Customer Perceptions of In-Store Identification

Tiina Kemppainen,[1] Lauri Frank[2]

[1] University of Jyväskylä, School of Business and Economics, Jyväskylä, Finland
tikemppa@jyu.fi

[2] University of Jyväskylä, Faculty of Information Technology, Jyväskylä, Finland
lauri.frank@jyu.fi

Customer identification is essential for all businesses; however, brick-and-mortar (B&M) retailers often face challenges capturing shopping behaviors in physical stores where customers are not accustomed to being identified, especially outside checkout. Nevertheless, B&M retailers are increasingly pressured to improve their identification and data collection methods to stay competitive with online retailers. Additionally, businesses are under pressure to incorporate digital elements into physical environments to keep them engaging and inspiring for the increasingly digitized customers. Hence, this study describes customer perceptions of in-store identification, focusing on B&M store entry and checkout-related identification. The data were collected from interviews with 18 customers of two Finnish B&M retailers. The findings show that while generally viewed positively, there is some reluctance towards identification initiatives. Customers cautiously accept entrance- and in-store identification, yet there are challenges in grasping the associated benefits. Additionally, concerns about privacy infringement and the extent of tracking were identified. While commonplace, checkout identification raises privacy concerns, highlighting the importance of nimble and discreet processes and preserving anonymity.

Keywords: customer identification, B&M stores, retail, qualitative study

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1 Introduction

Customer identification is an essential process for all businesses, involving the recognition of individual customers within a business setting, often achieved through the gathering and analysis of personal information or behavioral data. Identification practice is essential for businesses as it allows the evaluation of the effectiveness of business strategies. By analyzing shopping behavior data, companies can better understand how customers interact with their products and stores, allowing them to make informed decisions to optimize their marketing and merchandising efforts (Zhou et al., 2017). Ultimately, leveraging shopping behavior data allows retailers to enhance customer satisfaction, increase sales, and maintain a competitive edge in the marketplace.

While retailers can readily utilize data analytics in online channels to analyze click streams and customer shopping carts, among other things, they often face challenges in capturing comprehensive shopping behaviors in traditional brick-and-mortar (B&M) stores (Saßnick et al., 2023; Zhou et al., 2017). These challenges are related to in-store customer identification and behavior tracking. Physical service environments generally possess fewer resources and technological capabilities for monitoring and analyzing customer behavior in contrast to online platforms, which can amass substantial data through digital interactions. In B&M stores, customers are typically identified at the checkout through loyalty programs and methods like loyalty cards. Even though there are technologies available for the identification and tracking of customers (such as Bluetooth/Wi-Fi tracking, RFID tags on products, and biometric scanners like fingerprint readers), the adoption of these technologies remains restricted and there is a deficiency in comprehension regarding customer behaviors within the service environment, such as entering and navigating the store.

However, gathering customer data from physical environments is increasingly vital for B&M retailers seeking to compete with online counterparts as it provides retailers with valuable insights into customer behavior, preferences, and trends. The data can be used to enable personalized marketing efforts, improve the overall shopping experience, enhance operational efficiency, and facilitate targeted marketing campaigns to shoppers. In addition, the data can be used in fraud prevention and security. Moreover, retail innovations such as automated checkout systems, personal shopping assistants, and omnichannel services drive a profound

evolution of conventional retail outlets into smart stores (Hauser et al., 2019). As businesses transition towards omnichannel and metaverse environments, where digital and physical elements are increasingly integrated through various technologies, the role of data collection and customer identification is poised to become even more significant. Whereas today's customers commonly enjoy unhindered mobility within retail environments without formal identification, the prospective retail landscapes potentially necessitate operations such as pre-entry authentication protocols in order to personalize the customer experience and to prevent instances such as shoplifting or other undesirable behavior by customers.

Therefore, the purpose of this qualitative study is to describe customer perceptions of in-store identification at B&M stores focusing on store entrance and checkout identification. The data of this study were collected from interviews with 18 customers of two Finnish B&M retailers. The study aims to enhance the understanding of how customers perceive identification, along with exploring the positive and negative viewpoints on identification and associated data collection. Although there has been limited research on customers' perceptions of identification, especially concerning store entrance, understanding customer viewpoints is essential due to the rising need for customer identification and digital technologies in various physical service environments.

