

Identifying Brand-Owned Touchpoints Along the Digital Retail Customer Journey

—

A Practical Approach

Robert Zimmermann¹, and Andreas Auinger¹

¹ University of Applied Sciences Upper Austria, Digital Business, Steyr, Austria, {robert.zimmermann, andreas.auinger}@fh-steyr.at

Abstract. Today's brick-and-mortar retail is struggling to stay competitive when compared to e-commerce. However, with a new form of retail emerging, which makes use of modern day technology to drive sales and offers unique customer experiences, the playing field seems to level out. Nevertheless, in this so-called "digital retail", the number of touchpoints customers can encounter is constantly increasing due to the connection of online and offline customer journeys. To make use of sales-enhancing touchpoints, retailers require a comprehensive overview of brand-owned touch-points along the digital retail customer journey, as these are the touchpoints retailers are able to influence. The authors propose an approach that uses focus groups in combination with the creative techniques World Café, Channel CARDS, instant polls, and instant word clouds to gain a comprehensive overview of brand-owned touchpoints along the digital retail customer journey.

Keywords: *Touchpoints, Digital retail, Data saturation, Customer journey mapping.*

1 Introduction

Department store revenue peaked in 2001 and plunged by 36% until 2018 [1–3]. Conversely, e-commerce revenue for 2018 grew 15% worldwide compared to 2017 adding up to €1,617,053 million [4]. Looking at these numbers, it becomes evident that today's brick-and-mortar retail is facing a significant challenge to stay competitive with e-commerce. Retailers facing this challenge are engaging in a new form of retail called "digital retail" which makes use of modern-day technology, such as smartphones, to drive sales and offer unique customer experiences superior to pure online customer experiences. For example, it is argued that the use of smartphones can drive brick-and-mortar store sales by providing an augmented and personalized customer experience or

15th International Conference on Wirtschaftsinformatik,
March 08-11, 2020, Potsdam, Germany

that mobile payments can lead to a more streamlined and efficient shopping experience [5–8]. In fact, a literature review done by Zimmermann et al. [9] identified 29 smartphone-based sales influencers, most of which, according to literature, have a positive influence on sales in brick-and-mortar stores. However, in a digital retail setting, the amount of touchpoints customers can encounter is constantly increasing as it combines online and offline customer journeys [10]. According to Lemon and Verhoef [10], touchpoints comprise every individual contact between retailer and customer. In other words, every time a retailer interacts with a customer or vice versa constitutes a touchpoint. Consequently, not every touchpoint along the digital retail customer journey is equally important for retailers [11]. In order to make use of sales-enhancing touchpoints, retailers require a comprehensive overview of at least all brand-owned touchpoints along the digital retail customer journey [10]. Following Lemon and Verhoef [10], this paper defines brand-owned touchpoints as customer contact points (e.g., advertising, websites, loyalty programs, etc.) which are designed and managed by retailers only and thus are under their control. Consequently, they present accessible customer contact points which can be changed or altered by retailers in a sale enhancing way. To gain a comprehensive overview of brand-owned touchpoints along the digital retail customer journey, the authors propose an approach that incorporates focus groups supported by the creative techniques World Café, Channel CARDS, instant polls, and instant word clouds. We define comprehensive as a state in which the retailer’s employees are unable to identify additional brand-owned touchpoints, which, according to Saunders et al. [12], represents a state of data saturation. Consequently, the authors want to answer the following research question:

- I: Does our approach lead to a data-saturated overview of brand-owned touchpoints along the digital retail customer journey of an action fashion retailer?
- II: How can an overview of brand-owned touchpoints, gained by our approach, be used to support business decision making of an action fashion retailer?

The paper is structured in the following way: First, the paper presents the current state of customer journey mapping techniques upon which this paper builds. Next, we present a concept of how our approach can be used to gain a comprehensive overview of brand-owned touchpoints along the digital retail customer journey. Subsequently, the expected limitations of the proposed approach are explained. The paper culminates in an explanation of the expected scientific and managerial contributions and presents opportunities for future research.

2 Related Work

The discovery of touchpoints is strongly connected to the field of “Customer Journey Mapping”. As shown by a conceptual comparison from Berendes et al. [13] (see Table 1), all major customer journey mapping techniques use touchpoints. However, all of these techniques understand “Customer Journey Mapping” as a time logical sequence of touchpoints that describes the customer’s customer journey in different depths.

