data, offering a more detailed and insightful representation of the information collected.

Another method for ensuring the validity of the research is member checking, which allows participants to review their recorded data. This process involves sending interview transcripts to participants for verification, enabling them to confirm the accuracy of the information and clarify any ambiguities for the researcher if necessary. I provided the participants with copies of the interview transcripts for review and obtained their approval of the data, thereby enhancing the validity of the research. This process aligns with respondent validation, which is considered a more rigorous form of member checking. According to Anderson (2010) and Birt et al. (2016), respondent validation allows interviewees to review and modify their transcribed interview data, ensuring greater accuracy and credibility in qualitative research.

### **External Validity**

External validity means how well the results from a study's participants apply to a bigger or different group of people. It can be viewed in two ways: how it relates to the wider population and how it applies specifically to the intended target group (Findley et al., 2021). Generalizability involves drawing conclusions from a sample that represents a specific population (Lesko et al., 2017), whereas transportability pertains to applying findings from a sample to a different population (Pearl & Bareinboim, 2014).

In this study, the context is the challenges of MIEs adopting online channels in Finland, particularly within the bicycle shop industry. The European Commission (2003) defines MIEs as businesses that have fewer than 10 employees and bring in less than €2 million in annual revenue or have a balance sheet total below that amount. This definition provides a clear boundary for what constitutes an MIE within the EU context, making it a relevant framework for examining micro-businesses across Europe.

Given the research setting of bicycle shops in Finland, it can be argued that this study's findings may apply to similar MIEs within the same industry and economic context. Specifically, the challenges faced by Finnish bicycle shops in adopting online sales channels could resonate with other MIEs in Scandinavian countries, as these countries share common economic structures and cultural values. These similarities make it reasonable that the conclusions drawn from the Finnish context can extend to other Scandinavian bicycle shops with similar characteristics, such as size and economic environment.

However, caution should be exercised in generalizing the findings beyond this regional context, as differences in local markets, consumer behaviour, and the level of digitalization in other countries could lead to variations in the challenges faced by MIEs in different parts of Europe. Therefore, while the results may offer insights into the broader category of MIEs, their applicability should be carefully considered when transferred to different contexts outside of the Finnish and Scandinavian markets.

### **Reliability**

In qualitative research, reliability is commonly described using various terms like "dependability" (Bryman & Burgess, 2013; Rolfe, 2006), "confirmability" (Jensen, 2008, as cited in Nyström, 2010), and "consistency" (Arksey & Knight, 1999). As described previously, "Reliability refers to the 'application and appropriateness of the methods undertaken and the integrity of the final conclusions'" (Noble & Smith, 2015, p. 34). The application method refers to the data collection approach used in this research, which, in this case, consists of interviews conducted by the researcher. This method was chosen because it is well-suited for collecting rich data from participants, allowing for an in-depth exploration of their thoughts, experiences, and perspectives. Additionally, the open-ended question's structure provides an opportunity to ask follow-up questions, enabling the researcher to gain deeper insights from the participants.

The participants in this study are micro-business owners who are directly involved in the process of online channel adoption. This selection ensures that the interview data is both rich and reflective of the real-life experiences and challenges associated with adopting this new technology. Furthermore, if a participant's response is unclear or difficult to understand, the researcher can repeat the question for clarification or ask the participant to provide an example.

Participants were given the flexibility to choose the most convenient method for their interview, ensuring their comfort. The available options included phone calls and in-person interviews at their preferred locations. This approach helped create a more comfortable environment, allowing participants to speak with confidence and providing more reliable interview data that accurately reflects their real-life experiences.

### **3.6 Research Ethics**

According to Eriksson and Kovalainen (2013), research ethics apply to all aspects of research, not just data collection. They rule issues related to research ideas, collaboration, and intellectual ownership, extending from empirical work to writing and publishing. Furthermore, key ethical considerations in business research include confidentiality, informed consent, and protecting informants. Additionally, ethical writing and research collaboration require proper citation, respectful treatment of colleagues, and avoiding practices such as plagiarism or silencing research teammates. The following are some of the ethical principles applied in this research:

#### **Informed Consent**

According to Conelly (2014), acceptable consent should include three components: it should be given voluntarily, the participants should understand what is required of them, and they should be qualified to give informed consent.

Individuals must be competent to provide consent, meaning they should receive sufficient information about the research, fully understand it, and have the freedom to choose whether to participate or refuse (Polit & Beck, 2014). The participants are the owners, managers, or those responsible for the online channel adoption, usually with a background in the IT field. The participants were informed by email of the purpose of the research, and I clearly explained the questions to them and ensured they understood them. After that, I called the participants to confirm their voluntary participation and clarify any remaining misunderstandings.

## Privacy and Data Protection

The privacy and identity of the participants were carefully protected by keeping their names and identities undisclosed during data collection, analysis, and reporting. Privacy was also strictly maintained throughout telephone conversations, interview sessions, data analysis, and the publication of results. I made sure that all participants were informed about the recording of the interviews for transcription purposes. I also clarified that the recorded data would be deleted after the transcripts were completed. Molinillo and Japutra (2017) emphasized that any data used in case studies *was* anonymized to ensure the confidentiality of the firms involved.

## 4 Results

In this chapter, I will present the findings in response to the research questions of this study: What challenges do MIEs face when adopting an online channel alongside their physical store? And what strategic approaches do MIEs use to overcome these challenges? The findings of this research will be presented according to the theoretical framework that is based on the TOE framework components of technology, organization, and environmental factors that affect the adoption of online channel by MIEs.



Figure 2. Themes of the Technological, Organizational, and Environmental Contexts in the Adoption of Online Channel.

## 4.1 Technological Factors

Technological themes emerged from the data analysis process and were considered factors that embedded the adoption process: perceived benefits, online payment security and data privacy, inventory management, and Optimizing Website Traffic and Visibility.