2 In-store identification of customers

Customer identification refers to the process of recognizing and verifying the identity of individuals who interact with a business or utilize its services. Customer identification encompasses different methods in retail settings and B&M stores (Knof et al., 2023). However, the most prevalent methods primarily target identifying customers at the checkout counter, with loyalty programs frequently utilized, relying on different types of loyalty cards for customer identification. Standard loyalty programs primarily center around purchase data and often mandate customers to provide personal information in exchange for discounts, rewards, or tailored offers. (Shirai, 2022). In recent years, the traditional methods, including physical membership documents, have been increasingly supplanted by diverse mobile solutions. Retailers offer mobile apps and other solutions such as QR-codes that enable customers to check in. The transaction data captured at checkout offers

valuable insights into customer behavior, encompassing details like purchased items, payment methods, and time of purchase.

While retailers are typically quite advanced in collecting customer data at checkout, the other phases of the customer journey during the B&M store visit often remain less investigated and monitored. Unlike with online shopping, where each click and interaction can be monitored during the customer journey, tracking customer movements within a physical store can be challenging. However, due to technological advancements, retailers are increasingly integrating smart technologies into their retail environments to compete with e-commerce. This enables them to analyze customer behavior and provide personalized shopping experiences (Knof et al., 2023). The growing prevalence of smartphone ownership has provided companies with the means to monitor individuals' movements and track their customers through wireless technologies such as Wi-Fi and Bluetooth tracking (Knof et al., 2023). Many retailers offer free Wi-Fi in their stores, which allows them to track the movements of customers who connect to the network. This data can be used to analyze foot traffic patterns and understand how customers navigate the store. Customer movements in stores can also be monitored using tags attached to products. RFID (Radio-Frequency Identification) tags are small electronic devices that can be embedded in products or attached to merchandise or shopping carts (Ali et al., 2022; Hui et al., 2009). Retailers can use RFID technology to track specific items as they are moved within the store (Choi et al., 2015). In the current retail environment, the capability to detect and understand customer behavior can provide a significant competitive advantage (Landmark & Sjøbakk, 2017.) Nevertheless, there exists substantial potential for the further development of diverse technologies within the retail industry (Knof et al., 2023). Integrating various technologies and consolidating the gathered data can enable a comprehensive analysis of in-store customer behavior (Knof et al., 2023). To stay appealing, B&M stores must optimize their operations efficiently while engaging customers through innovative means.

From the customer's perspective, encountering customer identification or data collection while entering or moving around brick-and-mortar stores is currently rare. Typically, customers only need to provide identification during checkout, and this process is voluntary. Therefore, the adoption of different and unconventional modern methods for customer identification and detailed data gathering in a B&M store environment may raise concerns among shoppers. Examining these concerns

and delving into customers' viewpoints presents a significant topic from both managerial and research perspectives. The traditional methods of monitoring shopper behavior within stores, such as surveys and observational studies (Nordfält & Ahlbom, 2024), do not adequately address customers' thoughts and concerns. Hence, to gain a deeper insight into the issue, it is imperative to examine the thoughts and reactions that B&M store identification and data collection evoke among customers.

3 Methodology

Since this study aimed to enhance understanding of customers' perspectives on identification, the study was conducted as a qualitative study. The data were collected in April and November 2022 through Zoom interviews. Interview durations varied from approximately 36 to 64 minutes. Participants were recruited through newsletters that were sent to the loyal customers of two different Finnish retailers: participants 1-9 were sourced from a textile-selling company's registry, and participants 10-18 were sourced from a natural products and supplements -selling company's registry. As compensation, participants received gift cards. In total, 18 individuals participated in the interviews, comprising 16 females and two males. The participants' ages ranged from 27 to 69 years. The participant demographics are summarized in Appendix 1.

The interviews were themed around issues related to customer loyalty and what motivates participants to remain loyal customers. During the interviews, participants were asked to share their customer history, purchasing behavior related to the company both online and offline, as well as thoughts on marketing communications and customer identification and data collection. The participants were asked about their perspectives on loyalty programs, their views on the diverse identification and data collection methods employed by companies online and offline, the kinds of information they are open to sharing, and their sentiments regarding identification upon arrival at B&M stores, such as through mobile phone location data, QR codes, or alternative means.

The interviews were recorded and transcribed. Subsequently, the data was analyzed using NVivo 12 Pro qualitative research analysis software. The analysis was data-driven. During the process, participants' thoughts regarding customer in-store

identification were initially extracted from the data and subsequently categorized into two primary sections: perspectives on 1) identification upon entering a B&M store and 2) identification at the B&M store checkout. The subsequent section will provide a more detailed exploration of the findings.