Additionally, most of them [11, 14–18] derive from a service innovation or service delivery background. Hence, these techniques try to model one specific customer journey at a time to picture the typical journey of a specific customer segment. By doing so, the goal of these techniques is to improve service quality, service delivery and to find service innovation. However, none of these techniques tries to get a comprehensive overview of all available touchpoints a customer might come in contact with. In fact, Rosenbaum et al. [11] argues that designing an all-inclusive customer journey map would result in a highly complex journey map with little management value. In contrast, Lemon & Verhoef [10] point out that, although it is a complex endeavor, it is important to identify critical touchpoints along the customer journey that have the most significant influence on key customer outcomes. It can be concluded that a touchpoint overview is necessary to identify important touchpoints but it must not become too complex. This paper tries to close this gap by proposing an approach to get a comprehensive overview of only brand-owned touchpoints along the digital retail customer journey, thus keeping the resulting overview simple enough to help in business decision making while remaining comprehensive concerning brand-owned touchpoints.

Table 1. Conceptual Comparison of Customer Journey Mapping Approaches
– Adapted from Berendes et al. [13]

<i>Language</i>	<i>HSJML</i>	<i>Customer Journey Mapping</i>	<i>Service Blueprinting</i>	<i>Multi-Level-Service-Design</i>	<i>Customer Journey Modeling Language</i>
Source	Berendes et al. [13]	Rosenbaum et al. [11]	Bitner et al. [15]	Patricio et al. [16]; Teixeira et al. [17]	Haugsveit et al. [18]
Goal	Data-driven construction and analysis of customer journey	Service Innovation	Service Innovation	Service Innovation	Documentation and analysis of service delivery
Granularity	Individual	Aggregated	Both	Aggregated	Individual
Customer Journey	Yes	Yes	Yes	Yes	Yes
Stages	Yes	Yes	No	Yes	No
Touchpoints	Yes	Yes	Partly	Yes	Yes
Events/Event Types	Yes/Yes	No/No	No/No	No/No	No/Partly
Data	Yes	No	No	No	Partly
Multiple service providers	Yes	No	No	No	Partly
Intermediary	Yes	No	Partly	No	Partly

3 Proposed Research Approach

The authors are cooperating with an action fashion retailer situated in Austria who recently started to adapt a digital retail strategy. Currently, the retailer has no general overview of the touchpoints it presents to its customers. To gain a comprehensive overview of brand-owned touchpoints along the digital retail customer journey we use focus groups supported by the creative techniques World Café and Channel CARDS, to reach a state of data saturation. Following Saunders et al. [12], this paper defines data saturation as a state in which no additional knowledge and likewise no additional touchpoints can be identified by the fashion retailer's employees. Reaching data saturation is crucial as it presents the total amount of knowledge the fashion retailer's employees have about their brand-owned touchpoints and, therefore, represents the best overview of digital retail touchpoints that can be generated by using a company's internal resources. Furthermore, we use focus groups supported by the creative techniques instant word clouds and instant polls to cluster and structure the gained touchpoint overview to demonstrate the usefulness of the saturated overview in supporting business decision making. In the following, we describe the prerequisites (3.1) and individual steps of our proposed approach (3.2-3.5). The reasons why we use a specific method or creative technique in general and at a specific step of the approach are described in the "Method" section of each step.

3.1 Prerequisites

Before conducting the proposed approach, the following steps need to be carried out to allow a smooth implementation of the approach.

Recruit a Moderator. As focus groups and a World Café are central parts of the proposed approach a moderator is required to moderate group discussions, help to keep the groups active and motivated, and to monitor the time. Therefore, an enlisted moderator should be experienced in working with groups, assertive, and familiar with mediation techniques. However, the moderator should not influence the decision making of the participants. Instead, they should support the generation of new ideas and ensure that every participant takes part in the idea generation process. Therefore, they should actively seek to provide solutions that move the conversation forward when the participants are stuck in a discussion, yet remain passive when the participants are generating information.

Get the Right Participants. Participants are another central part of the proposed approach, as they are the main source of data. As a result, it is important to select the right participants. Selected participants should have profound knowledge about all processes in which the retailer engages with customers. If possible, participants should have different company backgrounds, meaning they should be from different departments or at least sub-departments to ensure that their knowledge comes from different sources. This is beneficial as it ensures a variety of perspectives in the decision making process.

Divide Your Participants. After selecting participants, they need to be divided up into at least two separate groups to ensure that the acquired overview of touchpoints is a valid data-saturated overview of brand-owned touchpoints. Consequently, this paper proposes that data saturation is reached at the point where the different groups are not able to generate additional knowledge about touchpoints and the majority of identified touchpoints of the two groups are identical. In the following, this paper describes the steps executed for one group only. However, if not otherwise indicated, the steps are meant to be executed by both groups. To ensure groups are comparable, each group should have roughly the same business experience and knowledge about brand-owned touchpoints.

