Application of Digital Nudging in Customer Journeys – A Systematic Literature Review

Completed Research

Armando Schaer  
University of Applied Sciences HTW Chur  
armando.schaer@htwchur.ch

Katarina Stanoevska-Slabeva  
University of St.Gallen  
katarina.stanoevska@unisg.ch

Abstract

More and more decisions are made on screens. Digital nudging attempts to guide users’ decisions on these screens. One relevant application area of digital nudging are customer journeys. Emerging research on this topic mainly analyses digital nudging on companies’ owned conversion screens (i.e. websites). However, in a multi-channel, multi-owner customer journeys (i.e. own website and search engine or social media) there is increasing need to guide users through various digital touchpoints along all stages of the customer journey. This paper examines existing research on the application of digital nudging throughout customer journeys. The literature review reveals that nudging has been considered in customer journey-related literature, but so far with little explicit cross-referencing to nudging and behavioral economics research. The scientific contribution of this paper comprises a synthesis of existing research, identification of research gaps and a research agenda to study the application of digital nudging along the customer journey.

Keywords

Digital nudging, Customer journey, Literature review, Nudging pipeline, Application of nudging.

Introduction

The concept of nudging has been discussed intensively amongst researchers during the last years (Mirsch et al., 2017). It is based on the findings in psychology and behavioral economics that people not always decide in a rational way and that individuals’ decisions are heavily influenced by various heuristics and biases (Thaler et al., 2010). It is furthermore derived from the libertarian paternalism theory. Thaler and Sunstein (2003) describe nudging as “[…] an approach that preserves freedom of choice but that authorizes both private and public institutions to steer people in directions that will promote their welfare.”.

With the rise of the digital economy, decisions are increasingly being made on screens (Weinmann et al., 2016). Consequently, research regarding decision-making has moved towards digital phenomena. The adoption of nudging to the digital realm is denoted as digital nudging and described by Weinmann et al. (2016) “... as the use of user-interface design elements to guide people's behavior in digital choice environments.”. One important research and application area of digital nudging is the design of customer journeys. Customer journeys typically refer to a process, path, or sequence of touchpoints (i.e. screens) through which companies attempt to guide a customer to get to know, access or use their services and products (see for example Følstad and Kvale, 2018 or Wolny and Charoenksuksai, 2014)

In the context of customer journeys, research has so far focused on nudging a user towards making a conversion (e.g. Esposito et al. 2017; Eigenbrod et al. 2018; Djurica and Figl 2017). While nudging in conversion-oriented contexts is important, it could also make an impact in earlier and later customer journey stages such as the prepurchase stages (i.e. campaigns for awareness creation for products) or postpurchase stages such as after sales support. Thus, the leading research question of this paper is: What is the current state of research regarding the application of nudging along customer journeys? The main
The research goal is to broaden the perspective on the application of digital nudging by summarizing relevant literature regarding application of nudging along customer journeys.

The literature analysis reveals that some research related to nudging and customer journeys is emerging (Maas et al. 2018), but not in a sufficient manner yet. Based on identified research gaps, this paper suggests a research agenda in two directions: 1) Design, application and evaluation of nudging within single stages or touch points of the customer journey. One research question in this context might for example be to test the effectiveness of different nudges (on own or third party owned screens) in the initial stage of customer journeys aiming to create awareness for a product. 2) Design, application and evaluation of nudging-pipelines with the aim to guide users across different touchpoints and stages of the customer journey.

While this study has a clear focus on the application of digital nudging along customer journeys, the broadness of the underlying research fields (nudging, behavioral economics and customer journeys) has led to many research streams that are closely linked. Related fields such as persuasive design (i.e. Fogg, 2003), the human computer interface field, the customer experience research field and marketing in general were not included into the research and are out of the scope of this study.

The content of the paper is structured as follows: The chapter Theoretical Background introduces the basic theoretical concepts of nudging and customer journey. The chapter Methodology describes the applied methodology for the literature analysis. The chapter Findings summarizes the results of the literature review and the chapter Conclusion, Limitations and Further research, concludes the paper with a summary and outlook to future research.