4 Findings

Identifying customers in B&M stores elicited various opinions and perspectives among study participants. Identification was generally viewed positively, but some reported avoiding loyalty programs and customer identification.

4.1 Identification Upon Entry

Participants had not personally encountered or noticed the process of being identified upon entering a B&M store. The concept sparked both support and opposition. While some expressed hesitation, a significant portion found it acceptable.

Identification upon arrival was viewed favorably due to its perceived potential for enhancing personalized service, thereby making customers feel valued. It was deemed crucial that recognition be voluntary, allowing customers the option to shop without identification. Additionally, identification was deemed acceptable if it was well-explained and easily declined. Moreover, recognition was seen as bolstering the security of physical service environments by ensuring knowledge of who is present in stores.

> Why not? It would be nice if someone recognized you; it wouldn't bother me. It would make me feel appreciated. But you should be able to get into the store without having to identify yourself. – P8

> It wouldn't bother me to be recognized if it's clearly communicated, and it's an action that can be turned off if I don't want to be tracked. – P6

> It's modern, for sure; I have nothing against it. [...] Also, for the store's safety, it is good to have identification. – P5

Identifying a customer's location was considered beneficial if it could offer targeted promotions and reminders about the store. When close to the store, location-based marketing communication could incentivize a visit more effectively than, for instance, e-mail advertisements.

> It could be used if you are in a shopping center and have allowed the location data from a certain distance. Then you could get a notification: "Hey, visit store X; you have a ten percent discount." – P7

Conversely, the notion of customers being identified upon arrival prompted negative sentiments due to the perceived lack of benefits associated with the identification. The traditional customer service models were deemed effective enough. Thus, there was no perceived need for more personalized attention or digital enhancements while browsing the store. Recognition of customers in the store was also seen as going "too far," which led to reluctance to share one's location data with businesses. This was explained by concerns about privacy and loss of anonymity: a company should not know where a customer moves, as it "feels like having a stalker" (P11).

> Absolutely not. I would never agree to that. [...] I don't like the idea of some business having that data. – P1

> I would not like that. It may go too far. [...] There is some psychological thing there: someone is following you. – P3

Participants who initially perceived identification and tracking positively also had their suspicions about companies' operating models. There were suspicions about the limits of tracking: whether it was limited to movement in the store or if customers could be tracked elsewhere. Recognition outside the store environment raised negative thoughts because it was seen as violating customer privacy.

> It is okay that they identify me there. But I have a suspicion that they might follow me when I'm somewhere else. – P6

On the other hand, identification was also seen as providing the company with too much detailed information, which could affect how customers are treated in the store. One perceived threat was the loss of equal treatment of customers and more

active sales efforts toward those customers who have purchased actively from the company. Also, a situation where the company recognizes a customer but the customer does not purchase anything was considered potentially embarrassing.

> I like to be anonymous. It would be like wearing a shirt saying: "I've bought from here and spent X amount of money." [...] Benefits can be given through e-mail, but elevating or diminishing the customer based on the amounts spent is not justified in public. – P7

> It would feel a bit embarrassing if you do not buy anything. – P9

Customer identification and tracking were seen as part of contemporary operational models, which customers may not necessarily be able to influence. It was seen as a current trend that consumers cannot do much about, and they must submit to the use of digital solutions. Data collection and tracking of individuals were suspected to happen regardless of whether the person was aware of it.

> Well, they collect data all the time. […] I do not see it as harmful if some company does it because it's being done all the time anyway. – P2

> Surely, the phone is always listening to what we're talking about. That's how we're being tracked. – P3

In addition to suspicions of mobile phones eavesdropping on their users, monitoring was observed through monthly reports provided by Google.

4.2 Identification at Checkout

Unlike identification upon arrival, checkout identification was a routine procedure familiar to all study participants. It was primarily perceived positively. However, some participants reported avoiding all identification and loyalty programs. These individuals perceived identification as an intrusive attempt to gather information, and the loyalty programs were not seen as providing sufficient benefits to the customer. Additionally, identification was viewed as bothersome since it is frequently requested in many B&M stores. The participants emphasized the importance of smooth identification processes and highlighted privacy-related

concerns. Identification should be carried out as discreetly as possible to prevent the situation from feeling overwhelming to the customer. Checkout identification should not be too personal or personalized, as anonymity was preferred during transactions. For example, being addressed by one's name was mentioned as an example of identification going too far. Moreover, participants expressed a preference for not receiving reminders from the company regarding customer data collection.