Create Personas. The last central prerequisite of the proposed approach is the creation of personas. Persona is defined as a artificial archetype that represents a specific target group by illustrating the target group like a real person [19]. The illustration of a specific target group should help the participants to better understand the needs of this specific group and, as a result, the creation of personas fosters the discovery of touchpoints for the persona specific target group. This paper does not specify which technique should be used to create the personas as there are different techniques that fit different companies with different target groups (e.g.: [20–23]). However, it should be noted that a more specific persona and consequently a more specific target group, helps to generate results that resemble reality in a more accurate way compared to more vague personas.

Take Your Time. The proposed approach does not prescribe an explicit time limitation for each session. This is because the overall aim of each session is to approach and finally reach data saturation. In each session, this process might take more or less time. As a result, the authors suggest flexible time parameters that can be extended or shortened by the moderator depending on the situational needs. As a rule of thumb, a session should not stop because of prescribed time constraints. Instead, it should end when the participants are unable to contribute additional knowledge.

3.2 Getting an Overview

Aim. The first session of the proposed research is used to get an initial overview of the brand-owned touchpoints created by employees from the action fashion retailer. This initial overview sets the basis for all future sessions.

Method. In order to gain this initial overview a World Café is conducted. World Café is a workshop design created by Brown and Isaacs [24] that can be utilized to generate new, gather existing, and picture collected knowledge by using group discussions [25]. It is widely used as an instrument in strategy workshops [26–29] and proved to offer more effective strategic planning capabilities compared to ordinary strategy workshops [30]. Additionally, the World Café excels particularly at tasks in which people are asked to extract their collective knowledge and think about a complex business topic together

[25]. Consequently, we decided to use the World Café technique in the first step of our study to generate a general overview of brand-owned Digital Retail touchpoints, based on the knowledge of employees from different departments.

Set-Up. Employees from the marketing department are invited to a World Café. The marketing department was selected as it manages most brand-owned touchpoints. The participating employees belong to all available sub-departments of marketing (e.g., social media marketing, e-mail marketing, omni-channel marketing, etc.) that are responsible for managing touchpoints along the retailer's digital retail customer journey. The proposed World Café consists of four stations to which the employees are distributed evenly. Each station is equipped with one A0 sized sheet of paper, Post-it Notes and markers. Additionally, each station provides an information sheet that presents information about one specific persona the retailer previously identified as core customer persona. The first task of the participants is to answer the question: "Which brand-owned touchpoints do you think this persona comes in contact with?" They are instructed to write down all touchpoints they can think of on a Post-it Note and stick it onto the sheet of paper. After 15 minutes, the members of each group switch to the next station and continue the procedure. At each station switch, one member of each group stays at their current station to give the arriving group an overview about the work the previous group has done. This is done until all groups have visited all stations, terminating the World Café. In closing, the posters are collected and stored for the next session.

Outcome. The result of applying the World Café in this context will be four A0 sheets of paper filled with Post-it Notes (subsequently called posters) picturing a broad overview of the brand-owned touchpoints which each specific persona might come in contact with.

3.3 Saturating the Overview

Aim. In this second session, the gained touchpoints overview should be lead to data saturation.

Method. To achieve this goal, we use focus groups since they allow for very specific problem analysis [31] in a context where a group setting is superior to a single person interview [32]. According to Morgan and Krueger [32], one of these scenarios is "getting participants' interpretations of results from earlier studies". For this reason, focus groups excel in the task provided in this paper of taking the resulting touchpoint overview of the World Café and enriching it with even more touchpoints. Additionally, a study done by Sultan [33] showed that focus groups can indeed be used to identify key brand touchpoints; therefore, we regard them as an appropriate method to identify additional brand-owned Digital Retail touchpoints that have not yet been identified by the World Café. To ensure that the resulting touchpoint overview has reached data saturation we use Cohen's Kappa [34] to compare the inter-rater reliability of the touchpoint overviews from the two separated groups. In this case, the inter-rater