Theoretical Background

Definition of Digital Nudging

As research shows, individuals do not always take decisions in their best interests. Exploring this phenomena in the field of behavioral economics, Thaler and Sunstein (2003) proposed the concept of libertarian paternalism with the goal of designing choice environments that affect human behavior (Mirsch et al., 2017). Libertarian Paternalism is defined as an approach “that authorizes both private and public institutions to steer people in directions that will promote their welfare” (Thaler and Sunstein, 2003). To denote this approach of steering people, Thaler and Sunstein (2009) coined the term nudging. Nudges, as described by the authors, contain “any aspect of the choice architecture that alters individuals behavior in a predictable way without forbidding any options or significantly changing their economic incentives” (Thaler and Sunstein, 2009).

The findings of Thaler and Sunstein (2009) have been applied in various fields, including public policies where trials in nudging have helped improve tax compliance or voter registration. The application of libertarian paternalism in a digital decision-making context is introduced in literature as digital nudging. By referring to the original definition for nudging, several authors proposed a specific definition for digital nudging mainly with the aim to explain the “digital” aspect of it. Gregor and Lee-Archer (2016) define “digital nudge” as nudges facilitated by information technology and understand the use of digital nudging as leveraging of predictive analytics within digital government frameworks. According to these authors, digital nudges pave the way from reactive to dynamic social security (Gregor and Lee-Archer, 2016). Weinmann et al. (2016) define digital nudging as the use of user-interface design elements to guide people’s behavior in digital choice environments. Thus, they define digital nudging from a human-computer-interaction (HCI) point of view and connect the generic definition for nudging from Thaler and Sunstein (2009) with the context in which digital nudging takes place – digital user interfaces. Mirsch et al., (2018) define digital nudging by referring to Hansen (2016) as “… the attempt to influence decision-making, judgment, or behavior in a predictable way by counteracting the cognitive boundaries, biases, routines, and habits that hinder individuals from acting to their own benefit in the digital sphere. Digital nudging does not forbid or add any rational choice option, change incentives significantly, or provide rational argumentation.” Other authors (Esposito et al. 2017; Li et al. 2018; Lieberoth et al. 2018; Maas et al. 2018) are exploring nudging in digital environments by referring to the original definition of Thaler and Sunstein (2009) without explicitly pointing to specific characteristics of digital nudging. Even though the definition of Weinmann et al. (2016) can be assumed to be the first definition of digital nudging and is widely cited, it seems to be too narrow by restricting digital nudging to the use of user-interface design elements. In the
future, communication in digital spaces might not be mediated by conventional user interfaces (for example communication with robots, or bots). Thus, a combination of the definition of Gregor and Lee-Archer (2016) and the definition of Mirsch et al. (2018) is proposed and will be used as a basis for the analysis in this paper: “Digital nudging is nudging facilitated by information and communication technology and is an attempt to influence decision-making, judgment, or behavior in a predictable way by counteracting the cognitive boundaries, biases, routines, and habits that hinder individuals from acting to their own benefit in the digital sphere. Digital nudging does not forbid or add any rational choice option, change incentives significantly, or provide rational argumentation.”

**Definition of Customer Journey**

According to Følstad and Kvale’s (2018) literature review, existing literature comprises various attempts to define the customer journey phenomenon. The different approaches and points of views of various authors from different research fields led to an incoherent use of terminology for customer journeys. Nevertheless, the literature review of Følstad and Kvale (2018) shows that the term customer journey is typically used in reference to a process, path, or sequence of touchpoints through which a customer gets to know, accesses or use a service (see also Wolny and Charoensuksai, 2014). Most definitions also highlight the customer-centric character of the customer journey by referring to it as service processes as seen by customers. (Følstad and Kvale 2018) also point out that not only definitions of the term customer journeys differ across publications, but also its scoping. Proposed scoping of customer journeys differ from clearly delimited journeys that have a defined start and end (see for example the well-known AIDA model comprising the attention-interest-desire-action stages (Lemon and Verhoef 2016; Wolny and Charoensuksai, 2014) to open-ended journeys such as the transitions from “never-a-customer to always-a-customer” (Følstad and Kvale 2018). By summarizing research from several authors, Lemon and Verhoef (2016) propose a generic customer journey model consisting of three stages: pre-purchase, purchase and post-purchase stage. These three stages differ with respect to goals and activities that are pursued by companies within them.

