Website Functions and Shopping Strategies: Ontological Framework and Synthesis

Completed Research Paper

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Abstract

In this research, we provide a comprehensive view of the factors related to website functions that influence shopping strategies leading to outcomes such as repurchase, purchase, no purchase, and rejection. We develop an ontological framework that encompasses 80 problem statements, and we used the framework to perform meta-analysis of the extant literature and map it. The results describe the state-of-research and highlight the bright, light, and blind/blank areas in the domain. We discuss the implications of our framework and the meta-analysis. We show that our ontological framework provides a new lens to explore the issues in the domain. Our analysis reveals that the current state-of-research is saturated with bright areas such as the studies of Ease of use & navigation factors while it lacks the attention towards blind/blank areas such as Shopping strategies. We conclude with open research questions and a discussion of limitations of our research.

Keywords

Ontological Meta-Analysis, Website Functions, Shopping Strategies, Purchase Intentions.

Introduction

The internet has created a new channel for service providers and retailers to sell their goods (Chung and Park 2009). Consequently, the number of customers visiting commercial websites has increased dramatically in the last decade, and the amount of spending online has increased accordingly (Chung and Park 2009). Multichannel retailers who have major sales through the internet channel, or companies who are pure-play, strive to increase their presence and sales online. However, visitors to those commercial websites vary in their intentions and behaviors. Customer behavior and perceptions in online purchase, however, can be predicted and influenced by several factors. Understanding the way visitors perceive factors such as website design, services, and ease of use help in predicting customer behavior and purchase intention (Song and Zahedi 2005).

There has been intensive research on consumer behavior online and on factors that affect customer purchase intention. One essential psychological state is the motivation behind a customer’s visit and how it shapes the customer’s behavior and decisions. Deng and Poole (2010) used meta-motivational state as a moderating effect to a customer’s visit outcome. Similarly, Rose et al. (2011) considered the visitor’s internal subjective state as an essential part of the customer experience that leads to an outcome. Moreover, Deng and Poole (2010) believed that meta-motivational state can be identified by analyzing customers clickstreams. Based on visitors’ behavior of clicking through different sections of a given website, Moe (2003) derived four common types of website shopping strategies based on their planned time of purchase and their searching behavior. Moe (2003) classified the shopping strategies into directed buying, search/deliberation, hedonic browsing, and knowledge building.

As consumers’ behavior and intention is influenced by several factors, much of the research has devoted efforts to explain the specific effects of number of factors on customer purchase intention. For example, Chatterjee and McGinnis (2010) studied price promotions and how different types of promotions affect
perceived deal value and purchase intention. Another research by Rose et al. (2011) examines the concept of online consumer experience and the factors that influence outcomes such as customer satisfaction and purchase intention. Also, Bai et al. (2008) examined the relationships between factors such as website functionality and usability and purchase intention. These few studies and much of the studies in the literature are focused on one or few factors and relate them to a specific outcome such as purchase intention.

Other researchers focus on the elements and functions of websites that affect visitors’ behavior and shopping strategy in online shopping. Song and Zahedi (2005) categorized website functions into five categories, and suggest that each category would have different impact on visitors. Yet, the research does not link the influence of these website functions to purchase intentions.

Purchase intention is one essential factor that predicts customers actual buying decisions (Bai et al. 2008). For that reason, a large portion of the literature focuses on purchase intention as an outcome and the factors that either predict or change purchase intention.

The body of research in the domain of online customer experience is classified in several areas including website quality (referred to as website functions) and online customer behavior (referred to as shopping strategies) and how they are linked to purchase (Rose et al. 2011). It is still, however, not clear whether these areas are given balanced attention by researchers and whether they provide linkage between the two areas. Although this domain has been studied intensively, an important question is related to the current state-of-research of this domain.

