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## **Value co-creation through multiple shopping channels:**

### **The interconnections with social exclusion and wellbeing**

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# Value co-creation through multiple shopping channels: The interconnections with social exclusion and wellbeing

## **Abstract**

This study examines consumers' value co-creation via several shopping channels including a traditional out-of-home shopping channel and "smart" channels where consumers use a computer, a mobile phone or social media. It focuses on the effect that value co-creation has on consumers' shopping behaviour as well as on the perceived contribution of a shopping channel to their wellbeing, with a focus on individuals who perceive themselves as being socially excluded, particularly by mobility disability. The project was carried out in the USA using an online survey (n=1220). Social exclusion has a positive statistically significant effect on respondents' self-connection with all channels; for many socially excluded respondents the shopping channel has an important role in their lives. Self-connection with the channel has a positive effect on value co-creation and there is a positive relationship between value co-creation and the perceived contribution of the channel on wellbeing. When consumers help other individuals in their decision making they not only create value for the retailer and for other customers but also contribute positively to their own wellbeing. Importantly, for smart shopping channels where consumers use a computer or a mobile phone, the impact of value co-creation on the perceived contribution of these channels to consumer wellbeing are stronger for shoppers with a mobility disability than for those without such a disability.

**Keywords:** value co-creation, traditional shopping channel, smart shopping channels, social exclusion, mobility disability, wellbeing

# Value co-creation through multiple shopping channels: The interconnections with social exclusion and wellbeing

## Introduction

Smart retailing revolves around firms and consumers using technology to reinvent and reinforce their role in the new service economy, by improving the quality of their shopping experiences [51]. Beyond the underpinning technology, smart retail is characterized by six key features, which include developing ad-hoc capabilities, changes in knowledge management and in the salesperson's jobs, creation of smart partnership, changes in service access and in consumption. When consumers shop they are not simply passive acquirers of goods but they can also actively create value [76]. Smart technologies have fostered consumer interactions with firms and consumers are nowadays engaging and participating in the value creation of a product or service [8, 51, 78]. The experiences created can lead to greater happiness than can be gained from material purchases [11, 71]. Such purchase experiences can help to build shoppers' wellbeing and sometimes offset the negative effects of social exclusion [18], which can thus have important social benefits. Shopping channels can contribute to satisfaction in important life domains such as social, leisure and community areas [28], referred to in this paper as 'channel contribution to wellbeing'. Technology must not be an end, but a medium to enhance high-quality customer experience [8]. Put differently, smart technologies need not just be "smart" but they should also be used in a "smart" way for the desired objectives to be achieved.

It could be argued that the more a shopping channel is underpinned by technology and in principle the more potential it exhibits to be "smart", the more the opportunities to establish and develop partnerships with engaged customers. In turn, customers could positively respond to the empowerment afforded by the new technologies and become value co-producers not only of the value they consume, but also that of others. Online retail has made it possible for consumers to interact directly with retailers, but also share information and experiences with one another. Such interaction and co-creation represents the "smart" application of the technological channels. If technology was the catalyst for this change due to the introduced capabilities, then one may expect notable differences when it comes to how consumers utilise technologies for co-creation among channels or at least between traditional and online ones. To this end, this study examines the extent to which consumers' value co-creation by "smart" shopping channels that are web-based, e.g. consumers using a computer (electronic commerce), a mobile phone (mobile commerce) and via social media (social commerce) can match or exceed a traditional store-based shopping channel. This research follows Yi and Gong [76] in conceptualising co-creation as consisting of two dimensions: customer participation and citizenship. Both of these dimensions are themselves multi-dimensional, which we address in the 'Method' section below.

We can expect a shift from a two-sided marketplace to a dynamic marketplace that also features "creation" as part of its key dimensions, namely "buying" and "selling" in the next stage of e-commerce (e.g., mobile commerce, creative commerce, social commerce) [17]. In this context, we consider social commerce to consist of "electronic commerce arrangements that use a Web 2.0 infrastructure and social media technology applications to support online interactions and user contributions to assist in the acquisition of products and services" [41]. As such changes will require higher levels of access, engagement, and the development of relationships among stakeholders, we focus on the impact that social exclusion could potentially have on individuals. More specifically, we examine the potential different effect that the two dimensions of value co-creation, namely participation and citizenship, may have on the perceived hedonic and utilitarian experiences from shopping as well as on shoppers' wellbeing and the role of the different shopping channels in this process. Also, as in the context of smart retailing, the benefits may include a larger and more

customized offer for consumers, reduced transactional costs and a reduction in encumbrances. In addition, smart retailing may be advantageous for people with disabilities [51]. Mobility disability is an important cause of social exclusion that can prevent shoppers from obtaining the benefits of traditional out-of-home store channels [64]. Consequently we pay special attention to shoppers who might otherwise be socially-excluded on the grounds of mobility disability.

The rest of the paper proceeds as follows. First, essential prior research on the dimensions of consumer value co-creation, its antecedents and effects is reviewed. Next, the quantitative survey method is outlined. The results are then presented and implications and conclusions are drawn. Finally, limitations and recommendations for further research are addressed.