### Perceived Benefits

Although this study's primary focus is on the challenges associated with adopting online channels, the participants identified several perceived benefits that are relevant to understanding the broader technological context. These benefits often served as motivating factors for adoption, highlighting the positive impact of online channels despite the presence of significant obstacles.

The participants in the interviews recognized the value of adopting an online store, especially as technology and customer behavior continue to evolve and change. Several reasons were mentioned for adopting the online channel, including the opportunity to sell beyond the local area, which helps expand the geographical reach and customer base. This broader reach allows MIEs to increase their sales and improve customer service. An interviewee from M1 highlights this point:

*Since the online channel extends beyond Tampere to cover all of Finland, more customers are reached. This expansion has improved customer service and increased opportunities for consumers to view and compare prices and products.*

One participant also highlighted that the online store provided a platform to showcase products and offer detailed information about the services the shop provides. With the introduction of the online store, the need for phone calls and emails has decreased, as many customers can find all the information they need directly on the website. This saves time and improves overall customer service, as an interviewee from M2 stated, "The integration of the online channel has allowed for better customer service, as customers can access information about products and services more easily." The online channel has also boosted visibility, allowing the business to grow and attract more customers.

The business utilizes platforms like Facebook and Instagram to further enhance visibility, which have proven to be a vital strategy in a competitive market. One of the key benefits of adding an online store is the ability to clear out old stock. As an interviewee from M3 explained:

*The online store has helped us clear out old inventory, especially during the pandemic. The online store turned what was once unsold stock into valuable sales opportunities by selling older products like tires and bicycle parts.*

The perceived benefits discussed above are summarized in Figure 4

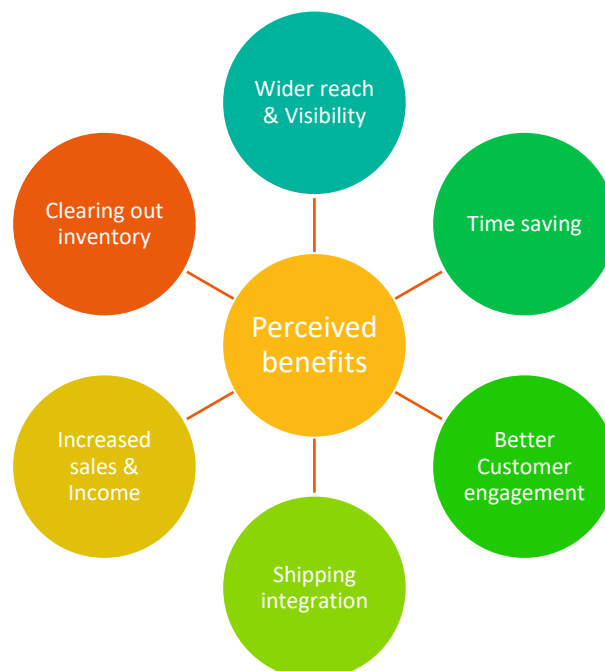


Figure 3. Perceived benefits of Online channel Adoption

### **Online Payment Security and Data Privacy**

The owners of the MIEs in this research are all using well-known platforms to build their online stores, which are typically integrated with payment systems. For example, an interviewee from M1 uses MyCashflow, while those from M2 and M3 use WooCommerce. None of the participants experienced any security issues with their online stores; for them, security and privacy are secondary concerns because they fully trust their chosen systems. Sensitive data such as social security numbers is not recommended to collect from customers, except names and phone numbers, as

basic information needed to be in touch with the customers when they buy products through online stores. Customers enter their personal information through an online store, such as name, address, email, and phone number, during the purchasing process for delivery purposes. This information is typically stored within the online platform, an interviewee from M2 stated:

*We are not gathering information so specifically from the customer; we are taking names and phone numbers, but we are not taking social security numbers, and we are not storing this information. Now, we are gathering more information through this web page and cash machine system, but those are secure systems by themselves.*

### **Inventory Management**

Managing and tracking inventory is a time-consuming task for physical stores, especially when integrating an online sales channel. Handling both in-store and online inventory presents a significant challenge. To address this, all three MIEs have adopted inventory integration software that helps synchronize stock levels between their physical and online stores.

The online store platforms used by the three businesses are MyCashflow, WordPress, and WooCommerce, all of which can integrate with point-of-sale (POS) systems to process sales transactions, monitor both online and offline inventory and keep it updated instantly. In addition to the platforms used by the three MIEs, the three shops also use other software that is used by the offline store. For example, a participant from M2 uses Erply software, while a participant from M3 uses Note Shot as a cash machine software that is used in the offline store. The MIE owners highlighted the ease of use and affordability of these solutions. The interviewee from M3 said:

*Currently, we use a simple and affordable integration software called Note Shot, developed by a Finnish company for micro-businesses. We have considered switching to a more expensive system but decided against it because we are already familiar with what we have.*

### **Optimizing Website Traffic and Visibility**

The online market is becoming increasingly crowded, with more companies entering the space every day. Competing with larger companies is challenging for the participants due to their greater resources and capabilities. However, for these smaller businesses, having an online presence is not

directly competing with the big players, but rather about enhancing customer service and showcasing their products and services. All participants agreed that improving their online visibility is crucial. To achieve this, some have used strategies like advertising through Google Ads or marketing their websites on cheap or free social media platforms such as Instagram and Facebook. The interviewee from M1 explained, “To enhance our visibility, we utilize platforms like Facebook and Instagram for marketing and promotion”.

Additionally, one participant has allocated marketing budgets to boost their online store’s presence. In contrast, others have focused on offering rare niche products in the market to stand out and improve visibility.

One of the strategies used to improve the online store's visibility is allowing customers to leave reviews and provide feedback directly on the website. Another approach involves creating an attractive and user-friendly website that offers a wide range of products and incorporates commonly used keywords related to the products or services. As one participant noted: “We also try to optimize our website, so it appears better in search results. That takes time, but it’s more affordable than paid ads in the long term.”