According to the findings of Følstad and Kvale (2018), opinions of researchers also differ regarding the degree to which customer journeys span multiple touchpoints, channels and service providers. In this context, the proposed range goes from customer journeys within a single website to such that comprise multiple channels and service providers. Lemon and Verhoef (2016) distinguish in this context brand owned, partner owned, customer owned and social/external touchpoints that can be part of the three customer journey stages. The different ownership of touchpoints results in different opportunities and challenges for companies. For example, brand owned touchpoints are under complete control of companies and decision situations can be designed embedded in a known context. Partner owned touchpoints are not under full control of companies and less is known about the context under which decisions are designed.

Overall, this process-based character of customer journeys allows for an investigation of decision-making and application of nudging in different stages of a customer journey.

**Digital Nudging in Customer Journeys**

Following the discussion above, digital nudging in customer journeys can be described as follows: Customer journeys are understood as a series of touchpoints or steps in a customer purchasing decision-making process. On this journey, a customer typically experiences a pre-purchase, a purchase and a post-purchase stage. Throughout these stages, choice architectures can be purposefully designed to guide people’s behavior towards a favorable outcome. In a digital context, the choice architect can therefore design user-interface design elements to nudge customer’s behaviors into a desired direction. Not only the application of nudging in each of the three stages of the customer journey are of relevance, but also nudging the customer across the three stages along the customer journey. An interrelated nudging pipeline from the pre-purchase, to the purchase, and the post-purchase stage of the customer journey might be necessary. Such nudging-pipelines need to consider also touchpoints with different ownership.

**Methodology**

In order to gain an overview of the existing research, a systematic literature search has been conducted in May 2018, October 2018 and January 2019. The analysis followed the approach for systematic literature
review as suggested by vom Brocke et al. (2009). The search for relevant (peer-reviewed) academic publications was based on multi-disciplinary literature databases: EbscoHost and ScienceDirect. To assure triangulation of search results and consideration of recently published articles and conference proceedings, the database search was complemented with an additional Google scholar search. Table 1 provides a summary of the search results.

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>EbscoHost</td>
<td>90</td>
<td>0</td>
<td>-</td>
<td>1391</td>
<td>135</td>
<td></td>
</tr>
<tr>
<td>ScienceDirect</td>
<td>777</td>
<td>22</td>
<td>150</td>
<td>-</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>Google Scholar</td>
<td>12700</td>
<td>3370</td>
<td>5520</td>
<td>351000</td>
<td>99900</td>
<td></td>
</tr>
<tr>
<td>Unfiltered Results from databases</td>
<td>127000</td>
<td>3370</td>
<td>5520</td>
<td>351000</td>
<td>99900</td>
<td></td>
</tr>
<tr>
<td>Sum of relevant articles databases</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>Sum of additional relevant articles from Google scholar</td>
<td>-</td>
<td>10</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>-</td>
<td>397</td>
<td>10</td>
<td>43</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 1. Results of literature research

The search was initiated using the two main terms digital nudging and customer journeys. Further searches were conducted with the following terms: “digital nudge”, “digital nudging”, “digital nudging” AND “customer journey”, “digital nudging” AND “marketing”, “customer journey” as well as “customer journey” AND “digital”. Search queries with a large amount of hits were narrowed down by adding complementary search terms (as indicated with an arrow in Table 1). The search from the two databases resulted in an initial list of 397 publications. After removal of 98 duplicate articles found multiple times, the titles and abstracts of the remaining articles were screened. 266 articles that did not relate to the research topic presented in this paper were excluded. These were for example articles related to business model innovation paradigms or other research areas (i.e. management of water resources with nudging). After the initial screening, 33 articles remained as relevant on the list.

All search terms were also used in Google scholar. The Google scholar search results were screened until the 10th result page. This search led to ten additional conference papers, including one highly relevant journal paper that was published in a marketing journal not listed in the two literature databases considered. The resulting 43 articles were studied in depth and synthesized. A backward search on the most relevant findings provided underlying theoretical background.

The analysis of the resulting papers involved two researchers: the first author who was the main reader and coder of the papers and the second author who read the papers and checked the coded analysis results. Differences in assessing the papers and coding were intensively discussed until a common decision was reached. 23 of the analyzed papers studied digital nudges in an assignable customer journey context and were used in table 2. Seven articles only implicitly referenced digital nudging approaches and did not apply attributable nudges. The remaining 13 papers defined digital nudging or customer journeys and were used to define the two phenomena under research in more depth.