In this research, we develop an ontological framework to conceptualize the issues related to web functions and shopping strategies that lead to a desired outcome such as increased purchase intention. We also use this ontological framework to guide our synthesis of literature and analysis. An ontological framework is a helpful tool in synthesis of literature that works in multiple disciplines (Ramaprasad and Syn 2013). It is a systematic way of framing a problem and acts as a lens to examine a specific issue. By developing an ontological framework, we were able to systematically and exhaustively search for articles that cover the problem we are addressing in this paper. We used the framework as a guide to derive keywords and phrases that relate to the problem and draw conclusions on the state-of-research.

The ontological framework and the mapping of the literature to the framework helped in answering the essential question in this research. It reveals that the current state-of-research is asymmetric due to the existence of bright and blind/blank areas within a single dimension. It is also clear that the body of research is unbalanced and is inclined towards explaining website functions more than shopping strategies. In addition to these findings, our framework contributes to researchers by providing new lenses to examine issues in this domain. Although the ontological framework seems simple, it encompasses large number of components that covers a great portion of issues in the domain. We further discuss the contribution in the conclusion section of this paper.

In the next section, we explain our ontological framework and discuss how we derived the parts and taxonomies of each dimension and the validity of the framework. We devote the following section to explain our data collection, empirical analysis, and the results of meta-analysis. Then, we discuss our ontological map of the domain and the results of the analysis. We finally provide conclusions and directions for future research as well as limitations to our research.

**Ontological Framework**

The ontology in this research sets the framework and the boundaries around the problem statement. We build our ontology based on the previous works of Ramaprasad and others (Ramaprasad and Papagari 2009; Ramaprasad and Syn 2013). An ontological framework is defined as “a logically constructed n-dimensional natural language description of the problem” (Ramaprasad and Papagari 2009). With the use of ontology, we are able to deconstruct and construct the components of the problem we are studying in a logical, systematical, and meaningful way. The overall design of the ontology provides us with a systematic, logical way in examining and reviewing the problem.

In conceptualizing the issue of purchase intention, we look into the components that influence customers and lead to an outcome of their online shopping experience. As researchers study those different components, they also examine the type of customers who visit online stores and their behavior based on
their shopping strategies. Therefore, we deconstruct our ontology into three dimensions: (1) website functions that act as factors influencing their shopping behavior and intentions, (2) customer shopping strategies that usually describe the reasons behind a customer visit, and (3) the possible outcome from a customer’s visit to a website. Therefore, the statement that describes the research problem can be read as “The influence of website functions on shopping strategies leading to a specific outcome”. Figure 1 provides the ontological framework for our research statement. In order to point out the keywords used in the ontology, we capitalize the terms of dimensions and categories in the rest of the paper.

<table>
<thead>
<tr>
<th>Website Function</th>
<th>Shopping Strategy</th>
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<tbody>
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<td>Ease of use &amp; navigation</td>
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<tr>
<td>Purchase facilitation</td>
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</table>

Figure 1: Ontological Framework for Website Functions and Shopping Strategies

Website Functions are classified in many ways in literature. Some researchers focus on visual aspects of design functionality such as complexity and order (Deng and Poole 2010) while others categorize them based on technical aspects such as usability factors (Cappel and Huang 2007). In our research, however, we do not focus only on these factors, but also on other factors that affect customer behavior and purchase intention in order to have a more inclusive view of those factors. Song and Zahedi (2005) examined more than 40 different website functionalities in their study. They classified them into five broad categories, namely Promotion, external interpersonal (which is referred to in this paper as External sources), Service, Ease of use & navigation, and Purchase facilitation. Promotion is the set of functions that are related to product promotions such as price discounts, new products presentation, providing gift certificate, recommending products based on users preferences, or based on automated process such as recommendation agents. The External sources functionality consists of the external factors that are linked to the website. This includes visitor’s product ratings, customer comments on product usage, products’ ranking by users, testimonials, user discussion forums. We also believe that social networks websites and social interaction functionalities are aspects of external sources, and therefore, we consider social networks as part of the External sources category. Service function is the set of services that are available in the website to ensure information security, user’s privacy, and the presence of policies. Other services related to interaction with the website such as shipment tracking, allowing customer feedback, and providing a communication channel with visitors. The Ease of use & navigation function is described by the page orientation, placement of navigation panels, graphical information related to products, color-coded information, tabular form, product listing, and uniformity of design formats. Finally, Purchase facilitation function relates to the aspects that collectively make the purchasing process convenient and help the visitors make their decision. Pictures of the product, product description, payment and shipping options, and frequently asked questions (FAQs) are parts of this category. We list the categories in a nominal order as Song and Zahedi (2005) ordered them in their study.