> (It's okay) if it doesn't become creepy. If they were like, "Hey Mary" (name changed) at the checkout, I might be a little scared at that point. There's no need to remind that they're collecting data. – P15

Identification at the checkout was considered useful when the customer benefits from it, such as gets loyalty points or a discount. Identification was also seen as applicable if it allows for better-targeted marketing on topics that interest the customer. The context of the purchase also determined the meaningfulness of identification. For example, in electronics purchases, identification was seen as useful because it can provide benefits to the customer: the product warranty is saved in the loyalty system, which facilitates the customer's actions in case of problems.

> Electronics are the best because the warranty goes straight to your account. You don't have to save the receipts. I can go to the store and say: "The phone I bought doesn't work." – P1

Determining the best method for identification proved challenging as different methods were associated with both advantages and disadvantages. The main types of identification methods discussed by the participants, including 1) tangible and 2) digital methods, and 3) personal information, are reported next.

Tangible Identification Methods

Most participants found traditional tangible loyalty cards inconvenient because these cards often accumulate, making them difficult to fit in wallets. Additionally, they are prone to being forgotten at home, rendering them unavailable when needed. Because of this, the loyalty program can easily be forgotten. Plastic cards were deemed obsolete, with suspicions mounting that they would slowly phase out from the available options.

> It annoys me that you always must have a card. It's a bit too much if you need a backpack (for the cards) just to go to the stores. – P8

> Whenever you go to a store and they ask if you have that card, you are like: "No, I don't have it." Then, eventually, your membership automatically gets forgotten. – P7

On the other hand, some participants also considered tangible cards a suitable means of identification because they are familiar and easy to use. Conventional identification methods were favored, particularly for vital and frequently utilized cards like those for grocery stores.

> Everything is changing so rapidly into this electronic form. I feel that those old methods were better in some respects. I kind of miss them. I think it used to be easier, clearer. – P14

Combining customer information with other cards, such as a driver's license, was seen as an easy option, as the driver's license is usually always with the customer, easily accessible, and on the other hand, the customer avoids extra plastic cards.

> It's good if identification is available easily, for example, through an identity document. […] Something that goes as smoothly as possible, that's nice. – P6

Conversely, concerns were raised about combining customer data with official documents like driver's licenses and credit/debit cards, as those were not preferred to be associated with commercial entities or other purposes.

> In some companies, they put that identifier on the driver's license. That made me think a little; is it wise? Somehow, it's so official that you wouldn't want to put it there, or on bank cards. – P4

Identification based on Personal Information

Participants also pondered various personal "intangible pieces of information," such as phone numbers, names, and customer numbers, as means of identification. Using a phone number for identification garnered mixed opinions. Some found identifying with a phone number easy to authenticate because it is simple and quick to recite. Phone number was also perceived as less personal than disclosing one's name at the cashier. Using a phone number was considered a suitable authentication method, especially for those without smartphones. Some, however, reacted negatively to reciting their phone number, as it was perceived as slow and cumbersome. Privacy concerns related to the phone number were also discussed. Other customers in the checkout line can hear the phone number, so potential repercussions were considered.

> Telling your phone number is very easy. But it's not very nice if there's a long line, and you're reciting your phone number, and the cashier is confirming your name and address. – P1

Privacy concerns related to phone numbers were also adressed, considering work and residency issues. For example, working in small towns and public professions were seen as potential problematic issues. For instance, a secret phone number doesn't fit well with identifying with a phone number. Some did not see serious threats associated with reciting a name or phone number since potential wrongdoers were perceived to find other methods if they wanted to cause harm.

> My daughter is a doctor, so her information is confidential. It might feel strange for her to recite a phone number at a cashier, where there might be a patient. – P3

> Strangers hear it at the cashier. But it may not cause much damage. Because if someone wants to cause trouble, they can also follow me home from the store. – P4

Digital Identification

Digital identification methods such as QR codes, barcodes, and applications were generally considered a good way to identify a customer, often seen as better than tangible authentication methods such as loyalty cards, as they are conveniently stored on the phone, which is typically always with the customer. QR codes were generally seen as a good way for identification. QR codes do not require disclosing any personal information, and their use was generally considered effortless.

> The phone is usually always with me. For example, Subway has a nice system, they have that QR code that you show to the reader, and it identifies your account. It's pretty cool. – P9

However, potential usage-related problems were also identified with QR codes, such as difficulty opening the code and losing one's customer account when changing phones. On the other hand, QR codes exclude loyalty from those who do not have a smartphone.