reliability is represented by the number of touchpoints that have been identified by both groups independently. Consequently, we argue that a state of data saturation has been reached when no additional knowledge can be generated by either group and the inter-rater reliability of the groups exceeds or equals a value of $K=0.61$, which represents an at least substantial agreement between the two groups [34]. However, comparing the touchpoint overviews of the two groups can be difficult as it is very likely that the different groups come up with different names for the same touchpoint. Therefore, the focus groups will be supported by Channel CARDS from the company *foryouandyourcustomers Wien GmbH* [35] (see also Fig. 1). These CARDS provide a broad overview of all kind of retail touchpoints and will be used to help kick-start the identification of even more touchpoints consequently leading to a similar choice of words when the groups identify touchpoints. Nonetheless, some touchpoints with the same meaning but different wording will remain and, as a result, these need to be aligned manually when calculating Cohen's Kappa. It has to be stated that other sets of touchpoint displaying cards exist (e.g. [36]). However, we chose Channel CARDS as these use German words for touchpoints, which is beneficial when working with a primarily German speaking Austrian action fashion retailer.



Fig. 1. Example: Channel CARDS

Set-Up. The employees are now invited to a focus group. The focus group will take place in a room where the posters from the previous session are displayed. Post-it Notes and markers are also made available. The task of the focus group is to identify touchpoints that have not been identified in the previous workshop and to add those to the posters via Post-it Notes. When the discussion about further touchpoints starts to slow down, the Channel CARDS are introduced. Each channel card is presented to the focus group one by one asking the question: “Is this is a brand-owned touchpoint a respective persona might come in contact with?” If the employees answer the question with “yes”, a Post-it Note is labeled with the mentioned touchpoint and added to the poster of the specific persona. After presenting all Channel CARDS the group is asked if there are any additional touchpoints they can think of. If not, the focus group for this specific group terminates and the procedure is repeated with the next group. After the

second group runs out of ideas for additional touchpoints, the current touchpoint overviews of the two groups are compared using Cohen's Kappa. If both groups do not come to substantially similar overviews ($K < 0.61$) the separated groups start the saturation process again as long as the resulting overviews of both groups is substantially similar ($K \geq 0.61$). At this point, the session as a whole is finished and the touchpoint overviews of the two groups are combined into one overview.

Outcome. The result of session two will be four posters (one for each persona) filled with all brand-owned touchpoints the employees from the department of marketing of the action fashion retailer could identify. As the two groups of employees are unable to add additional touchpoints to the posters data saturation is reached.

3.4 Clustering the Overview

Aim. After data saturation has been reached the question remains if the created touchpoint overview can be used to support business decision making. Therefore, the aim of the third session is to cluster the gained touchpoints into top-level categories. An example top-level category could be "Social Media" consisting of the touchpoints: "Facebook", "Instagram" and "Twitter". Subsequently, this clustered overview allows retailers to identify where they have the highest amount of contact points with a specific persona, thus helping retailers to decide where they can effectively engage with a persona or not.

Method. To identify top level-categories and to assign touchpoints accordingly we need the employees to interpret the results of the previously gained touchpoint overview. According to Morgan and Krueger [32] "Getting participants' interpretations of results from earlier studies" is a task well suited to be answered by focus groups [32], which is why it is used in this session. We argue that discussions about different opinions about categorization and touchpoint assignment will help to identify top-level categories and assigning touchpoints to top-level categories. To encourage these discussions we use instant word clouds (see also Fig. 2) and instant polls (see also Fig. 3) derived from answers anonymously submitted by session participants. They allow us to collect and to visualize submitted answers instantaneously, which will help to reveal different opinions about categorization and assignment, hence encouraging discussions about these opinions [37, 38]. To create instant polls and instant word clouds we use Mentimeter.com. It has to be noted that there are many tools offering the possibility to create instant polls or instant word clouds (e.g. [39, 40]). However, we choose Mentimeter.com since, in contrast to other tools, it allows us to create instant polls and instant word clouds in one tool and is able to save previously conducted polls and word clouds and can be used for free [41].