## Literature Review

### *Value co-creation*

Co-creation is the joint, collaborative, concurrent, peer-like process of producing new value, both materially and symbolically. Co-creation is about the joint creation of value by the company and the customer within an experience environment in which consumers can have an active dialogue and co-construct personalised experiences [55]. For such a shift to take place, companies must escape the firm-centric view and aim to co-create value with their customers via interactions, focusing on the experiences that customers will seek to co-create. When considering the market as a forum for hosting co-creation experiences, Prahalad and Ramaswamy (ibid) state that *“the nodal firm, its products and services, employees, multiple channels, and consumer communities come together seamlessly to constitute the experience environment for individuals to co-construct their own experiences.”* Consumers’ goals, motivations and values can influence choices to shop by a specific channel [37] [25, 62] or multiple channels [61] and this can have implications for how value is created and consumed across channels [46].

*“A general view of value recognising both a utilitarian outcome resulting from some type of conscious pursuit of an intended consequence and an outcome related more to spontaneous hedonic responses captures a basic duality of rewards for much human behaviour.”* [2] The choice of retail channel is no exception and given the choices available consumers can weight their preferences accordingly so that they maximise the overall value consumed (for a review on value one may refer to [77]). On the one hand, utilitarian experience has been described as *ergic*, task-related, and rational [2], while on the other, hedonic experience has been defined as those facets of consumption that relate to the multisensory, fantasy and emotive aspects of product usage experience [29].

Such an evaluation on the consumer’s side may not only comprise the value perceptions emanating from the product considered, but also the store attributes in which this takes place, e.g. tangible store attributes have been found to positively impact on utilitarian (rather than hedonic) value, while intangible store attributes impacted only on hedonic product value [39]. Similarly, in line with the hedonic and utilitarian dimensions of products [4], hedonic shopping experiences describe the sensations, whereas utilitarian shopping experiences describe the functions facilitated, during the decision making process. Utilitarian and hedonic values and motivations have been found to affect intentions to use retail channels, often in different ways depending on the context and channel, but often acting in a complementary way [13, 32, 38, 49, 68].

Although it is often the company and its managers that are portrayed as those that need to adapt to the customer centric view, consumers also need to want to engage before co-creation can become possible. Depending on personal attributes and circumstances, consumers may prefer channels for engaging with companies which may be more conducive towards co-constructing experiences such as those mentioned above. Given the focus of this paper we proceed in the next section to examine how social exclusion can affect two key dimensions of value co-creation, namely participation and citizenship [76].

### *Social exclusion*

According to Burchardt, Le Grand, and Piachaud [10] “an individual is socially excluded if (a) he or she is geographically resident in a society, (b) he or she cannot participate in the normal activities of citizens in that society, and (c) he or she would like to participate but is prevented from doing so by factors beyond his or her control”. Social exclusion can have a wide range of negative effects on individuals’ happiness, wellbeing, and health [5]. For instance, social exclusion can have a significant negative impact on an individual’s sense of purpose, can result in reduced efficacy, can reduce one’s belief that one is a moral being and lastly can erode one’s self-worth [66]. When it comes to shopping, households and individuals are not separated from the rest of society just when they cannot afford to buy goods, but also by their goods acquisition practices [75]. Research has shown that socially-excluded individuals tend to be multichannel shoppers too and spend more time shopping, which may indicate that shopping provides them with an opportunity to “escape” from social reality and in turn it makes them connected [18]. Similar results have been reported with regard to spending and consumption decisions, suggesting that social exclusion causes people to spend and consume strategically in order to achieve their goals, namely to feel included and accepted [47]. Based on the above, we suggest that for socially excluded consumers, value-co-creation as part of their utilitarian and hedonic experience with shopping may lead to the perception of a positive contribution of the channel to their wellbeing. In other words, people who are excluded try to re-include themselves, using tools that include shopping by various channels and, we suggest, value-co-creation, in order to improve their wellbeing by interacting with other individuals and businesses via that channel. These arguments lead to the hypotheses below, in the context of the four shopping channels studied (i.e. traditional out-of-home shopping, electronic commerce, mobile commerce, social commerce).

*H1: A higher level of social exclusion will be associated with a higher contribution of a specific channel to an individual’s wellbeing.*

In the process of value co-creation the channel that consumers use plays a fundamental role as it facilitates the value co-creating activity. Therefore, we argue that individuals develop a connection with the channel and this becomes a part of themselves and thus reflects the image that they pass on to their peers. This is in line with the contribution of products and brands in the development of personal identity, which, according to the previous literature, leads to the development of a connection between the brand and the self [21]. This connection between brands and the individual contributes to the development of an individual’s perceived identity. This identification with the brand can be enhanced by several factors, such as brand-self similarity, brand distinctiveness, social benefits, and memorable experiences, and it can influence brand loyalty and advocacy [67]. Hence, such brands can influence an individual’s identity despite the individual's not being a formal member of the brand [7]. In addition, previous research suggests that consumers who identify with a brand tend to create positive word of mouth [69]. Therefore consumers who connect themselves with a particular channel tend to co-create value via this channel for several organisations. Therefore, we suggest that socially-excluded individuals develop a strong connection with their preferred channels as these channels not only facilitate consumers’ day to day activities, such as shopping, but also the channels facilitate interaction between shoppers and other individuals and organisations. This increased connection implicitly involves greater participation and the simple act of interacting with others is likely to entail offering feedback to suppliers and reviews or suggestions that may help other shoppers [27]. Thus:

*H2: A higher level of social exclusion will be associated with an individual’s higher (a) connection, (b) participation and (c) citizenship gained through shopping using a specific channel.*

Value co-creation is a form of consumer-centric innovation where consumers are a source of ideas and have an active role in the creation of value for an organization [36, 56] as they are no longer considered as simple respondents to a firm’s action [65, 72, 76]. Organisations invite consumers to

participate in co-creation activities, ranging from new product development to promoting products to their peers. Hence, firms see the co-creation strategy as an opportunity to develop a sustainable competitive advantage [30], though it can be difficult to translate co-creation to a tangible benefit [40]. The main outcomes of co-creation are customer knowledge, perceived quality, satisfaction, and loyalty [30]. Consumers' co-creation value is enhanced when the experience is inspiring, intrinsically motivating, involving and fun [36]. The main benefits for consumers are related to social integrative benefits, such as a sense of belonging to a community as well as hedonic/affective benefits (e.g. enjoyment of the co-creation process) or cognitive benefits (e.g. co-creating products that better serve their needs) [22].

Perhaps not surprisingly, previous research has identified participation and citizenship as two key dimensions of value-co-creation [76]. Each of these dimensions consists of four constructs. Specifically, participation consists of information seeking, information sharing, responsible behaviour and personal interaction, whereas citizenship consists of feedback, advocacy, helping and tolerance.

The process of value co-creation is facilitated by the channel that individuals use in order to communicate with an organisation and other customers and it is also influenced by the connection and the identification with a brand. Self-connection concerns the strength of the link between the self and a particular brand [20]. Consumers connect themselves with the channels not because of the identity of the channel but because it becomes important for them due to its importance in their everyday life. In addition, previous literature suggests that self-connection, and therefore identification with a brand, has a positive effect on extra-role behaviours in relation to the brand, such as the proactive communication of anticipated problems [1]. Therefore, we suggest that due to the importance of the channels in socially excluded individuals' day to day activities, the connection with a channel is an antecedent of the value co-creation process as well as the hedonic and utilitarian value that they gain from the process and the perceived contribution of the channel to their wellbeing.

To manage their social self, consumers both identify and connect with brands [60]. When consumers identify with brands, they reflect some aspect of their already existing self [33]. In comparison, self-brand connection is a consequence of a consumer's proactive construction of self [21]. Connecting with the brand includes not only forming an attitude toward the brand, but also becoming personally attached to it and, sometimes, connecting with the brand in a brand community [60]. Considering that consumers' willingness to participate in value co-creation has a strong proactive component because value co-creation is voluntary and intrinsically motivated, the self-connection to the channel is better suited than the channel identification to explain the relevant mediating process between consumers' social exclusion and their willingness to participate in value co-creation.

Value co-creation can address one of the main difficulties of online shopping, the translation of in-store experience to the online environment, as it can enhance customer engagement [8] and contribute to the integrated experience that multi-channel shopping requires. Previous research on branding suggests that self-connection with a brand enhances value co-creation [9]. In contrast, the lack of some elements of value co-creation, such as advocacy, can lead to customers' dissatisfaction [48]. Park and Sejin [52] demonstrate that customers' co-creation experiences for service recovery, in which the issues are addressed satisfyingly, generate not only utilitarian value but also hedonic value. The arguments lead to:

*H3: Greater connection with a channel positively impacts on an individual's (a) participation and (b) citizenship through a specific channel.*

*H4: Greater participation positively affects the perceived (a) hedonic experience and (b) utilitarian experience acquired by co-creating value through a channel.*

*H5: Citizenship positively affects the perceived (a) hedonic experience and (b) utilitarian experience acquired by a channel.*

*H6: (a) Participation and (b) citizenship positively affect a channel's contribution to an individual's wellbeing.*

Shopping has both hedonic and utilitarian value for consumers [2]. Previous studies suggest that the utilitarian value of co-creation refers to a customer's evaluation of how efficient and useful co-creation has been in meeting one's needs, whereas the hedonic value of co-creation includes a customer's intrinsic, emotional, and social reward from the collaboration [30]. The main outcome for shoppers who have made a purchase is the hedonic value of accomplishing a task, whereas the main outcome for those who did not make a purchase is utilitarian value, such as what arises from knowledge acquisition [58].

Value-creation enhances customers' wellbeing [24] as it can satisfy the psychological needs for competence, autonomy and a sense of relatedness [15]. Previous research suggests that traditional out-of-home shopping contributes to consumers' wellbeing [28]. Park and Ha [30] found that the utilitarian value of co-creation influences the perceived equity that the customer receives as well as the degree of affect, whereas hedonic value from value co-creation influences only customers' affect. Functional attributes no longer exclusively drive online buying, and enjoyment is a strong predictor of attitude toward online shopping, making social and hedonic motives important not only for shopping in general but for e-shopping too [13]. The instrumental aspects of new media are important predictors of online attitudes, but the more immersive, hedonic aspects play at least an equal role [13]. So, the former distinction between offline hedonic shopping value and online utilitarian shopping no longer applies [68]. As such, an attempt to treat online shopping media as cold information systems, rather than immersive, hedonic environments, is likely to be fundamentally misguided, especially when it comes to products that exhibit strong hedonic attributes [13]. Hedonic [54] and utilitarian [50] beliefs influence channel-switching behaviour in traditional retailing, whereas utilitarian beliefs influence attitudes towards channel-switching in online retailing [54]. Previous research suggests that shopping at the mall can benefit consumers' life in general, and their social, leisure, and community life in particular, and this can enhance their loyalty to this particular shopping channel [28]. This leads to:

*H7: The perceived (a) hedonic experience and (b) utilitarian experience acquired by co-creating value through a channel positively impacts on a channel's contribution to an individual's wellbeing.*

### ***Mobility/disability***

The characteristics of the consumers have a significant effect on consumers' day to day activities, such as shopping and interaction with other individuals, and in particular on their behaviour towards the incorporation of technology in them [16]. In particular, mobility issues or disabilities may negatively impact on attitudes and technology efficacy. For consumers with such characteristics, online shopping can also be a form of vicarious consumption, facilitated in particular by imagery that can evoke positive affective responses, especially on occasions when the actual consumption and interaction with other individuals is not feasible, due to cost, risk [44] or other restrictive factors such as lack of accessibility to shopping outlets or social communities. Hence, electronic retailing (either using a computer-based approach or a mobile phone based one) may offer an alternative means for alleviating the underlying obstacles and at least partly offsetting the negative impact of social exclusion [64]. This is because it is expected that virtual shopping channels may be more accessible than traditional out-of-home stores for disabled shoppers [18]. Mobility disabilities can hinder shoppers' efforts to obtain the benefits of traditional out-of-home store shopping [31], leading to lower hedonic experience value and wellbeing [19]. Online shopping may enhance experience value and wellbeing [14]. Therefore:



*H8: Mobility/Disability moderates the previous relationships such that, for smart shopping channels where consumers use a computer or a mobile phone, and interact via social commerce, the relationships are stronger for shoppers with a mobility disability than for those without such a disability.*

Figure 1 presents the conceptual framework.

*Insert Figure 1 here*

It is expected that a number of other relationships are likely. Self-connection may have direct positive influences on the 'downstream' endogenous variables. It is implicit in the hypothesized model that self-connection with a channel influences channel contribution to wellbeing indirectly through co-creation, hedonic and utilitarian value. Direct relationships from self-connection to these variables are also expected. Aherne and colleagues [39] find that self-connection leads to greater in-role and extra-role behaviours by customers. In-role behaviour refers to product utilisation, which should lead to greater utilitarian value. Extra-role behaviours include co-creation activities such as word-of-mouth, helping other customers and helping the organization with feedback. Carrying out such good works leads to social identity fulfilment [39], which should help customers to gain hedonic value and improved wellbeing [59]. Some evidence suggests that the positive emotions associated with gaining hedonic value can improve shopping efficiency and thus also boost utilitarian value [12]. In the interests of clarity, brevity and readability, these additional paths are omitted from the conceptual diagram whilst still being briefly explored in the data analysis.

## Method

A quantitative survey approach was taken in order to address the research aim. The project was carried out in the United States of America (USA) using an online survey. The USA was selected as the location of the study as it is the largest online market in the world in terms of consumer spending [45]. Four different channels were considered: traditional out-of-home channel, web-based using a computer (electronic commerce) or a mobile phone (mobile commerce), and via social media (social commerce).

In order to generate a balanced sample in terms of gender, age and area of residence we recruited participants through a market research company. Careless completion and other common errors in online surveys [6] were tested by common method bias controls as well as by controlling the setting of the online surveys (e.g. not allowing incomplete responses) respectively. In total, 1220 consumers participated in the study in summer 2014. The demographic and socioeconomic profile of the participants is presented in Table 1. To facilitate assessment of the moderating effects of mobility disability, the sample was split based on two-step cluster analysis, which classified respondents into two groups, namely, no or minor mobility/disability issues and major mobility/disability issues.

*Insert Table 1 here*

In addition to the usual profile information, respondents were asked to state degrees of disability/mobility and social exclusion. A two-item, seven-point scale adapted from Shepherd [63] defined and measured disability issues, reflecting the degree to which an individual encounters issues or symptoms on a continual basis that may require practical social support. Four items for social exclusion reflect loneliness and lack of social interaction [42]. Respondents were also asked whether or not they used mobile and social commerce for shopping purposes. Channel-related questions concerned the two dimensions of value co-creation, namely participation and citizenship and their sub-dimensions [76]. Self-connection to channel was measured using 3 items [21]. For participation these dimensions included information sharing, personal interaction and responsible behaviour, measured with 2, 4, 3 items respectively [76]. Similarly, for citizenship we measured advocacy, helping, feedback and tolerance with 2 items each, except for tolerance, for which 3 items were used [76]. Also, participation, hedonic and utilitarian experience values were each measured with 4 items [73]. Finally, channel contribution to wellbeing was measured with three items [28]. These channel-related questions were each asked four times and, therefore, the questions were adapted and repeated for each of the four shopping channels. Table 2 presents the items that measured each construct and the factor loadings.