Table 2. MIE Strategies for Technological Challenges in Online Adoption

Challenge	Strategy	Description	Used by
Online Payment Security and Data Privacy	Use of Trusted E-commerce Platforms	Platforms used: My-CashFlow and WooCommerce.	M1,M2,M3
Inventory management	Integrated System for Online & Offline	Cash machine Apps used: Erply and Noteshot	M1,M2, M3
Optimizing Website Traffic and Visibility	Social Media Marketing. Reviews & Differentiation and Niche strategy.	Facebook & Instagram, Google Ads. Customer Reviews on Website, selling special and rare products.	M1, M2, M3

## 4.2 Organisational Factors

Through the interviews and the subsequent data analysis process, several key themes emerged from the rich insights shared by the owners of MIEs, complemented by the reviewed literature. These themes represent the core organizational challenges influencing the adoption of online channels. The main themes include resource constraints that encompass financial resources, time, and human capital limitations. The following sections present the organizational challenges faced by MIE owners in more detail.

### Resource Constraints

One of the key organizational themes identified through the thematic data analysis is Resource Constraints, which encompasses limitations related to time, financial resources, and human resources. The participants consistently highlighted these constraints as significant barriers to the effective adoption and maintenance of online sales channels. Below is a breakdown of the specific challenges experienced by MIE owners:

**Financial Constraints:** Financially supporting the adoption of an online store is not an easy task for small companies, according to the participants. Hiring IT specialists to manage the adoption process requires significant investment, especially since it is an ongoing process rather than a one-time effort. Additionally, securing loans for business innovation projects can be challenging for small enterprises, as banks and financial institutions require a strong business history and proof of repayment plans. As an interviewee from M3 explained, "It is difficult for small companies to get loans if you don't have money. We have Finnvera as our financial guard, and through them, it is possible to get a loan."

Rather than taking on financial burdens by hiring external specialists, all participants resolved this challenge by relying on their own skills and efforts to establish their online stores. Although the learning process was time-consuming, most participants noted that winter was the ideal time to focus on developing their online stores, as business demand is lower during that season.

One participant was particularly fortunate to have a family member with IT expertise who managed the entire online store setup and ongoing updates. The interviewee from M1 highlighted the

cost-saving advantage of this approach: "We did not face financial problems with building an online channel as we did it ourselves. It is expensive to take an outside company."

**Human Resources Constraints:** Limited personnel are a common characteristic of small enterprises, as noted in the literature. According to the European Union's definition, an MIE has fewer than ten employees. In our cases, the number of employees ranges between 2 and 6, with additional staff sometimes hired during peak periods. Due to the high cost of hiring specialists and the challenges of recruiting personnel with specific skills worsened by Finland's high employment costs, employees often must perform multiple roles within the business. The interviewee from M1 emphasized this challenge, "It isn't easy if you don't have an IT background; it's not possible to employ an IT specialist, because you cannot afford it." Similarly, the interviewee from M2 discussed the difficulties in hiring skilled personnel for bicycle maintenance. The owner had to personally train many workers, only to face high turnover, which disrupts business sustainability. The interviewee from M2 stated:

*I have trained many workers during my time because the workers usually change. You must know how to fix bicycles, but most importantly, you must have an interest in the job and understand more about how things work.*

To overcome the shortage of specialized employees, the companies distribute daily tasks among their existing staff. For instance, the interviewee from M3 noted:

*I have one employee who can do coding. He did not study IT but is learning little by little learning and is still not professional, and we have another one who takes care of marketing, and both are employees besides their primary job of repairing bicycles.*

This multi-tasking approach is a common strategy among MIEs, allowing them to manage diverse responsibilities despite limited human resources.

**Time Scarcity:** Usually, running a physical business as an entrepreneur requires a lot of time and effort, as the entrepreneur is responsible for handling daily business operations. The adoption of another form of business, such as an online store, adds an extra workload, as it requires competency in the IT field in addition to other duties such as pricing, managing inventory, processing payments, and handling logistics and product returns, this beside the main job of

running the physical store which includes bicycle services, selling, replying to emails and calls and serving customers in the store.

This point was emphasized by the interviewee from M1: "It isn't easy if you don't have an IT background. It's not possible to employ an IT specialist because you cannot afford it". According to him, running an online store would not have been possible for him without the help of his wife, who has IT knowledge, he stated, "With the help of my wife, we overcame the challenges." The process of adopting online store also requires time if the entrepreneur depending on in-house skill especially the bicycle store business in Finland is a seasonal business due to the long winter season. The work on online store development is usually done or updated during wintertime. A participant from M2 confirms this point: "The company operates mainly during spring and summer, making winter the only period available for working on new projects like an online store."

Despite the time-consuming nature of the adoption process, which all participants in this research experienced, M3 strategically implemented updates during slower business periods. However, the introduction of an online store ultimately proved to be a significant time-saver. With most product and service information readily available online, customers can browse the website before visiting the physical store, allowing them to make informed decisions in advance. This has streamlined customer interactions, reduced the volume of phone calls and emails, and improved overall customer service, an interviewee from M3 stated:

*The adoption of an online store has significantly reduced the number of phone calls and emails we receive. This has been a positive change, as it saves us a lot of time and allows us to focus more on updating our online store.*

### **4.3 Environmental Factors**

The main themes that emerged from the data analysis regarding environmental factors include governmental and institutional support, market competition, networks and partnerships, as well as shipping and return policies. The following sections will provide more detailed insights into each of these factors.