Fig. 2. Example: Word cloud by Mentimeter.com

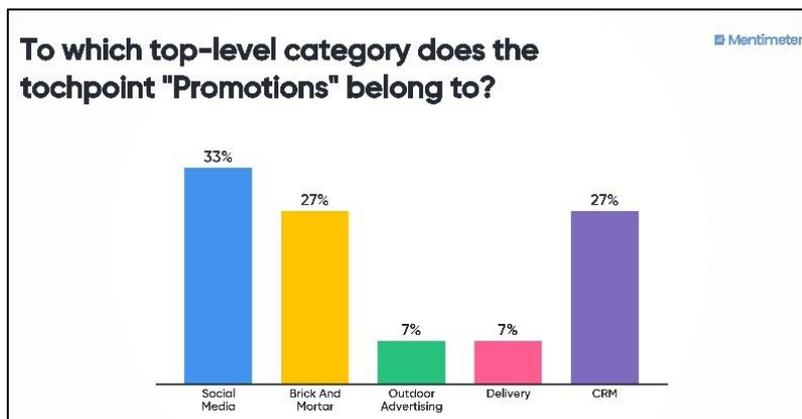


Fig. 3. Example: Poll created by Mentimeter.com

Set-Up. The separated groups are rejoined to form one big group, which is invited to discuss the previously created posters. Five additional A0 sheets of paper, Post-it Notes and markers will be provided. Additionally, an instant word cloud is set up with Mentimeter.com (see Fig. 3) and made visible to the focus group. The first task of the focus group is to find top-level categories for the previously derived touchpoints. Therefore, the group is asked to inspect the posters, and every time a person comes up with a possible top-level category, they should add the idea to the word cloud using Mentimeter.com. When no new category can be added to the instant word cloud, the group is asked to discuss the presented possibilities. Afterwards, the group should write down all top-level categories on which they could agree onto Post-it Notes and pin these notes on one of the provided A0 sheets of paper. When the focus group has decided on a final set of top-level categories, the set of top-level categories are copied via Post-it Notes to the four remaining A0 sheets of paper, which are then assigned to one persona each. The second task of the focus group is to assign the touchpoints of each specific persona to the top-level categories. For this purpose, an instant poll from

Mentimeter.com is used (see Fig. 3). In this instant poll each touchpoint is presented and the employees are asked to which top-level category they would assign the touchpoint (touchpoints can be assigned to multiple categories at once). After the results of an instant poll become visible, the focus group can discuss the proposed assignments and should finally assign the touchpoint to one or multiple top-level categories. This is done by using the previously mentioned A0 sheets of paper and pinning the respective touchpoint Post-it Note near to the Post-it Note of the top-level category Post-it Note. If a touchpoint was assigned to multiple top-level categories, an additional Post-it Note is created so that both top-level categories can be fitted with a Post-it Note. After all touchpoints have been assigned session three ends. In preparation for session four, the top-level categories will be color-coded. Each top-level category and its assigned touchpoints will be marked with a unique color.

Outcome. The outcome of session three will be a clustered, data-saturated, and color-coded overview of company touchpoints on four new A0 sheets paper (subsequently called posters).

3.5 Structuring the Overview

Aim. In the fourth session, the clustered and data-saturated touchpoint overview will be used to create a structured overview, visualizing the importance of each brand-owned touchpoint for the action fashion retailer. This overview should help retailers to assign company resources accordingly as touchpoints with low importance should get less resources than touchpoints with high importance.

Method. Similar to session three, session four uses a focus group supported by an instant poll. As previously mentioned, this approach is appropriate because the authors want the participants' interpretations of results from earlier studies [32] and consequently support their decision making process by visualizing submitted answers instantaneously, encouraging discussions about these answers [38].

Set-Up. Four new A0 sheets of paper will be prepared by drawing three concentric circles on each of them. Every sheet is assigned to one poster. Following, the focus group present in session three is invited to session four. The focus group will take place in a room where the now data-saturated, clustered, and color-coded posters from the last session, together with the new A0 sheets of paper are displayed. The group is tasked to rate every touchpoint according to its importance for the company. It has to be noted that the definition of importance can vary from company to company according to their preferences or possibilities to assign value to touchpoints. While some companies might define importance as a simple point scale, set by the head of a department, others might use actual sales data or touchpoint encounter frequency rates to determine the importance of a touchpoint. In this example, the action fashion retailer went for a three level scale set by the head of the marketing department that was based on the touchpoints perceived overall importance for the company. Therefore, in this example, the group can choose between three levels of importance, starting from: "Fundamental"

(very important), “Relevant” (important), and “Interesting” (minor important). To help in the decision making process, an instant poll from Mentimeter.com will be provided where the participants can vote on the rating of each touchpoint. However, the voting is only used as a supportive tool to allow for the visualization of contrasting opinions. Therefore, the final decision about the rating of a touchpoint is done in the group discussion. After all touchpoints of all personas have been assigned to a level of importance, the session ends.