The third dimension of the ontological framework describes the possible outcome from a customer’s visit to an online store. Most researchers focus on purchase intention as a single construct to their problem. Purchase intention indeed is one possible outcome of a customer’s visit to an online retailer. However, there are several possible outcome categories. When we look into the scale of purchase intention, it could vary in the frequency and the magnitude of the construct. For example, a purchase transaction by the same customer can be repeated more than one time. Repeated purchase is a different issue that some other researchers have examined. For example, Liu et al. (2004) studied how privacy and trust influence repeated purchase. Also, a repeated purchase would indicate a loyalty as Kim et al. (2011) defined it in their study as the willingness to repeat a purchase from an Internet store. Since repeater purchase (repurchase) and loyalty explain almost the same concept, we consider it one category labeled Repurchase/loyalty. And in order to have a complete scale of purchase intention, we include the event of
No purchase that could occur as an outcome of a customer visit. This is an important possible outcome because it indicates a lack of the ability to convince or entice customers to purchase. At the end of the scale resides the negative outcome of a customer's visit, a Rejection of the website. Customers might be outraged or annoyed by specific factors in a website, and that would cause the visit to be terminated with a negative perception. Therefore, customers might reject a website as an effect of a website factor. For example, manager replies to reviews in a website could be perceived as an advertisement, causing some types of customers to negatively react to the situation (Mauri and Minazzi 2013). Hence, it is important to see the issue from a broader angle rather than only as a scale of purchase intention as outcome.

So far we have discussed website functions and how they affect purchase intention as an outcome. Many researchers, however, pay less attention to different shopping strategies of customers. For instance, a customer with the goal to search for product information has different shopping behavior than a customer who has enough information about a specific product and visits a specific website to finalize his/her purchase. The various website functions, thus, have different effects on these two customer types. Lin and Chan (2009) differentiated customers who are goal-oriented from experiential behavior, and showed that the effects of website factors may have different magnitude on the two customer groups. A more detailed view of categorizing shopping strategies is by Moe (2003). Using an analogy to physical store shopping behavior, Moe (2003) applied a general consumer behavior to online shopping strategies. She suggests that customer’s behavior changes depending on his/her intention, whether to purchase or explore, and how soon the decision is to be made. The two factors (search behavior and time horizon), then, intersect and generate four general intentions that determine the shopping strategy online. The four strategies are directed buying, research/deliberation, hedonic browsing, and knowledge building. Directed buying strategy defines a visitor that has an intention to purchase immediately. The visitor in this category has already collected the information needed to support his/her decision. However s/he might need some final piece of information to make her/his final decision. Search/deliberation strategy occurs when a visitor has an intention to purchase but at a later time. Therefore, the visitor is looking for specific information to support his decision. Hedonic browsing occurs when a visitor has an intention to explore for the moment. The visitor has neither an intention to purchase nor a future decision in mind. The visitor in this category, therefore, is just practicing a habitual surfing. Finally, Knowledge building is defined as a type strategy where a visitor has no intention to purchase, but explore for future decisions. We consider this classification of shopping strategy inclusive and comprehensive.