## Government and Institutional Support

The participants of MIEs emphasized the lack of support from both public and private institutions. All participants rely on building their online stores through in-house efforts, often during their own free time when work demand is lower. Two participants mentioned that they began dedicating time to learning and practicing how to build an online store during the winter, taking a step-by-step approach. Additionally, participants expressed a lack of knowledge regarding available public or private support as an interviewee from M3 explained:

*I was not aware of any associations that offer support to small businesses. We never sought help because we didn't know if it was available, and no one offered assistance. The city might provide some form of support, but I'm not sure what kind. When we launched our online channel, it happened quickly, and we were too busy to look into possible support options.*

One participant is a member of the Finnish Entrepreneurs' Union (Suomen Yrittäjät), whose support primarily focuses on legal matters, such as offering legal advice, but does not extend to financial assistance. This was pointed out by an interviewee from M1, who stated:

*We did not receive any direct support from the government. Although we are members of Suomen Yrittäjät (Entrepreneurs' Union), which offers advice on legal matters, we have not received any specific assistance regarding the adoption of an online sales channel.*

The second participant denied receiving any help for online store adoption. However, he explained that support is available from certain associations in Finland. He learned about this through a friend, who informed him about financial assistance for hiring a new employee for a specific period. The interviewee from M2 stated, "I got this kind of support from Ely-keskus for a new business. They covered half of the employee's salary for one year".

## Market Competition

As small companies in Finland and according to the limited resources compared to large enterprises, adopting online channels raised as an extra channel beside the physical store for many purposes such as extending geographical reach, improving customer service, improving the visibility of physical stores through online appearance and improve the income of the business, but known of the MIEs owners expressed any sign of using an online channel to compete with other rivals in

the market as all of them admit that is not possible to compete with big companies as they don't own the resources that allow them to overpass other rivals As stated by the interviewee from M2:

*The competition is tough due to the presence of many large companies in the industry, which drive prices down. As a result, we do not even attempt to compete at that level. Instead, we focus on showcasing what we have to offer our customers.*

Shifts in the business landscape drove the adoption of online channels, making innovation essential for survival. Additionally, changes in customer purchasing behaviour, influenced by the rise of the internet and mobile technology, played a crucial role. Participants acknowledged that failing to adapt to digital transformation could eventually push them out of the market. In Finland, a strong technological infrastructure and high customer readiness further facilitate the adoption of innovation.

One of the interviewees also highlighted that the online channel enables them to sell niche products that are not widely available in the market. This is one of the advantages of online stores, as it allows small businesses to focus on unique products and differentiate themselves from competitors. He stated:

*We can also offer some unique products that are not commonly available on the market. I remember when we launched our online store, we had an older rear derailleur that was no longer being sold in regular stores. As soon as we listed it online, it sold out immediately because people were actively searching for those rare parts.*

When companies adopt an online channel, there should be a clear strategy and strong reasons behind the decision, especially for MIEs facing daily challenges. Entrepreneurs must ask themselves: Why do I need an online store? What are the benefits? Is the goal solely to compete? Big companies have the resources and the capacity to survive with low prices and discounts, as well as the ability to market their products. The Interviewee from M3 shared:

*The success of an online channel depends on your objectives, but competing in the bicycle sales industry is highly challenging. Currently, demand is low, while larger companies offer significant discounts and fierce competition, making it difficult for small businesses to stay competitive.*

## Network and Partnership

Of the three participants, only one explicitly mentioned receiving help and support from their networks during the adoption of online channels. For example, in the area of marketing, a member of their network assisted the company with advertising and creating social media content. Additionally, each team member had personal connections as friends or partners who could provide support with marketing or technical issues related to the online store. In addition to these informal networks, their bicycle brand supplier also regularly offered assistance related to the products they sell. The interviewee from M3 highlighted this point:

*Each of us has personal networks we can turn to for help in solving problems. For example, we have an entrepreneur friend who has been in the business for a long time, and we asked him for help, even though he's not from Jyväskylä. We also received some support from one of our suppliers. The main thing is that we've always tried to solve everything by ourselves, one way or another.*

Interviewees from M1 and M2 decided to develop their online stores by leveraging their internal network and the skills within their teams. Both participants took a hands-on approach, focusing on self-learning and skill development, especially during the winter months. They dedicated time to acquiring the technical knowledge needed to build and maintain their online presence.

For the Interviewee from M1, this process was further supported by family involvement, particularly from his wife, who had a background in IT. Her expertise played a key role in simplifying the technical challenges of building the website, making it easier for them to navigate the complexities of e-commerce development. Additionally, the team's collaborative effort, combined with the determination to learn, allowed them to create an efficient and functional online store despite limited external resources.

The support system of internal knowledge, self-learning, and family contributions was central to the success of their online ventures, highlighting the resourcefulness that small businesses often rely on when developing their digital presence.

## Shipping and Return Policies

Each participant has a unique experience in shipping and logistics services. As online stores gain more experience and the volume of products sold through digital channels increases, negotiating shipping deals becomes easier and more cost-effective. All participants have contracts with different logistics providers. One participant, for instance, has a contract with Posti, the Finnish national postal service. This contract is an advance agreement, meaning that the service is purchased upfront for a set number of shipments. This arrangement is more cost-effective compared to paying for individual shipments. Interviewee from M1 highlighted this point:

*We have a contract with Posti, although their services are not the cheapest. However, we receive a discount by purchasing in advance for an agreed-upon number of shipments. We ship orders immediately after customers place them, and we purchase the postal services in advance to streamline the process.*

The interviewee from M2 has a different approach to logistics services. The company has contracts with both Matkahuolto and Posti but has set fixed shipping prices for customer orders. Bicycles have a fixed shipping cost of €50, while all other products are shipped for €10. The company uses two sets of packages: bicycle packages and packages for all other products. With this policy, the company breaks even with its delivery partners, as stated:

*We charge €10 for packaging and €50 for bicycles, based on rates from Matkahuolto and Posti. By calculating these prices, we avoid extra costs while maintaining efficiency. We offer two package options to simplify the process for both ourselves and our customers, considering delivery and packaging variations for potential savings.*

Although the interviewee from M2 is generally satisfied with the delivery approach, he has expressed difficulties with packaging sizes, as they are not always clear. Occasionally, there are changes in the delivery policies. He also mentioned issues with Matkahuolto's customer service, particularly when delivering bicycles, noting that getting information from them is not easy. Additionally, there is no clear structure regarding the delivery charges, which sometimes exceed what was agreed upon earlier. However, he noted that the service appears to be improving at the moment.