> They would be quite handy, but how do you make them easy to show at the register? […] There is always the problem that when you change phones, they disappear. Then you must get them again. – P4

Another identified problem with digital identification methods was their company-specific nature, which typically means the customer must download several company-specific apps to identify themselves. Apps where multiple loyalty cards can be loaded were seen as a good and functional alternative.

5 Discussion

The study contributes to the existing literature by providing insights into how customers perceive customer identification in B&M stores, shedding light on both the positive and negative viewpoints regarding identification and associated data collection. Despite the limited research on customers' perceptions of identification, particularly regarding store entrance identification, comprehending it is vital due to the increasing utilization of customer identification and digital technologies in diverse physical service settings.

The findings of this study revealed that customer in-store identification evokes a range of opinions and viewpoints among customers. While it is recognized as standard practice in today's business landscape, there are differing perceptions towards these practices. While identification was primarily viewed positively, there is also reluctance, characterized by actively avoiding participation in loyalty programs and customer identification initiatives. Checkout identification emerged as a routine yet contentious procedure. Privacy concerns were paramount, with emphasis on the importance of discreet identification processes and the preservation of anonymity during identification. Tangible identification methods, such as loyalty cards, were deemed inconvenient and outdated, leading to calls for more streamlined digital solutions. Digital identification methods, including QR codes and mobile apps, were generally favored for their convenience and accessibility. However, concerns were raised about the company-specific nature of these methods and their potential exclusion of non-smartphone users, as well as customers with low technical skills. Also, previous studies have indicated that consumers prefer coalition loyalty programs over single-firm programs (Shirai, 2022); therefore, it is worth considering how partnerships and services that combine various operators can be utilized in in-store identification and loyalty programs. As the findings indicate, platforms that combine different loyalty cards are a practical solution from the customer perspective.

Customers' identification during the entrance and store visits was cautiously received with positive perceptions. This finding is pleasant from the merchants' perspective, as ultimately, retailers should aim to gather comprehensive information about customers as soon as they step into the store, enabling them to customize marketing messages based on individual needs (Landmark & Sjøbakk, 2017). However, grasping the associated benefits was regarded as challenging, and there were suspicions related to identification, including concerns about privacy infringement, loss of anonymity, and the extent of tracking and data collection. The traditional customer service models were generally deemed sufficient, with no perceived need for additional digital enhancements or personalized attention during the B&M store visit. Moreover, the potential negative implications of customer recognition, such as unequal treatment based on the loyalty level were emphasized. By evaluating such apprehensions, retailers can evaluate the potential advantages and drawbacks of incorporating identification technologies, enabling them to make better-informed decisions regarding investment and implementation. Based on the findings, for

example RFID tags attached to shopping carts or baskets can be a good option for tracking customer movements, as they are not as personal as, for instance, mobile phone location data.

The findings underscore the delicate balance between identification and privacy protection in the retail environment. As businesses continue to embrace digital solutions and data-driven strategies, it is imperative to address consumer concerns and uphold ethical data practices. Transparency, consent, and data security must be prioritized to foster trust and accountability. Furthermore, retailers must navigate evolving consumer preferences and technological advancements to ensure a seamless and secure shopping experience for all customers. More research is needed on how these issues can be further investigated and considered in the planning of identification and data collection in B&M environments.

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Appendix 1: Participant's background information

Participant	Gender	Age	Occupation	Interview Duration
P1	Female	29	Childcare Assistant/Personal Assistant	01:04:18
P2	Female	51	Procurement Specialist	00:46:44
P3	Female	59	Lecturer	00:50:23
P4	Female	39	Student	01:02:22
P5	Female	69	Retired (Physiotherapist)	00:31:19
P6	Female	34	Lawyer	00:49:23
P7	Female	35	Nurse	01:01:43
P8	Male	41	Electrician	00:50:48
P9	Female	54	Hourly Teacher	00:36:30
P10	Female	28	Unemployed/Part-time Worker	00:48:52
P11	Female	44	Entrepreneur/Influencer	00:46:37
P12	Female	66	Secretary	00:49:00
P13	Female	35	Speech Therapist	00:50:59
P14	Male	45	Nursing Assistant & Student	00:48:48
P15	Female	27	Musician, Freelancer	00:42:21
P16	Female	54	Entrepreneur, Designer	00:43:11
P17	Female	54	Entrepreneur, Homeopath	00:55:14
P18	Female	35	Unemployed	00:55:41