The three dimensions are organized so that one can iterate through the dimensions and categories to construct natural language sentences. Each constructed sentence from the ontology indicates a specific issue related to the domain we are studying. For example, one sentence reads: “the influence of service function on directed buying strategy leading to repurchase/loyalty.” This statement describes a research topic around factors of website services, such as security, that affect goal oriented customers to become loyal. Another statement reads: “the influence of external sources function on hedonic browsing strategy leading to rejection.” This research problem directs researchers to examine external factors, such as social networks, that cause hedonic browsing customers to dislike a website and never return back. The ontological framework has a total of 80 (5*4*4) instances of research problem. The following is a list of few instances that could be generated from the ontological framework:

- The influence of promotion function on search/deliberation strategy leading to purchase
- The influence of service function on knowledge building strategy leading to no purchase
- The influence of ease of use & navigation function on hedonic browsing strategy leading to rejection
- The influence of purchase facilitation function on knowledge-building strategy leading to repurchase/loyalty

**Validity of the Framework**

In order to verify the validity of our framework, we follow the discussion by Ramaprasad and Syn (2013) indicating the need to affirm “face, content, semantic, and systemic validity of the framework, and the external validation of the same by experts in the domain.” The face validity of our framework is confirmed by the composition of the statements as composed by the dimensions. The dimensions and their corresponding taxonomies were selected based on literature review, and each dimension’s categories are asserted to be mutually exclusive and exhaustive with reference to the literature. Therefore, the content
validity of our framework is considered high. In addition to the fact that each component carries a meaning, the dimensions and their categories were rationalized as we defined them above. Moreover, the naming of each category is highly relevant to what it explains and were either borrowed as is from their original source or changed to clarify the meaning. This affirms the semantic validity of the framework. Further, the ability to identify bright, light, and blind/blank areas of research using the framework affirms its systemic validity. Finally, since this framework has not been presented or discussed with other researchers/professional, we are not able to confirm its external validity. However, the derivation of the components of the framework is consistent with other studies in the same domain (Deng and Poole 2010; Rose et al. 2011).

**Mapping the Ontological Framework: Meta-Analysis**

**Data Collection**

We used the ontological framework as a guide to systematically search for research articles that cover the domain of our study. We followed two steps to accomplish this task. First, we used Web of Science as a source to search for research articles using terms and phrases generated from the ontology. We generated lists of terms for each dimension and category in the ontology. Table 1 shows the terms we have used in our search. We borrowed the search terms for Website functions and Shopping strategies from Song and Zahedi (2005) and Moe (2003) respectively. We intuitively constructed search terms for the Outcome dimension and categories based on our review of the literature. Next, we used the phrase “purchase intention online”, and concatenated it with a changing term according to the list of terms in Table 1. Following this step, we obtained an initial list of 157 research articles that matched the phrases in the titles, abstracts, and author keywords of the articles.

<table>
<thead>
<tr>
<th>Dimension/Category</th>
<th>Terms</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Website Function</strong></td>
<td></td>
</tr>
<tr>
<td>Promotion</td>
<td>Promotion, price comparison, discount, gift certificate, recommendations</td>
</tr>
<tr>
<td>Service</td>
<td>Service, security, privacy, guarantee, warranty, tracking, feedback, contact</td>
</tr>
<tr>
<td>External sources</td>
<td>Rating, comments, rank, bulletin boards, testimonials, user group, discussion forum, social media</td>
</tr>
<tr>
<td>Ease of use &amp; navigation</td>
<td>Ease of use, navigation, product cancellation, graphics, colors, tabular form, lists, layout, uniformity, design, format</td>
</tr>
<tr>
<td>Purchase facilitation</td>
<td>Description, picture, payment options, shipping options, links, FAQ</td>
</tr>
<tr>
<td><strong>Shopping Strategy</strong></td>
<td></td>
</tr>
<tr>
<td>Directed buying</td>
<td>Direct buying, immediate purchase, focused search, goal driven</td>
</tr>
<tr>
<td>Search/deliberation</td>
<td>Research, search, deliberation, deliberate, planned purchase, delayed purchase</td>
</tr>
<tr>
<td>Hedonic browsing</td>
<td>Hedonic, browsing, explore, exploring, exploratory, not focused</td>
</tr>
<tr>
<td>Knowledge-building</td>
<td>Knowledge search, information search, acquire, inquiry</td>
</tr>
<tr>
<td><strong>Outcome</strong></td>
<td></td>
</tr>
<tr>
<td>Repurchase/Loyalty</td>
<td>Repurchase, loyal, loyalty, repeated purchase</td>
</tr>
<tr>
<td>Purchase</td>
<td>Purchase, first purchase, purchase intention, increased purchase intention</td>
</tr>
<tr>
<td>No Purchase</td>
<td>Reduced purchase, no purchase, less probability</td>
</tr>
<tr>
<td>Rejection</td>
<td>Reject, rejection, negative, negative impact, negative outcome</td>
</tr>
</tbody>
</table>