*It is not easy to work with Matkahuolto. They have overcharged me several times because they keep changing their packaging requirements. I ended up having to argue with them,*

*not knowing what the correct procedure was. When I go to customer service to drop off a bike, they do not provide clear instructions. Then, if I get charged the same amount for one bike, the packaging requirements might have changed, leading to confusion and frustration.*

For the interviewee from M3, the experience with delivery services seems to be more efficient and seamless. The owner works with two logistics companies: DB Schenker and Shipit, a platform that combines several logistics providers under one third-party service. Shipit integrates various shipping carriers, including Posti, Matkahuolto, DB Schenker, UPS, FedEx, and Kaukokiito, allowing customers to manage domestic and international shipments efficiently. The platform is integrated with their web store, providing customers with a variety of delivery options and pricing.

For bicycle deliveries, the interviewee from M3 has a separate contract with DB Schenker, which offers bicycle shipping within Finland for less than €30, a price the participant considers very reasonable. Although the participant offers free delivery for bicycles within Finland, they view the cost as minimal compared to the overall value of the bicycle.

*We use Shipit features in our online channel, integrating Posti, Matkahuolto, and Schenker. I can easily print delivery labels through Shipit when customers make an online order, and shipping is competitive in pricing. While Matkahuolto is convenient, Posti is more challenging to manage due to its distance. As for bicycle deliveries, Schenker's pricing for delivery under €30, even for a high-value bike, seems surprisingly affordable.*

Concerning return products policy or experience of the participants, there is no fixed or clear policy regarding this matter, but it is something that should be dealt with as a part of online channel adoption reality as part of customer service, for the participants, it is not good to have some products return as it cost the company, with the interviewee from M1, customers never make any return of the product since they started the online store. He stated, "We have never had any product returns from customers, but if a return does occur, the customer is responsible for covering the return shipping costs."

Since launching the online channel, one of the MIEs has experienced only a single product return, which occurred when the customer selected the wrong item. In this case, the return was pro-

cessed free of charge. However, the need for a clear return policy was highlighted, especially regarding whether the company or the customer should cover the return costs. As the interviewee from M2 commented:

*Of course, selling products with a return policy can be a bit challenging. So far, we have not had many returns, and there has been only one case where the customer ordered the wrong product. In that situation, we allowed the return free of charge, or the customer handled the return and covered the shipping cost himself or herself.*

The interviewee from M3 emphasized that to avoid product returns, customers should be able to understand the descriptions and images of the products, enabling them to choose the correct product and avoid the return process. However, he also agreed that returning products is currently challenging.

*The return process is still challenging and not yet fully organized, but we are working on improving it. At the moment, customers are responsible for handling product returns themselves, as the process is not yet automated.*

## **5 Discussion**

In this chapter, the findings presented in the results section are critically examined about existing literature on adopting online channels by MIEs in Finland's bicycle industry. The discussion addresses the research questions and objectives by exploring the key obstacles that MIEs face and the strategies they use to overcome these challenges. Furthermore, this chapter outlines the managerial implications for stakeholders, including MIE owners, municipal authorities, and government officials. Finally, the study's limitations are discussed, and recommendations for future research are presented.

### **5.1 Answers to the Research Questions**

The idea for this thesis emerged from my own experience as the owner of a bicycle shop in Finland in the city of Jyväskylä. I observed that many similar businesses in the industry are increasingly moving toward digital transformation, and the growing trend of online shopping has become an

undeniable reality for me as an entrepreneur. This observation inspired me to explore the adoption of online channel by MIEs in Finland and the challenges they face during the adoption process. The questions of the research are:

1. What are the main challenges facing MIEs when adopting an online channel in Finland?
2. What strategic approaches are used by MIEs to overcome the challenges?

The objective of this research is to identify the key challenges MIEs encounter in adopting and utilizing online channels, with a focus on the following areas:

- Investigating technological obstacles, such as cybersecurity risks, Optimizing Website Traffic and Visibility, and inventory management.
- Examining organizational challenges, including limited financial resources, Human resources, and scarcity of time.
- Analyzing environmental factors, such as market competition, governmental support, access to external support, shipping and return policies.

This research applied the Technology-Organization-Environment (TOE) framework to examine the technological, organizational, and environmental factors that hinder small companies' adoption of online channels. The study used a qualitative approach by interviewing three MIE owners operating bicycle shops in three different cities: Jyväskylä, Tampere, and Espoo. Semi-structured interview questions were carefully designed to explore the owners' experiences with the adoption process. The interviews revealed various challenges, which were then categorized according to the three components of the TOE framework. The following sections will discuss these challenges under each TOE factor.

### **5.1.1 Technological Factors**

The factors that emerged as hiders and enablers from the technological context include perceived benefits, online payment security and data privacy, inventory management, and optimizing website traffic and visibility.

**Perceived Benefits:** The benefits of adopting an online channel strongly motivated the participating MIE owners. Key advantages included a wider customer base and expanded geographical reach. Customer service also improved, as customers could browse and purchase products at their convenience without needing to contact the shop directly.

Additionally, the online store enhanced business visibility by serving as a digital showcase for the shop and its offerings. Since orders could be placed online, it also allowed owners to save time and focus more on daily tasks. Another benefit mentioned was the ability to clear out old inventory by offering discounted products through the online store.

**Online Payment Security and Data Privacy:** According to the research findings, payment security and data privacy are not major concerns for the participating MIEs. Technological advances and the development of secure systems and applications have significantly reduced the risks of fraud and data leakage. The online platforms used by the participants in this study, such as MyCashflow and WooCommerce, are well-established and reputable in the field of e-commerce. These platforms also offer reliable customer support, which further assists businesses in managing potential technical issues. Moreover, the participants expressed confidence in these systems, particularly given Finland's reputation as one of the most technologically advanced countries with a strong digital infrastructure. As a result, this factor is not perceived as a significant barrier to online channel adoption.