Findings

Overview of Generic Digital Nudges and Approaches Nudge Design

The core concepts of nudging and digital nudging were defined and elaborated in depth in 13 of the 43 considered papers. In continuation of the initial definition of nudging presented in the chapter Theoretical Background, the analysis of these papers allowed for a more extended elaboration on nudging as well as identification and definition of related phenomena. Of relevance for the further literature analysis was in particular the identification of generic nudges and existing approaches for design of nudges.

Generic Nudges: As already mentioned in the Introduction, people do not always decide in a rational way. Individuals’ decisions are heavily influenced by various heuristics and biases (Thaler et al., 2010). The outcome of any choice is influenced not only by rational or irrational deliberation of available options but
also by the design of the choice environment (Weinmann et al., 2016). The way in which available choices are presented to users in digital environments, can subconscious influence the choice outcome (see for example Thaler et al., 2010 or Weinmann et al., 2016).

Nudges are specific design approaches for choice environments, i.e. attempts to influence peoples' judgments, choice or behavior in a predictive ways that either attempt to overcome or use specific psychological effects (i.e. cognitive boundaries, biases, routines and habits in individual and social decision-making (Hansen, 2016)) to guide individuals towards a predefined choice option (Mirsch et al., 2017). Thus, a nudge can be considered as a combination of a specific choice design that provokes a given psychological effect. For example, the generic nudge “Loss Aversion” can often be observed on the hotel booking platform booking.com. One form of implementing this nudge is to publish the statement “Only one room left” near the offer that is displayed to the user. The addition of this statement to the choice environment of booking a room triggers a spontaneous reaction of users to quickly book in order not to lose the last room available. Based on findings from research in psychology and behavioral economics generic types of nudges have been proposed in literature that are based on similar combinations of specific choice designs and foreseeable or intended psychological reactions. Based on the 13 analyzed papers (i.e. Thaler et al., 2010; Mirsch et al., 2017; and Weinmann et al., 2016), 20 generic nudges were identified: Framing, Status Quo Bias, Social Norms, Loss aversion, Anchoring & Adjustment, Hyperbolic Discounting, Decoupling, Priming, Availability Heuristics, Commitment, Mental Accounting, Optimism & Over-Confidence, Attentional Collapse, Messenger Effect, Image Motivation, Intertemporal Choice, Representativeness & Stereotypes, Endowment Effect, and Spotlight Effect. This list of generic nudges was used to analyze and code the 23 articles dedicated to application of nudging in customer journeys.

**Approaches for Nudge Design:** Several reviewed papers propose approaches for designing and implementing digital nudges: Gregor and Lee (2016) propose to design digital nudges by mapping the context (i), designing the nudge (ii), and experimenting and evaluating (iii) it. Schneider et al., (2018) derive a cycle model from Datta and Mullainathan (2014) and Ly et al. (2013) that consists of the following steps: define the goal (i), understand the users (ii), design the nudge (iii) and test the nudge (iv). Mirsch et al., (2018) propose a similar framework with the following design steps: Definition of the digital nudge context (i), digital ideation and design (ii), digital nudge implementation (iii) and digital nudge evaluation (iv). Compared to Schneider et al. (2018), they also consider the context of the nudge, which is related to the technical and application context for which the nudge is implemented. Overall, all suggested design approaches for digital nudging refer to a set of similar core steps: identification of the context, definition of the goal, design of the nudge, digital nudge implementation and evaluation.

**Overview of Application of Nudging along Customer Journeys**

Synthesizing the found articles showed that connections between the nudging theory and customer journeys have yet to be explicitly investigated. Within the reviewed literature, some studies made explicit use of nudges in their application of customer journeys; others used nudging approaches without explicitly mentioning them. By referring to the identified generic forms of digital nudges and related psychological effects (see for example Mirsch et al., 2017) mentioned in the previous chapter, selected publications were coded and classified according to the used generic type of nudge and the stage of the customer journey in which the nudge was used. The following Table 2 classifies the publications according to these two criteria.