*Table 1: Search Terms for Ontological Framework Categories*

Second, we carefully read the titles and abstracts and excluded papers that do not match the domain in our study. The excluded papers were related to areas such as auction markets, group buying websites, virtual worlds and gaming, cross-cultural studies (or cultural differences), advertisement in websites, or papers that study physical markets (not online). The final list of articles in our analysis contains 104 papers published between the years 2000 and 2013, and from more than 60 journals and publications. Then, we used the article titles, abstracts, and author keywords to match them with each dimension and category in our ontological framework using the terms corresponding to each category. For each category in the dimensions, we counted the number of matching articles to represent the frequency of papers that fall under that specific category. The results of our matching process are represented in the ontological map in Figure 2.

**Results and Analysis**

The results of our matching process are shown in Figure 2. The numbers next to the categories in the ontological framework indicate the frequencies of occurrence. These frequencies indicate how many times
the specific category is studied in the collection of papers we analyzed, and the bars below each category visually represent those frequencies. The visual representation helps in quick identification of the high and low frequencies. Out of the 104 papers in our dataset, 14 articles studied Promotion, 22 articles for Service, 18 for External source, 54 for Ease of use & navigation, and 15 for Purchase facilitation. With regards to articles focusing on Shopping strategies, 3 focused on Directed buying, 2 on Search/deliberation, 5 on Hedonic browsing, and 2 on Knowledge-building strategy. As an outcome focus, our results show that 12 articles examine Repurchase/loyalty outcome, 85 focused on Purchase as an outcome, 2 on No purchase, and 5 on Rejection category.

The results of our analysis provide insights on how researchers address issues related to the domain of the effect of Website functions on Shopping strategies. It shows that there is a greater emphasis on some areas while showing other areas that are less focused. We discuss the implications of these results in the following section.

<table>
<thead>
<tr>
<th>Website Function</th>
<th>Shopping Strategy</th>
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</tr>
</thead>
<tbody>
<tr>
<td>Promotion (14)</td>
<td>Directed buying (3)</td>
<td>Repurchase/loyalty (12)</td>
</tr>
<tr>
<td>Service (22)</td>
<td>Search/deliberation (2)</td>
<td>Purchase (85)</td>
</tr>
<tr>
<td>External source (18)</td>
<td>Hedonic browsing (5)</td>
<td>No Purchase (2)</td>
</tr>
<tr>
<td>Ease of use &amp; navigation (54)</td>
<td>Knowledge-building (2)</td>
<td>Rejection (5)</td>
</tr>
<tr>
<td>Purchase facilitation (15)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Figure 2: Ontological Map of Website Functions and Shopping Strategy