**Inventory Management:** To address this challenge, all three MIEs have adopted inventory integration software that synchronizes stock levels between their physical and online stores. The point-of-sale systems used by the participants are compatible with the online platforms, enabling seamless integration of physical store and online inventory. Specifically, M1 uses MyCashflow, while M2 and M3 utilize WooCommerce for their online stores.

**Optimizing Website Traffic and Visibility:** The MIEs used a combination of strategies to improve the visibility of their online stores. These included selling rare or niche products to differentiate themselves in a competitive market, using free social media tools like Instagram and Facebook to promote their offerings, and running paid advertisements to reach a broader audience. Additionally, they encouraged customer reviews and feedback on their websites to build trust and improve visibility. Creating attractive, user-friendly websites with a wide range of products and

relevant keywords was also an important strategy to enhance search engine visibility and attract more customers.

### 5.1.2 Organisational Factors

**Resource Constraints:** These include time, financial, and human resources. The entrepreneurs in this research did not adopt their online sales channel at once. Instead, the process progressed slowly, depending on their skills and capabilities in order to conserve resources such as time, finances, and personnel.

As the results show, for MIEs, it is not feasible to hire specialized employees to build their online sales channel, as labor costs in Finland are high. To save time, also a limited resource due to the many responsibilities handled by the members of the MIEs, the employees themselves gradually started the project during the slow business period, which is winter in Finland. During the cold season, demand and workload decrease, allowing MIEs to dedicate time to the online channel development.

Thus, for most MIEs, the adoption process was slow and gradual. The only exception was M1, for whom the process was relatively easier due to the support of a family member, specifically, the entrepreneur's wife, who has an IT degree. Her involvement made the adoption smoother.

In general, none of the MIEs outsourced the work, as hiring an external company was considered too expensive and beyond their financial capacity, especially since the need for support does not end after the adoption process. Managing an online channel requires ongoing support, which means continuous costs. Therefore, in any case, there is a need to learn how to manage the channel independently after its adoption.

Taking a loan is also not an easy option for small companies, as loans come with high costs, and it is difficult for MIEs to demonstrate a strong repayment ability. Financial institutions are often hesitant to grant loans to small businesses, as they lack the resources and financial security that larger companies possess.

### 5.1.3 Environmental Factors

**Government and Institutional Support:** The participants expressed a general lack of knowledge about available support for companies. While some had a vague awareness that certain types of assistance might exist, they admitted to having no clear or detailed information. They felt that even if such support was available, the demands of daily operations and limited staffing left them with no time to actively search for it. In addition, the perceived complexity and bureaucracy involved in applying for support were seen as significant obstacles, leading many to believe that accessing such assistance would not be straightforward.

**Market Competition:** There is a shared understanding among the participants that competing with large companies in the online space is not realistic due to significant differences in available resources. For them, adopting an online channel is seen more as a way to showcase their products and services than to directly compete. To avoid price-based competition, the companies have adopted various strategies such as fast delivery, product differentiation, and focusing on niche markets. Although competition remains tough, the MIEs reported an increase in sales through their online channels.

**Network and Partnership:** Support from informal networks, such as friends, partners, and other personal contacts, appeared to play a helpful role in the adoption of online channels. Assistance was often provided with marketing tasks, like creating social media content, as well as addressing technical challenges. In addition to this informal help, suppliers also contributed by offering guidance related to the products being sold. Although this support may not have been formally structured, it helped ease the adoption process in practical ways.

**Shipping and Return Policies:** In Finland, shipping is generally not seen as a major challenge for online stores. The logistics market is well-developed, with many companies offering competitive services. As a result, small businesses have several delivery options to choose from, and the cost of shipping is not considered a significant issue. Some businesses include the delivery cost in the product price, while others charge it separately. Common strategies include using fixed rates for package types or relying on standard prices from logistics providers. Delivery is typically fast, with customers receiving their orders within a few days.

Returning products is a more uncertain area. Many businesses do not yet have a formal return policy, and approaches vary depending on the situation. In some cases, the customer pays for the return, while in others, the seller covers the cost. However, returns are not generally seen as a major issue.

## **5.2 Managerial Implications**

This study provides several practical implications for MIE owners and stakeholders aiming to adopt or improve their online sales channels.

First, technological readiness plays a critical role in successful adoption. Managers should recognize the long-term benefits of online channels, such as increased visibility and customer reach, and consider simple, user-friendly platforms that offer integrated inventory management and support services. Leveraging secure, reputable platforms can reduce concerns about payment safety and data privacy.

Second, due to resource limitations, MIEs should plan gradual adoption strategies aligned with their internal capabilities. Instead of outsourcing, which is often financially unfeasible, business owners can use quieter business periods, such as winter in Finland, to develop and test their online channel. Self-learning and internal resource development should be encouraged to reduce long-term operational costs and dependency on external providers.

Third, lack of awareness and access to governmental or institutional support highlights the need for improved communication between support agencies and small business owners. Managers should actively seek information on available programs and support channels, even if time constraints exist. Similarly, policymakers and business support organizations need to simplify and promote their offers more clearly to reach MIEs effectively.

Fourth, market competition should not discourage small businesses. While competing directly with large firms may be unrealistic, MIEs can thrive by differentiating themselves through niche products, personal service, fast delivery, and strong brand storytelling. Online channels should be viewed as a way to enhance visibility and credibility rather than just a sales platform.

Fifth, leveraging personal and informal networks, such as friends, family, and suppliers, can significantly ease the adoption process, especially when financial resources are tight. Managers are encouraged to build and maintain supportive relationships that can provide help with technical tasks, marketing, and operations.

Lastly, logistics and return policies must be managed strategically. Since Finland's logistics market offers reliable and affordable options, managers should choose delivery strategies that suit their business model, such as fixed shipping costs or passing costs to the customer. Although return policies are often informal, establishing a clear and customer-friendly return strategy can improve customer trust and satisfaction.

Overall, MIE managers should take a resourceful and step-by-step approach to online adoption, relying on available networks and tools while being mindful of internal capacity and long-term sustainability.