*Insert Table 2 here*

## Results

### *Construct quality*

The first part of the analysis aimed to confirm the dimensions of the value co-creation structure as a second-order factor. Prior to the development of value co-creation as a multi-dimensional construct, we tested the direct effect of social exclusion and self-connection with the channel on the three dimensions of participation and the four dimensions of citizenship, as well as the effect of these dimensions on hedonic and utilitarian experience and also the perceived contribution of a channel to wellbeing (i.e. a conventional first-order model). The results revealed correlations of the dimensions of value co-creation among each other, in support of the hypothesized second-order factor approach, which accounts for relationships among the lower-order factors [12].

### *Analysis proceeded by testing value co-creation as a multi-dimensional construct*

First, the study tested the factorial validity of the two dimensions of value co-creation, namely, participation and citizenship. This step examined the first-order confirmatory factor analysis (CFA) model design, which suggests that participation comprises four factors, namely, information seeking, information sharing, responsible behaviour and personal interaction; and citizenship comprises four factors, namely advocacy, feedback, helping and tolerance. Consistent with previous literature [76], the three and the four factors respectively were correlated, indicating the higher-order constructs of participation and citizenship. The first run after introducing the second-order factor indicated acceptable model fit (TR:  $\chi^2(38) = 182.916$ , CFI = .988, and RMSEA = .056; EC:  $\chi^2(38) = 204.418$ , CFI = .989, and RMSEA = .060; MB:  $\chi^2(38) = 114.061$ , CFI = .981, and RMSEA = .075, SC:  $\chi^2(38) = 177.489$ , CFI = .944, and RMSEA = .129). The next step was the calculation of the CFA incorporating the remaining constructs of the model (social exclusion, self-connection, hedonic experience, utilitarian experience, channel contribution to wellbeing). The first run of the model revealed a need for modifications, in order to achieve satisfactory convergent validity as the average variance explained by participation was initially below 0.5. Accordingly, the 'information seeking' factor was dropped from the dimensions of participation. After model re-specification, the statistics indicated good model fit (TR:  $\chi^2(566) = 2284.007$ , CFI = .955, and RMSEA = .050; EC:  $\chi^2(566) = 2445.870$ , CFI = .959, and RMSEA = .052; MB:  $\chi^2(566) = 1430.962$ , CFI = .942, and RMSEA = .065, SC:  $\chi^2(566) = 1407.413$ , CFI = .914, and RMSEA = .08). Discriminant and convergent validity were satisfactory for the four models (Table 3) as the average variance explained for all factors was greater than 0.5 and correlations between the constructs were low. All items loaded significantly under their respective factors, demonstrating good reliability of the scales. The dimensions of participation and citizenship showed correlations among each other, which was expected as the higher-order factors were introduced to account for relationships among the lower-order factors [12]. Similarly, participation and citizenship were themselves correlated, which is again expected as they are dimensions of the same overall concept, co-creation. Nevertheless, the correlations were still within common levels in structural equation modelling studies (levels 0.7 and 0.8) [23].

Kock [34] has demonstrated that even when discriminant validity is satisfactory, common methods bias (CMB) can still be an issue and therefore recommends a full collinearity assessment. Kock & Lynn [35] recommend an upper variance inflation factor (VIF) threshold of 5 for SEM models of this type. The highest VIF is 4.15, therefore CMB is not an issue in the model (Table 4). As further confirmation, we ran the CFA model of the two higher order constructs, participation and citizenship, partialling out a theoretically-unrelated "marker variable" as a surrogate for method variance [43]. The marker variable used is financial stress, measured by three items in our questionnaire [57], on 1 to 7 scales assessing the degree to which financial distress affects respondents' day-to-day activities. The items measuring financial stress were: "How often do you worry about being able to meet normal monthly living expenses?", "How confident are you that you could find the money to pay for a financial emergency that costs about \$1000", and "How often does this happen to you: You want to go out to eat, go to a movie or do something else and don't go because you can't afford to?". In this test, we expected a strong correlation between participation and citizenship as they are both dimensions of value-co-creation and a weak correlation between financial stress and these constructs. The correlations between financial stress and participation as well as between financial stress and citizenship were very weak, significantly weaker than the correlations between citizenship and participation for all channels (Table 5). It is therefore concluded that CMB is not an issue [43, 53].

*Insert Tables 3-4-5 here*

### *Structural Models Results*

Structural equation modelling using IBM SPSS Amos examined the relationships between the concepts that influence value co-creation, either via a traditional channel or online via electronic, mobile or social commerce and the effect that these channels have on shoppers' wellbeing. The analysis was run separately for the four channels. The results for the four models (Table 6) indicated

strong fit. All items loaded significantly under their respective factors, demonstrating good reliability of the scales [26].

*Insert Table 6 here*

The conceptual model and hypotheses H1-H7 are supported except for H2c, H4a and H7b, which are rejected. The findings suggest that social exclusion is not directly associated with value co-creation as the relationship between social exclusion and participation (the first dimension of value co-creation) was negative whereas there was no relationship between social exclusion and citizenship (the second dimension of value co-creation). Hence, consumers who are socially excluded have a negative attitude towards value co-creation. To some extent, this is expected as socially excluded individuals may have other priorities, such as the difficulties that they face in their day to day activities rather than wanting to create value for organizations. However, social exclusion has a positive statistically significant effect on respondents' self-connection with all channels, therefore, for many socially excluded respondents the shopping channel has an important role in their lives. These individuals may consider that the shopping channel that they use helps them to develop a relationship with the retailers from which they buy their products and also that the shopping channels may influence the way that they are perceived by other consumers. This relationship is statistically significant for all the channels.