<table>
<thead>
<tr>
<th>Applied Nudges</th>
<th>Pre-Purchase Stage</th>
<th>Purchase Stage</th>
<th>Post-Purchase Stage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Anchoring &amp; Adjustment</td>
<td>(Cheng et al. 2018), (Larsen 2016)</td>
<td>(Esposito et al. 2017), (Székely et al. 2016)</td>
<td></td>
</tr>
</tbody>
</table>
Table 2. Application of digital nudging in customer journey studies

The findings related to the use of nudging in the three stages of customer journeys can be summarized as follows:

**Pre-Purchase Stage:** Ten of the reviewed articles make use of digital nudging in a pre-purchase context of the customer journey. The studies serve varying purposes in the pre-purchase stage that covers aspects of the customer’s interaction with the brand, category, and environment before a purchase transaction (Lemon and Verhoef 2016). Cheng et al. (2018) for example, investigate the customers online search for service companies with an empirical analysis. Larsen (2016) evaluated how the merging of offline and online data, and an omni-channel, data-driven approach substantially increased Ford Denmark’s marketing performance. Moran et al. (2014) discuss a new “Moment of Truth” model, that integrates variables such as shared brand experience and searchable electronic word of mouth and explains how marketers can manage these “Moments of Truths”.

These studies show that digital nudges have been used in very different customer contexts within the pre-purchase stage. While one study uses branded keywords in a search context to nudge, another uses retargeting methods to anchor their prospects. Such differences in touchpoint contexts are found in all the analyzed articles and show that not only stage and applied nudge-type, but also the context of the touchpoint take effect in customer journeys. A noteworthy detail to the pre-purchase stage is the difference in how strongly a nudge attempts to take prospects to the next stage of the journey. The successful implementation of the “low-frequency” targeting in the Ford-Study (Larsen 2016) implies that effectiveness of nudges varies across different types of nudges and customer contexts. This raises the need for a holistic view on when to use which nudges.

**Purchase Stage:** The majority of found papers make use of digital nudging in purchase stages of a customer journey. These 14 papers and conference proceedings focus on customer interactions with the brand or its environment during the purchase itself (Lemon and Verhoef, 2016). The studies allocated to this stage also show a plethora of varying customer contexts and services where digital nudging effects were applied. For example, in their paper about marketing stimulating different word-of-mouth content to drive online and offline performance, Pauwels et al. (2016) quantify interactions among marketing, online word-of-mouth content, search, online and offline store traffic for an apparel retailer. The authors point out that marketing can have a direct and an indirect performance effect by nudging the customer closer to purchase. Their findings show that tracking of electronic word-of-mouth content is highly important to drive performance. Roscoe et al. (2016) studied effects of web search stance in online information search and decision making. Other studies looked into making nudging in a purchase stage more effective in general. For example Maedche et al. (2018) as well as Djurica and Figl’s (2017) research design for improving digital nudging using eye-tracking technology.

The research within the purchase stage shows that context, like which channel a customer uses, how a customer can be approached (push- or pull marketing) as well as control over the channels, has an influence on which nudges can be used and how effective they can be implemented.

**Post-Purchase Stage:** The post-purchase stage holds customer interactions with a brand and its environment after a purchase (Lemon and Verhoef, 2016). Only five of the analyzed studies were assigned to this stage. Gupta et al. (2017) studied the emotional connection of customers to a brand and conclude that (study)-respondents are rather emotionally connected with a brand they have mentioned than with rational benefits. Their investigation shows that a repurchase with a brand occurs more likely, if there is a
good experience with it. Shankar et al. (2016) conducted their study on nudging in mobile shopping environments and discuss issues, current insights and future research opportunities.

The relative absence of papers in a post-purchase stage can be explained by the current research’s focus on conversional contexts. In order to gain a comprehensive insight into using digital nudging in customer journeys, further research should include post-purchase touchpoint of a customer.

**Methodologies Applied in Nudging Research**

The analyzed publications applied different research methods. These include literature reviews, eye tracking, open questionnaires, field experiments, surveys, lab experiments and qualitative approaches like interviews and diaries. However, in most articles authors chose to test their hypotheses using online experiments and case studies.

In order to show how nudges can be used along the customer journey, Maas et al. (2018) designed an Amazon Mechanical Turk experiment. It consisted of four different nudges based on common behavioral biases and/or other cognitive limitations. Using the same platform, Schneider et al. (2017) set up an experiment to test five experimental conditions on nudging participants into online verification of a fictional carsharing service. Other online experiments use various customer journey contexts like flight booking screens to test willingness to pay for CO2-compensation (Székely et al. 2016), user profiles to test racial stereotyping in the sharing economy (Pahuja and Tan 2017) or mobile apps for health bonus programs to investigate readiness to provide personal health data (Schöning et al. 2019).