Outcome. The outcome of this session will be a structured and data-saturated overview of brand-owned touchpoints that allows for a quick identification with which brand-owned touchpoint a persona comes in contact, how important this touchpoint is for the company, and to which top-level category the touchpoint belongs

4 Limitations

The authors expect that following this approach should lead to the creation of a data-saturated overview of brand-owned touchpoints for specific personas. However, this approach has its limitations. First, the quality of the data-saturated overview strongly depends on the knowledge of the initially invited participants. Even though the marketing department should have a broad overview of all brand-owned touchpoints, it cannot be ruled out that some brand-owned touchpoints might be unknown to the marketing department but well known to other departments. Additionally, it has to be considered that this approach creates an overview from the company perspective only as it is lacking a customer perspective. Subsequently, the approach is biased towards a marketing based company perspective. To overcome this bias it could be beneficial to invite customers to the workshop, which, because of their different perspective, could add additional touchpoints to the overview. In fact, according to Halvorsrud et al. [42], the touchpoints perceived by customers can differ quite substantially from the touchpoints perceived by companies. Additionally, Rosenbaum et al. [11] points out that, particularly when determining the value of a touchpoint, the opinions of companies and customers can be very different. However, including customers in the workshop would add another layer of complexity to the workshop and could also limit the ability of the employees to speak freely about their company. Secondly, it has to be noted that some of the sessions might be very time consuming and, as a result, at some point the participants might become exhausted and not be able or willing to contribute the best of their knowledge. This might hinder the development of group discussions, and therefore, prevent knowledge gain in the later stages of the research. However, the use of creative elements such as the World Café, instant polls, and instant surveys, as well as the substantial practicality of the workshop in total and the possibility to split the workshop to multiple days, should help to prolong the participant’s attention spans. Lastly, this approach can only lead to a snapshot of current brand-owned touchpoints as the topicality of the data-saturated overview is degrading over time. Therefore, this approach should not be used in a “do once, use forever” approach but instead needs to be updated frequently if used for managerial purposes.

5 Contributions and Future Research Implications

5.1 Scientific Contributions

Referring to the first research question, the use of the proposed design demonstrates how focus groups supported by the creative techniques World Café, instant polls, instant word clouds and Channel CARDS can be used to reach data saturation. Hence, the authors could exemplify that it is possible to generate a valid data-saturated overview of brand-owned touchpoints along the digital retail customer journey for an action fashion retailer by using the proposed approach.

5.2 Managerial Contributions

The proposed approach allows companies to gain a comprehensive overview of brand-owned touchpoints, with which their persona-based customers come in contact. Answering the second research question, this knowledge can be used in various ways. For example, companies might use the overview itself to analyze where they do and do not yet interact with customers and subsequently use this analysis as a strategic planning tool. Furthermore, having a structured overview showing which touchpoint of a specific persona is perceived as important for the company and which is not allows companies to shift their business efforts to ensure that important and less important touchpoints get the right amount of attention. In addition, companies can use the identified touchpoints when applying customer journey mapping techniques such as “Service Blueprinting” [15], “Multi-Level Service Design” [16], “Customer Journey Modeling Language” [18] or “Customer Journey Mapping” [11]. Using the identified persona-based touchpoints could gradually increase the precision of the referenced customer journey mapping techniques and in consequence support enterprise modeling. In the example of an action fashion retailer, the proposed approach allowed the retailer to identify a specific set of touchpoints, which can be used to interact with a certain persona. As a result, the retailer can use this overview when planning future customer contacts or to optimize current contact points. Additionally, the proposed approach allowed the retailer to identify important and less important touchpoints. Hence, the retailer is now able to allocate company resources to touchpoints rated important by upper management and, therefore, work more efficiently. The authors conclude that an overview of brand-owned touchpoints gained by our proposed approach can indeed find meaningful use in supporting business decision making. As a result, the second research question can be answered positively.

5.3 Future Research Implications

According to Lemon and Verhoef [10], the increasing complexity and differing importance of touchpoints makes managing the customer experience harder and harder. The proposed approach is a first step in managing the customer experience by providing a data-saturated overview of brand-owned touchpoints of an action fashion retailer.

However, this can only be the starting point when trying to manage future customer journeys and customer experiences. In the future, customer and company perspective should both be taken into consideration to gain a more accurate picture of touchpoints used by customers along their digital retail customer journey. Furthermore, our approach needs to be tested with retailers from other branches or sectors to ensure its universal validity. In addition, retailers still lack the capability to determine the monetary value of each specific touchpoint along the digital retail customer journey. As a result, business decisions can currently only be made on estimates or instincts. Hence, data-based methods need to be introduced to allow more precise decision making. In general, retailers lack the ability to accurately identify customers when they switch between online and offline touchpoints. Without tools to accurately picture customers digital retail customer journeys, the task of staying competitive will remain challenging for digital retailers.