Self-connection with the channel also has a positive effect on both dimensions of value co-creation. Therefore, consumers who consider the different shopping channels as important in their everyday life are more willing to interact with the retailer and co-create value for themselves, for the retailers and for other customers. Thus, self-connection mediates the relationship between social exclusion and value-co-creation. Socially excluded respondents who consider shopping channels as important in their everyday life are more willing to co-create value by helping other customers. This can potentially help to offset the negative consequences of social exclusion.

Value co-creation via participation contributes to making shopping a hedonic experience. This relationship is significant in the case of electronic and mobile commerce and non-significant in the case of the traditional out-of-home channel and social commerce. The enhanced hedonic experience acquired by co-creating value via a channel makes a significant contribution to the perceived contribution of the channel to consumers' wellbeing for all channels except for mobile commerce. Co-creating value via citizenship makes a significant contribution to making shopping a hedonic experience for all shopping channels except social commerce. Value co-creation via participation enhances the utilitarian experience of consumers through all four channels although value-co-creation via citizenship has a negative effect on the utilitarian experience of shopping.

The relationship between value co-creation through participation and the perceived contribution of the channel to consumers' wellbeing is negative for all channels. Therefore, sharing information with the retailer does not improve respondents' wellbeing. In contrast, the relationship is positive for value co-creation through citizenship. When consumers help other individuals in their decision making they not only create value for the retailer and for other customers but they believe that interacting with other consumers via this channel also creates the perception of a positive contribution of the channel to their own wellbeing. This relationship is statistically significant ( $p < .05$ ) for all the channels except social commerce. Lastly, a few hypotheses were rejected (H2c, H4a, H7b), which could be related to numerous factors. For example, socially excluded consumers may consider themselves as neglected by society ("second class" citizens) and this (H2c being rejected) may reflect their disappointment. Similarly, the key constructs of participation (e.g. information seeking, information sharing) could relate more to utilitarian experience aspects than hedonic experience ones (H4a). In turn, channel contribution to wellbeing could possibly be more associated with hedonic experience aspects than utilitarian ones (H7b).

### *Moderation analysis*

The next step in the analysis was the examination of the moderating effect of experiencing disability/mobility issues on value co-creation and its contribution to respondents' wellbeing, using a multi-group analysis. First, metric invariance was established between the two groups, no or minor mobility disability issues vs. those who report major mobility disability issues. The model demonstrated acceptable fit across the two groups. Structural weights for the two groups in the respective channels are reported in Tables 4 to 7 inclusive.

For respondents who shop using the electronic commerce channel the relationship between social exclusion and self-connection with the channel was stronger for those respondents who experience major mobility issues. In addition, self-connection with the channel has a stronger effect on both dimensions of value co-creation, namely, participation and citizenship, for those with major mobility issues. Finally, the paths from social exclusion to citizenship and from self-connection with the channel to the contribution of the channel to respondents' wellbeing are marginally more significant for the respondents who experience major mobility issues ( $p < .1$ ). Resulting from these significant moderations, shoppers with mobility disabilities believe that the channel makes a greater contribution to their wellbeing by shopping through electronic commerce than do shoppers without disabilities (total effects of social exclusion on channel contribution to wellbeing .21 vs .09 respectively, based on significant paths from Table 7 and significant differences from the multi-group analysis only,  $p < .05$ ; henceforth: 'significant total effects') (Table 7).

*Insert Table 7 here*

In relation to the mobile commerce channel, the path from social exclusion to self-connection with the channel is again more significant for respondents who experience major mobility issues. In addition, the paths from self-connection with the channel to participation and citizenship and from social exclusion to participation are more significant for the respondents with major mobility issues. Respondents who experience major mobility issues consider the relationship between self-connection and hedonic experiences and between the perceived hedonic and utilitarian experiences more significant. The path from participation to perceived utilitarian experiences is marginally more significant for the respondents with major mobility issues and the path from self-connection with the channel and the contribution of the channel to respondents' wellbeing is marginally more significant for respondents without major mobility issues (both  $p < .1$ ). Resulting from the significant moderations, shoppers with mobility disabilities believe that the channel contributes more to their wellbeing when shopping through mobile commerce than do shoppers without disabilities (significant total effects of social exclusion on channel contribution to wellbeing .24 vs .01 respectively) (Table 8).

*Insert Table 8 here*

Respondents who use the social commerce channel and who also experience major mobility issues exhibit some differences in behaviour compared to their no mobility issues counterparts. Specifically, the paths from social exclusion to self-connection with the channel, from self-connection with the channel to participation and to citizenship are more significant for individuals with mobility issues. Resulting from these significant moderations, shoppers with mobility disabilities believe that the channel contributes more to their wellbeing when shopping through social commerce than do shoppers without disabilities (significant total effects of social exclusion on channel contribution to wellbeing .31 vs .10 respectively) (Table 9).