### **5.3 Assessment of the Results in the Light of Earlier Literature**

The findings of this study largely aligned with earlier research on the adoption of the online channel by MIEs. Using the Technology-Organization-Environment (TOE) framework as a lens, this research confirms and extends previous studies regarding the challenges and enablers in digital adoption.

Technological factors, such as perceived benefits, security, and usability, have been consistently emphasized in prior literature. For example, Frow and Payne (2004) identify perceived relative advantage as a critical motivator for small business adoption of digital tools, noting that electronic channels allow customers to access information and purchase goods or services conveniently, at their preferred time and location. In this study, the MIEs also recognized the value of reaching wider audiences and enhancing their visibility, confirming earlier findings by Hanson (1999), who emphasized that web traffic plays a crucial role in determining the success of electronic commerce.

Interestingly, while earlier literature often identified online payment security and privacy as major barriers, the findings in this study reveal a different perspective. Many MIEs expressed confidence in the payment and data protection features of the platforms they use. This shift appears to reflect the technological improvements and regulatory frameworks, such as GDPR compliance and encrypted payment systems, that have strengthened user trust. These advancements seem to have addressed earlier security concerns related to the e-commerce field (Larreina, 2013) and contributed to a more positive perception of online channels among MIEs.

In terms of organizational factors, this study identifies internal resource constraints, particularly limited time, finances, and staff as significant barriers; this finding is supported by Karjaluoto and Huhtamäki (2010), who emphasize that scarcity of financial and human resources commonly prevents MIEs from adopting digital channels.

However, while earlier studies often emphasized the necessity of technical expertise for digital adoption, this study demonstrates that a gradual, self-directed approach leveraging free or low-cost tools can serve as a practical alternative for MIEs. This underscores the significance of adaptability and internal learning capacity. Sell et al. (2019) support this perspective by characterizing the channel expansion process in MIEs as a dynamic, five-phase learning cycle: identify, decide, design, act, and evaluate, constrained by a persistent poverty triad of limited time, financial resources, and digital competence.

Under environmental factors, this study confirms that a lack of awareness and difficulty accessing government support remain ongoing issues. Participants expressed uncertainty about what support is available and found bureaucratic processes discouraging, highlighting a clear gap between support programs and the MIEs they aim to assist. These findings reflect those of Kergroach (2021), who identified key reasons for this gap, including limited knowledge and awareness of existing programs, doubts about the trustworthiness of public support providers, skepticism toward consulting services, and generally low aspirations for business expansion and development. In addition, the participants' reliance on informal networks and supplier partnerships reflects the findings of Karjaluoto and Huhtamäki (2010), who emphasized that entrepreneurs should collaborate and form cooperative networks among small firms to share expertise and mutual benefits.

Interestingly, the perception of the online channel not primarily as a space for competition but as a showcase platform extends existing literature by adding nuance to how MIEs perceive digital presence. For example, Hanson (1999) highlighted web traffic and online marketing as essential to business growth, whereas this study suggests that visibility and customer engagement may be more attainable and valuable for MIEs.

Finally, the findings related to shipping and return policies indicate that the participants are generally unclear about return procedures, as all of them are still in the early stages of adopting online channels. This supports the view of Bell et al. (2013), who emphasize that it is essential for store owners to carefully design return policies that balance cost efficiency with a high level of customer service. Furthermore, Simone and Sabbadin (2017) highlight that providing clearer and more accessible return information on retailers' websites can be an effective strategy for reducing the number of online order returns.

In summary, this study confirms much of the existing literature while adding context-specific insights relevant to Finnish MIEs in the bicycle industry. It highlights the adaptability of MIEs in the face of structural constraints and calls attention to persistent gaps in support and accessibility of public programs.

#### **5.4 Limitations of The Research**

This research contributes to the understanding of why many MIEs find it difficult to establish an online channel, but this paper is subject to a number of limitations.

**Sample and generalizable:** The study is focused on interviewing three MIE owners situated in three different Finnish cities in the bicycle retail field. Although the qualitative approach enabled an in-depth investigation of each case, the small and industry-specific sample size restricts the generalization of results to other industries or countries. The findings are based on the experiences and needs of the participating MIEs and may not be generalizable to the entire population of MIEs either in Finland or elsewhere.

**Subjectivity and Biases of the Researchers:** Like many qualitative studies, results are based on self-reported respondent experiences, which can be influenced by their personal bias or memory recall

bias. Moreover, the data interpretation depends on the judgment of the researcher, who may introduce some tendency despite attempts to be objective.

**Scope of the Research:** The research is limited to the adoption of online sales channel, and did not consider other components of digital transformation or other online tools such as mobile apps, CRM (customer relationship management) systems, and cloud-based business operations. As a consequence, these results might not reflect the entire digitalization setting for MIEs.

**Time pressure and development:** The study was implemented at one point in time, and the situation for online uptake, support programs, or technical applications may change quickly. For instance, shifts in government policy, digital resources, or market trends might make the findings irrelevant.

**Language and Cultural Context:** The interviews were performed in a particular cultural and national context (Finland), where digital infrastructure, business, and customer behaviour may be different from other countries. These local constraints on such findings may make them difficult to generalize in other regions.

## 5.5 Recommendations for Future Research

This study offers an initial look at the challenges MIEs face when adopting online sales channels, but there's still plenty to explore. Here are some suggestions for future research:

**Expand the Sample:** The current study includes a small group of MIEs, mainly from Espoo, Jyväskylä, and Tampere. It would be helpful to look at a larger and more diverse group from different industries and regions across Finland. This would make the findings more generalizable and could reveal differences in how adoption happens depending on the sector or location.

**Long-Term Studies:** Following MIEs over time could give us a better picture of how adopting an online channel affects their growth, sustainability, and relationships with customers in the long run.

**Look More Closely at Public Support:** Since many participants weren't aware of or didn't use institutional support programs, future research could examine how accessible and effective these public initiatives are for small businesses. This might help uncover gaps between policy plans and real-world implementation.