Acknowledgement

This study has been conducted within the training network project PERFORM funded by the European Union's Horizon 2020 research and innovation program under the Marie Skłodowska-Curie grant agreement No. 765395. Note: This research reflects only the authors' view. The Agency is not responsible for any use that may be made of the information it contains.

References

1. Wolf, R.: Here's which brick-and-mortar retailers are getting hit the hardest, <https://www.businessinsider.com/brick-and-mortar-retailers-getting-hit-the-hardest-2018-5?IR=T> (Accessed: 22.12.2019)
2. US Census Bureau: Department store sales (excluding leased departments) in the United States from 1992 to 2016 (in billion U.S. dollars), <https://www.statista.com/statistics/197712/annual-department-store-sales-in-the-us-since-1992/> (Accessed: 22.12.2019)
3. ICSC: Sales growth of department stores in Western Europe from 2012 to 2017, by country, <https://www.statista.com/statistics/911107/department-store-sales-growth-western-europe/> (Accessed: 22.12.2019)
4. Statista: eCommerce - worldwide | Statista Market Forecast, <https://www.statista.com/outlook/243/100/ecommerce/worldwide?currency=eur> (Accessed: 22.12.2019)
5. Eriksson, N., Rosenbröijer, C.-J., Fagerstrøm, A.: Smartphones as decision support in retail stores – The role of product category and gender. *Procedia Computer Science* 138, 508–515 (2018)
6. Inman, J.J., Nikolova, H.: Shopper-Facing Retail Technology: A Retailer Adoption Decision Framework Incorporating Shopper Attitudes and Privacy Concerns. *Journal of Retailing* 93, 7–28 (2017)

7. Bradley, J., Macaulay, J., O'Connell, K., Delaney, K., Pinto, A. and Barbier, J.: Winning the New Digital Consumer with Hyper-Relevance. In Retail, Insight Is Currency and Context Is King, <https://www.startitup.sk/wp-content/uploads/2015/11/ioe-retail-whitepaper.pdf> (Accessed: 24.11.2018)
8. Vuckovac, D., Fritzen, P., Fuchs, K., Ilic, A.: From Shopping Aids to Fully Autonomous Mobile Self-checkouts - A Field Study in Retail. *Wirtschaftsinformatik 2017 Proceedings*, 927–941 (2017)
9. Zimmermann, R., Auinger, A., Riedl, R.: Smartphones as an Opportunity to Increase Sales in Brick-and-Mortar Stores: Identifying Sales Influencers Based on a Literature Review. In: Nah, F.F.-H., Siau, K. (eds.) *HCI in Business, Government and Organizations. eCommerce and Consumer Behavior*, 11588, pp. 82–98. Springer International Publishing, Cham (2019)
10. Lemon, K.N., Verhoef, P.C.: Understanding Customer Experience Throughout the Customer Journey. *Journal of Marketing* 80, 69–96 (2016)
11. Rosenbaum, M.S., Otolara, M.L., Ramírez, G.C.: How to create a realistic customer journey map. *Business Horizons* 60, 143–150 (2017)
12. Saunders, B., Sim, J., Kingstone, T., Baker, S., Waterfield, J., Bartlam, B., Burroughs, H., Jinks, C.: Saturation in qualitative research: exploring its conceptualization and operationalization. *Quality & quantity* 52, 1893–1907 (2018)
13. Berendes, C.I., Bartelheimer, C., Betzing, J.H., Beverungen, D.: Data-driven Customer Journey Mapping in Local High Streets: A Domain-specific Modeling Language. *ICIS Proceedings* (2018)
14. OMG: About the Business Process Model And Notation Specification Version 2.0, <https://www.omg.org/spec/BPMN/2.0> (Accessed: 04.10.2019)
15. Bitner, M.J., Ostrom, A.L., Morgan, F.N.: Service Blueprinting: A Practical Technique for Service Innovation. *California Management Review* 50, 66–94 (2008)
16. Patrício, L., Fisk, R.P., Falcão e Cunha, J., Constantine, L.: Multilevel Service Design: From Customer Value Constellation to Service Experience Blueprinting. *Journal of Service Research* 14, 180–200 (2011)
17. Teixeira, J., Patrício, L., Nunes, N.J., Nóbrega, L., Fisk, R.P., Constantine, L.: Customer experience modeling: from customer experience to service design. *Journal of Service Management* 23, 362–376 (2012)
18. Haugstveit, I.M., Halvorsrud, R., Karahasanović, A.: Supporting redesign of C2C services through customer journey mapping
19. Kreutzer, R.T.: *Toolbox für Marketing und Management. Kreativkonzepte – Analysewerkzeuge – Prognoseinstrumente*. Springer Fachmedien Wiesbaden; Imprint Springer Gabler, Wiesbaden (2018)
20. Pruitt, J., Adlin, T.: *The persona lifecycle. Keeping people in mind throughout product design* / by John S. Pruitt, Tamara Adlin. Elsevier : Morgan Kaufmann Publishers, Amsterdam, Boston (2006)
21. McCay, A.: How to Create a Persona in 7 Steps - A Guide with Examples, <https://uexpressia.com/blog/how-to-create-persona-guide-examples> (Accessed: 04.10.2019)
22. Louis Grenier: How to create a simple, accurate user persona in 4 steps without leaving your desk [template + example], <https://www.hotjar.com/blog/user-personas/> (Accessed: 22.12.2019)