*Insert Table 9 here*

Statistically significant differences were also found between individuals without and with major mobility issues who use the traditional out-of-home channel. The paths from social exclusion to self-connection with the channel, and from self-connection with the channel to participation and

citizenship are more significant for individuals who experience major mobility issues. Finally, the same respondents consider the relationship between participation and the perceived hedonic experiences as more important. Resulting from these significant moderations, shoppers with mobility disabilities believe that the channel contributes more to their wellbeing when shopping through traditional store channels than do shoppers without disabilities (significant total effects of social exclusion on channel contribution to wellbeing .30 vs .13 respectively) (Table 10).

*Insert Table 10 here*

The effects of social exclusion on self-connection, self-connection on participation and self-connection on citizenship are consistently higher for the more disabled respondents, leading to higher total effects of social exclusion on contribution to wellbeing for the disabled compared to non-disabled shoppers for each channel (H8 partially supported).

## **Discussion**

This paper has generated a plethora of unique findings and unveiled a range of issues which require further discussion. Earlier in the paper we argued that online technologies can in principle give rise to more opportunities for establishing and developing partnerships with engaged customers. This can make it possible for customers to become value co-producers, positively influencing their own consumption experience but also that of others. We expected notable differences when it came to how consumers utilise technologies for co-creation among channels or at least between traditional and online ones. Still our results do not offer consistent evidence of such differences. This could be interpreted as indirect evidence that technology itself may not suffice to develop “smart” applications and channels. Instead the focus should be on how innovative technologies can be integrated into the retailers' operations to create tangible benefits.

Also, a key finding from this research is that social exclusion has a positive effect on consumers' self-connection with all channels. This is not surprising as these consumers may not be “integrated” into the society they are part of and these channels provide a prime opportunity to overcome this social exclusion barrier. Hence, socially excluded consumers can identify themselves better with these channels and are keen to use them. This self-connection with the channel has a positive effect for these consumers on both value creation dimensions, i.e. participation and citizenship. In general, consumers want to contribute and be valuable members of society and, equally, they want to have good access to information, be responsible and interact with other citizens by getting involved with helping, providing feedback and supporting each other. Being connected with these channels supports the above positively and, in turn, it enhances value creation for these two dimensions. In addition, we need to emphasize that socially excluded consumers, who value these channels highly, place great importance on the co-creation of value by helping other customers. This is an expected finding as socially excluded consumers have faced major difficulties in their everyday life and they will be very concerned and sensitive about these issues; therefore, they could be willing to support other customers as required. The latter has a subsequent, positive effect on the perceived contribution of the channel to consumers' wellbeing too, as our work found that when consumers help other individuals in their decision making they also contribute positively to their own wellbeing. In addition, value co-creation through participation has a positive role in increasing the utilitarian experience for consumers via these four channels. This is another interesting result. We need to stress that participation consists of four constructs (information sharing, information seeking, responsible behaviour, personal interaction), which seem to underline the value of a utilitarian approach; more importantly, this participation (e.g. via information sharing) can help to overcome traditional barriers for value co-creation encountered by consumers in general and socially excluded consumers in particular; for the latter, we found that sharing information with a retailer does not improve respondents' perception of the contribution of the channel to their wellbeing, which is an expected finding as consumers will share information primarily with other consumers.

Finally, our work has shown the key linkages and relationships between these issues, which are illustrated in a succinct manner in Figure 1. Specifically, our work has demonstrated the impact of social exclusion on self-connection, self-connection on participation and self-connection on citizenship, which was found to be higher for more disabled respondents. Self-connection with the channel was found to have a positive influence on both participation and citizenship, which are key dimensions of value co-creation; in turn, these dimensions result in the generation of hedonic and utilitarian experience and value. Likewise, consumers involved with these activities not only co-create value for the retailer but they contribute to their own wellbeing (see Figure 1) and the latter was supported for the disabled respondents. Overall, our work has noted the clear association between social exclusion and well-being, it has highlighted a set of interconnections and stressed the major, fundamental differences in terms of the above between disabled and non-disabled respondents.

## Conclusions

The findings contribute to theory by highlighting the importance of value co-creation in enhancing the perceived hedonic shopping experience; the contribution that this makes to consumers' wellbeing as well as the role that different shopping channels can have in this process. Hence, this research has confirmed and extended past work by Van Boven and Gilovich [71] and Caprariello and Reis [11], who demonstrated that the shopping experience can lead to greater happiness. More importantly, the current study found this relationship to be especially strong for consumers with mobility disabilities via the examination of various shopping channels. These consumers represent a market segment which has not previously attracted major attention by academic scholars in relation to the topic under examination. In addition, the findings build on the work of Babin, Darden, Griffin [2] by demonstrating that consumers with mobility disabilities can gain relevant hedonic and utilitarian experiences via the use of various shopping channels, with in-principle varying degrees of "smart" potential. This latter makes a unique contribution to the literature in relation to this consumer segment. Nevertheless, socially-excluded consumers seem to have a negative attitude towards value co-creation and this represents another original finding of this work.

For all four channels, disabled shoppers believe that the channel contributes more to their wellbeing when shopping through the respective channels than do shoppers without disabilities. The effect for traditional out-of-home shopping is understandably relatively low, reflecting the physical access difficulties of this channel. However, the effect is even lower for conventional electronic commerce, whereas it is highest for mobile commerce. Conventional online shopping using a computer may tend to have the effect of isolating individuals, whereas mobile commerce offers mobility, reachability [74] and the shopping value of the touchscreen interface [3]. Mobile commerce and, to a lesser extent, social commerce, are now established as channels where consumers can co-create value and build wellbeing, which is particularly valuable for shoppers with disabilities.