**Compare with Larger SMEs and Other Nordic Countries:** Comparing MIEs with bigger SMEs could show how resources, strategies, and challenges differ. Also, looking at how Finland's policies and digital environment stack up against neighbours like Sweden or Estonia might reveal how national differences shape adoption.

**Understand the Customer Perspective:** Investigating how customers view and use these online channels could add valuable insights to complement the business owners' perspectives. Knowing customer preferences and concerns, like trust and online behaviour, could help businesses better tailor their strategies.

**Return Policies and Logistics:** Since handling returns and managing logistics were considered tricky or unfamiliar, future studies could explore how small businesses set up delivery and return systems that are both customer-friendly and sustainable despite limited resources.

**Digital Skills Training:** More research could examine how micro-entrepreneurs build their digital skills, which training methods work best, and how informal networks support learning.

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## Appendices

### Appendix 1. Interview Questions for MIE Representatives

1. Can you provide a brief overview of your microenterprise (MIE), including its year of establishment, number of employees, primary operations, and target market?
2. What were the main factors influencing your decision to adopt online channels?
3. What specific challenges did you encounter during the adoption of online channels?
4. How did your MIE overcome or attempt to overcome these challenges?
5. How did the size and resources of your MIE impact the adoption process?
6. Can you discuss any changes in customer behaviour or market dynamics resulting from the adoption of online channels?
7. What strategies did you implement to integrate online channel into your existing business operations?
8. Looking back, what advice would you give to other MIEs considering the adoption of online channels?
9. What role does government support or initiatives play in facilitating or hindering the adoption of online channels for MIEs in Finland?
10. How do you perceive the competitive landscape for MIEs adopting online channels in Finland?
11. How do considerations of trust and security impact the adoption of online channels by MIEs in Finland, especially in relation to customer data protection regulations?
12. How do shipping, distribution, and handling returns influence MIEs in Finland when they adopt online channels?

## Appendix 2. Themes and Codes from Interview Transcripts

Themes	Sub theme	codes
		More Customers, better customer service, wider geographical reach(M1)
		Online channel as a showcase tool (M3)
		Online visibility as a necessity for business growth (M1)
		Reduction in phone calls and emails due to online presence (M3)
	Perceived benefits	Improved inventory management with online integration (M1,M2,M3)
		Faster price checks and better customer service (M3)
		Integrated shipping system for ease of order fulfillment (M3)
	Integrated Inventory	The physical and online businesses are integrated through cash machines and inventory management software(M1,M2,M3)
		Decision influenced by integration ability and cost efficiency(M2?)
Technological Factors		GDPR compliance concerns(M2)
		Secure handling of customer data in online transactions(M2)
	Data Privacy and Security	The company ensures <b>personal data protection</b> through MyCashflow and other platforms are all are security built in (M1,M2,M3)
		using facebook and Instagram (M1)
	Optimizing Website Traffic and Visibility	Impressive website and easy to use (M2)
		Utilise Google Ads service (M3)
	Human Resource Constraints	Employee-driven initiative to develop online shop(M1,M2,M3)
		No dedicated IT team, reliance on learning and external networks (M2,M3)
		One employee handling marketing without formal IT training (M3)
Orgnaisional Factors		Employees managing online store alongside primary duties(M1,m2,M3)
		It isn't easy if you don't have an IT background (M1)
	Time Scarcity	With the help of my wife, we overcame the challenges (M1)
		difficult to employ IT specialist( M1,M2,M3)
		Challenges in securing loans for small businesses(M3)
		Use of Finnvera as a financial support option(M3)
		No engagement with entrepreneur associations or city-provided support(M2,M3)
		High cost of hiring external service providers(M1,M2,M3)
		The business needs <b>capital</b> to compete effectively but cannot afford IT specialists.(M2??)
	Financial constraints	Initial website development cost estimate (€3,000–€10,000) (M2)
		Seasonal nature of business affects investment ability(M2)
		High cost of hiring external service providers
		Difficulty obtaining bank loans(M2)
		Business loans require collateral
	Government and Institutional Support	No government assistance was received for adopting the online channel.(M1,M2,M3)
		we are member of Yrittäjät liito(Entrepreneurs' Union) (M2??)
		ELY center provided partial wage subsidy for hiring an IT-skilled employee(M2)
		No engagement with entrepreneur associations or city-provided support (M3)
Environmental Factors		Minimal government or institutional assistance
		Lack of awareness about financial or advisory support for small businesses
		Membership in <b>Yrittäjät liitto</b> provides legal advice but not digital adoption support.
		Lack of awareness about financial or advisory support for small businesses(M1,M2,M3)
		We did not get any help from the government(M1,M2,M3)
	Logistics	trust of delivery and the speed of delivery are important(M1)
		in advance contract with Posti more cheaper (M1)
		The company has optimized shipping by contracting with Posti, ensuring fast dispatch and cost management (M2)
		The business has a contract with <b>Posti</b> , pre-purchasing shipment services for cost efficiency.(M1)
		Third-party shipping services determining pricing (M3)
		Cost-efficiency of shipping despite high product value(M3)
		we don't have any return products (M2,M3)
		hard competition in online market( M1,M2,M3)
		Digitalization as a necessity for staying competitive(M2)
	Competitive Pressure	We are not competing against Larger Businesses(M1,M2,M3)
		Large companies dominate with lower prices(M3)
		Differentiation through expertise and specialized products(M2)
		Other businesses in the industry moving towards online channels(M3)
		Online sales considered an additional visibility tool rather than a profit driver(M1,M2,M3)
		<b>Price, trust, and delivery speed</b> are key factors influencing purchasing decisions.(M1)
		The company uses <b>social media marketing (Facebook &amp; Instagram)</b> to enhance visibility.(M1)
		Competition is <b>intense</b> , and many competitors sell the same products online.(M1)
	Network and Partnership	Dependence on partnerships for digital marketing and social media management(M3)