Discussion: Ontological Framework and Meta-Analysis

The ontological framework we developed in this paper provides a conceptual framework to guide research in the domain of Website functions and Shopping strategies along with their effects on Outcome such as Repurchase, Purchase, or Rejection. Researchers in this domain focus on a specific category, and most of the time pay less attention to other important factors. Our design of the ontological framework includes all possible types of Shopping strategies. It is important to identify customer's shopping strategies when examining factors that affect their purchase intentions. In the physical world, when a customer enters a store, sales representatives or agents are able to greet customers, and would have the chance to identify the reason behind a customer visit using simple set of questions. In knowing customer intention beforehand, sales agents are able to direct customers to the right store section, recommend products for sale, and help in providing specific information that would enhance the overall customer experience, leading to a greater chance of purchase. However, this whole process is almost unavailable online, or is still developing. A study by Wang and Doong (2010) examined the effect of a virtual spokesperson in terms of a recommender system in virtual stores, and found that a recommendation agent helps in understanding customers, and therefore, better assist them and increase their purchase intention. We also believe that by understanding customer shopping strategies, we should be able to examine different levels of effects as a result of encountering different factors of Website functions. Chang (2011) considered two types of shopping strategies (high and low uncertainty representing directed buying versus hedonic browsing) and showed that Ease of use & navigation elements such as number of product categories is perceived differently by the two groups of customers. This is important because the implication of a specific factor is perceived differently by different groups of customers. Without categorizing customers based on their strategies, it would be difficult to generalize the effect of a specific Website function on all customer types. Hence, our ontological framework helps researchers to better conceptualize and direct their efforts to more inclusive problem statements that consider all important aspects.

Website functions are important factors in predicting or affecting customer intentions. Much of the research in the domain focus on one or few aspects of website functions. Our ontological framework
provides a comprehensive view of the several factors that could affect purchase intention. We believe that the set of categories under the Website function dimension include almost all possible factors that might influence customers purchase intention. The inclusion of this dimension in the ontology acts as a guide to researcher to focus on a more inclusive view of the factors. Research models that examine one or few factors might be weaker than models that include all possible factors that might collectively have similar effects.

The Outcome part of the ontology represents an essential aspect that researchers should focus on. In our review of the literature, we found that researchers usually address one type of Outcome. It is fundamental to understand what the different possible outcomes are in order to better generalize the results. It is also equally important to examine the other end of the spectrum of a specific factor, such as the No purchase compared to Repurchase and Purchase, and the other possible outcome such as Rejection. We designed our ontological framework so that it is inclusive of all possible outcomes in the domain we study.

Together, the three dimensions in our framework cover the domain largely. They uncover new areas of research that were not given much attention by researchers. Although large number of researchers developed different models studying different issues in the domain in this study (Bai et al. 2008; Deng and Poole 2010; Lin and Chan 2009; Rose et al. 2011), our framework is more comprehensive in terms of the dimensions, the taxonomies, and the components.

The empirical analysis and mapping the ontological framework provide number of insights on the state of research in the domain of Website functions and Shopping strategies. The results of our analysis shows that there are bright, light, and blind/blank spots, following the categorization of ontological mapping results by Ramaprasad and Syn (2013). In this domain, there are bright areas such as Ease of use & navigation elements and their effects on Purchase as an outcome. From the results in Figure 2, we can indicate that researchers have intensively studied the effects of Ease of use & navigation factor on Purchase intention online. The results also indicate light areas of research such as the other factors under the Website function dimension (Promotion, Service, External sources, and Purchase facilitation) and Repurchase/loyalty Outcome. However, we consider the whole dimension of Shopping strategies and its categories as blind/blank spots in the literature. Also, the Outcome dimension clearly shows blind/blank spots such as No purchase and Rejection categories. This indicates that the research is asymmetric in terms of examining the range of possible outcome of customer visits to retail websites. The fact that about 10% of the articles have examined shopping strategies does not necessarily mean it is an unimportant aspect. It might indicate that this kind of research requires much effort to identify customer's shopping strategies. It could also indicate areas where researchers have not paid much attention to the importance of shopping strategies and how they might provide additional insights to the results of their research. In addition, the blank/blank spots in Outcome such as No purchase and Rejection indicate that researchers have not tackled issues related to the other end of the outcome spectrum. We argue that it is important to know how website function factors lead to customer Rejection as it is important to know how they lead to Purchase or Repurchase/loyalty. A customer rejecting a website is considered losing a potential customer, and it is essential to examine factors that lead to losing customers. In the same sense, an outcome of No purchase might indicate a delayed purchase intention or that a customer is not convinced enough with the products offered in a website. Therefore, it is also essential to identify factors that change the state of No purchase to Purchase or even Repurchase/loyalty.