Real-life case studies involved testing nudges in banking apps (Wijland et al. 2016), engaging the active use of bus passes (Lieberoth et al. 2018), or social sharing of content of educational websites (Huang et al. 2018). The broad use of case studies and online experiments show the value of experimental research design on studying digital nudging and should be considered in the research agenda.

While these studies have considered psychological effects in their studies, they have often been applied without specific mentioning of nudging effects or frameworks. Furthermore, there is no connection being drawn between the use of a nudge within different contexts in customer journeys, for example comparing its effectiveness between pre-purchase, purchase and post-purchase stages of a journey as described by Lemon and Verhoef (2016). There is also no consideration of synchronizing and using nudges across the three stages, i.e. from pre-purchase to purchase and from purchase to post-purchase. None of the studies explored potential differences of nudging on brand-owned and partner owned touchpoints.

**Conclusion, Limitations and Further research**

The literature analysis revealed that research related to application of nudging along customer journeys is just emerging and relatively immature. The overview and classification of published applications of nudging in customer journeys shows that existing research concentrates mainly on the purchase stage. Furthermore, out of 20 published generic types of nudges, only seven types have been found in literature related to their application in customer journeys. However, these first published results show that these new research field is promising and that further research can provide significant contributions for science and practice. Marketers will be able to allocate efficiently their resources on the right digital nudges within a customer’s journey. Furthermore, practitioners in the human-computer-interaction field will profit from research results that will give guidance how to design digital screens in a way to guide user’s behavior in a desired way. While nudging has proven to be effective in different contexts, such as social security administration, marketing or health concerns, there are little guidelines as to when to implement which nudging effect in a customer journey.

**Research Agenda**

Research has shown up to 20 different psychological effects that can be considered for digital nudging (Mirsch et al. 2017). To develop digital nudges, Schneider et al. (2018) have created a framework, that spans goal definition, gaining an understanding of the user, designing the nudge and testing it. This enables researchers and practitioners to apply digital nudging in various contexts. Further studies need to investigate, if specific digital nudges can be assigned to the three stages of the customer journey.
Therefore, we propose a research agenda that is aimed at studying which types of nudges have a bigger impact at which customer journey stage. The following figure combines the customer journey perspective with Schneider et al.’s (2018) design model for digital nudges. It implies that proposed research could investigate effective nudges within and between these stages.

**Digital Nudging in Customer Journeys**

![Diagram of Digital Nudging along the Customer Journey](image)

**Figure 1.** Digital nudging along the customer journey (based on Schneider et al., 2018) and Lemon and Verhoef, 2016).

Investigating the applications of digital nudges in customer journeys, promises a better understanding of when to use which digital nudge to best support a customer to make an efficient and rational decision. Goal of such research is to find out, which nudges to implement to take a customer one-step further in a customer journey process. The result of such research may be a nudging pipeline as a holistic view on interrelated nudging across various stages. A nudging pipeline could enable nudging users from one stage of the customer journey to another and combine nudges depending on stage of the customer journey as well as the context in which the nudging takes place (i.e. brand or partner owned touchpoints). Outcomes could give evidence, which nudge to use in a purchase stage after a prospect has positively reacted to a “status quo bias”-nudge in an awareness phase or allow to set the right nudging context on a landing page after converting on a “hyperbolic discounting”-nudge on a social media channel.

**Limitations**

The undertaken structured literature review focused on the existing research in the area of digital nudging that touches customer journey topics. Therefore, keywords around the two terms were used and the results systematically analyzed. While the research on the keywords was broad, exhaustiveness cannot be claimed. Furthermore, related research fields like persuasive design (see Tam and Ho 2005), smart nudges (Guthrie 2013), human-computer-interaction and other streams of behavioral economics were not considered in this paper. Furthermore, the ownership of screen on which nudging takes place is another dimension of digital nudging that has not been considered in this research. Nevertheless, this study was able to show that there is a need for further research to thoroughly understand how nudges can be implemented along the customer journey.

**References**