23. UXplanet.org: How to create Personas, a step by step guide., <https://uxplanet.org/how-to-create-personas-step-by-step-guide-303d7b0d81b4> (Accessed: 22.12.2019)
24. Brown, J., Isaacs, D.: *Das World Café. Kreative Zukunftsgestaltung in Organisationen und Gesellschaft*. Auer, Heidelberg (2007)
25. Stary, C., Maroscher, M., Stary, E.: *Wissensmanagement in der Praxis. Methoden, Werkzeuge, Beispiele*. Hanser, München (2013)
26. Carter, E., Swedeen, B., Walter, M.C.M., Moss, C.K.: "I Don't Have to Do This by Myself?" Parent-Led Community Conversations to Promote Inclusion. *Research and Practice for Persons with Severe Disabilities* 37, 9–23 (2012)
27. Fouché, C., Light, G.: An Invitation to Dialogue. *Qualitative Social Work* 10, 28–48 (2011)
28. Hodgkinson, G.P., Whittington, R., Johnson, G., Schwarz, M.: The Role of Strategy Workshops in Strategy Development Processes: Formality, Communication, Co-ordination and Inclusion. *Long Range Planning* 39, 479–496 (2006)
29. Johnson, G., Prashantham, S., Floyd, S.W., Bourque, N.: The Ritualization of Strategy Workshops. *Organization Studies* 31, 1589–1618 (2010)
30. Chang, W.-L., Chen, S.-T.: The impact of World Café on entrepreneurial strategic planning capability. *Journal of Business Research* 68, 1283–1290 (2015)
31. Stewart, D.W., Shamdasani, P.N., Rook, D.W.: *Focus groups. Theory and practice* / David W. Stewart, Prem N. Shamdasani, Dennis W. Rook. SAGE, Thousand Oaks, Calif., London (2006)
32. Morgan, D.L., Krueger, R.A.: *Focus group kit*. Sage Publ, Thousand Oaks, Calif. (1998)
33. Sultan, A.J.: Orchestrating service brand touchpoints and the effects on relational outcomes. *Journal of Services Marketing* 32, 777–788 (2018)
34. Cohen, J.: A Coefficient of Agreement for Nominal Scales. *Educational and Psychological Measurement* 20, 37–46 (1960)
35. foryouandyourcustomers.com: ChannelCARDS for Your Multichannel Business - foryouandyourcustomers.com/magazine/channelcards/?lang=en (Accessed: 28.12.2019)
36. [service-innovation.org](http://www.service-innovation.org): Service Innovation » Blog Archive » New version of the Touch-point cards, <http://www.service-innovation.org/new-version-of-the-touch-point-cards/> (Accessed: 21.12.2019)
37. [Mentimeter.com](https://www.mentimeter.com): Create Live Word Clouds, <https://www.mentimeter.com/features/word-cloud> (Accessed: 22.12.2019)
38. [Mentimeter.com](https://www.mentimeter.com): Everything you need for interactive presentations, <https://www.mentimeter.com/features> (Accessed: 22.12.2019)
39. [DirectPoll.com](https://directpoll.com): DirectPoll | Instant Polling & Real-Time Visualization, <https://directpoll.com/> (Accessed: 21.12.2019)
40. [Polleverywhere.com](https://www.polleverywhere.com): Live interactive audience participation, <https://www.polleverywhere.com/> (Accessed: 21.12.2019)
41. [Mentimeter.com](https://www.mentimeter.com): Create interactive presentations, workshops, and meetings, <https://www.mentimeter.com/> (Accessed: 28.12.2019)
42. Halvorsrud, R., Haugstveit, M.I., Lee, E., Følstad, A. (eds.): *Components of a Visual Language for Service Design* (2014)