**Conclusion, Future Research, and Limitations**

In this study, we developed an ontological framework describing the domain of Website functions and Shopping strategies that lead to specific types of possible Outcome. We deconstructed our research statement that describes the domain into dimensions and categories that can be read in natural English language describing 80 different issues. The dimensions and their taxonomies in the ontological framework were carefully examined so that they are inclusive to the type of problems related to the effects of Website functions on customers shopping strategies. Then, we described the process we followed in order to perform the literature review and Meta-analysis. We showed how the ontological framework was mapped to the results of our analysis and described the current state of research.

Our work in this research has two types of contributions. First, the conceptual framework represented in our ontological framework provides a guide to researchers on the methodology of addressing issues
related to factors that influence purchase intention. To our knowledge, our study is the first that comprehensively look into issues related to purchase intention and factors that affect shopping strategies leading to set of outcomes such as the ones in the ontological framework. We provide new lenses to explore issues in this domain. The dimensions in our ontological framework direct researchers to issues that are rarely studied although they are still important. The Website functions dimension provides a comprehensive, inclusive taxonomy of factors that influence purchase intentions. In addition, the dimension of Shopping strategies brings new way of addressing issues in the purchase intentions domain. We indicated the importance of addressing Shopping strategies when studying factors that influence purchase intention. Further, we provide a complete horizon of possible outcomes when examining customer’s visits to online shops. We showed that it is equally important to study Rejection, Purchase, and Repurchase as an outcome of customer’s visits.

Second, the meta-analysis and the ontological mapping provide insights on the current state-of-research. It shows that the current state-of-research is asymmetric and is not equally distributed among the categories in the ontological framework. One can clearly infer that researchers have focused intensively on factors related to Ease of use & navigation while they paid less attention to other Website functions such as Promotion and Purchase facilitation, for instance. It also shows that few researchers devote efforts to examine Shopping strategies while they are significantly critical aspects that help in identifying the different levels and magnitudes of Website function factors on outcomes, such as Repurchase, Purchase, or Rejection. Also, we have shown that it is important to examine Rejection as an outcome rather than only studying the scale of purchase intentions.

There are many possible future research areas that are pointed out by the ontological framework and the results of the analysis. Researchers can use the ontological framework to iterate through the statements and identify areas of research that has not been studied so far. Also, the inclusion of Shopping strategy dimension in our ontological framework opens a new venue of research. Furthermore, we believe that Outcome dimension identifies important areas of research such as the event of customers rejecting a website and the reasons behind such behavior.

Although we consider our ontological framework comprehensive in terms of covering widespread issues in the domain of Website functions, Shopping strategies, and Outcomes of customer’s visits, our ontological framework is limited to online websites platforms excluding aspects related to new trending areas such as mobile commerce and social commerce platforms. However, our ontology should be flexible to inclusion of new categories that might emerge in terms of Website functions, for example. We have borrowed parts of the dimensions from previous work of other researchers, and one might argue that other taxonomies can replace the ones in our ontological framework. Nonetheless, we still believe that our selection of the sources is credible and inclusive types of taxonomies. Further, we used one source of data collection, Web of Science, to gather research articles and map them to the ontological framework. Nevertheless, Web of Science is a large database that covers large number of journals and conferences, and the articles we collected can still represent the domain in our study.

References