This work has also generated numerous implications for managers and policy makers. Specifically, consumers who are socially excluded represent a market segment which has not been targeted by managers in the past. This study has shown that these consumers consider the shopping channel they use to be an ideal platform for developing a relationship with the retailers from whom they buy products. Managers have a great opportunity to capitalize on this finding by nurturing and developing a relationship with these consumers. Additionally, both electronic and mobile commerce channels make shopping a hedonic experience during the value co-creation process via participation; hence, managers could target these consumers via these two channels in order to support value co-creation initiatives in their firms. Another major finding is the role of value co-creation via participation, which seems to enhance the utilitarian experience of consumers through all four channels. Based on this, managers are advised to disseminate relevant information to these consumers in order to maximize their input during the value co-creation process (e.g. new product development for their own brands etc.). Electronic commerce is also a major channel for consumers with disabilities and managers should make use of this channel to connect successfully with these consumers in order to maximize their contribution during value co-creation opportunities.



Retailers can benefit from the value that consumers can create and therefore they need to encourage this interaction by focusing on the benefits that this participation can have for the respondents. In order to target shoppers with mobility disabilities and encourage value co-creation from this consumer group, retailers should highlight the important role of particular shopping channels in their lives.

The work will also be of significant interest to policymakers. Specifically, the findings have revealed that socially excluded consumers who perceive shopping channels as important in their life are more willing to co-create value by helping other consumers. Policymakers could capitalize on this finding by connecting these socially excluded consumers with other consumers who may require their input and support; by doing so, these consumers will feel less isolated and more integrated in the community. More importantly, policymakers need to be aware that when these consumers help other individuals in their decision making, they contribute positively to their own wellbeing too. Likewise, policymakers should be aware that shoppers with mobility disabilities believe that the channel contributes more to their wellbeing when shopping through either electronic or mobile commerce than do shoppers without disabilities. These two channels are becoming increasingly popular and they can be utilized accordingly by policymakers aiming to improve wellbeing and consumer welfare standards.

Finally, this work has some limitations. Specifically, it examined four specific shopping channels. Further research should consider other channels and “smart” technological devices, especially tablets, which are becoming a key device for shopping. Future research could also consider other national environments to examine whether the findings of this work have further generalizability. Further longitudinal studies will also be invaluable for confirming or extending the role of the interconnections proposed in this paper, especially the finding that, for smart shopping channels where consumers use a computer or a mobile phone, the contributions of value co-creation to consumer wellbeing are stronger for shoppers with a mobility disability than for those without such a disability.

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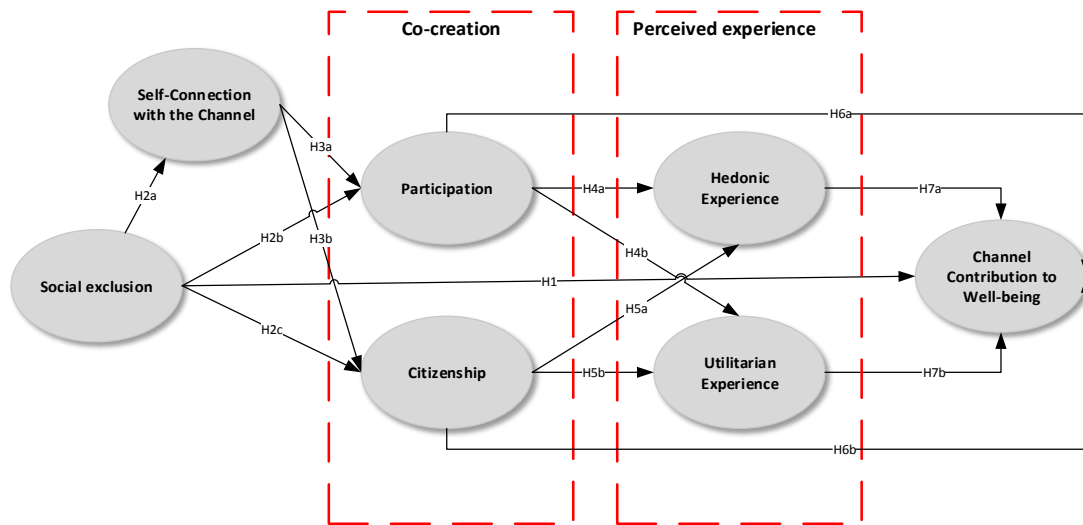
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**Figure 1: Conceptual Framework**



*Note: H8: All relationships are stronger for consumers who encounter mobility issues*

**Table 1: Participants' profile**

Characteristic	Frequency	%	Characteristic	Frequency	%
<b>Gender</b>			<b>Age</b>		
Male	547	44.8% (48.7%*)	20-39	379	31.1% (36.5%*)
Female	673	55.2% (51.3%*)	40-59	434	35.5% (35.5%*)
Total	1220	100%	60 or over	407	33.4% (28%*)
			Total	1220	100%
<b>Mobile Commerce Use</b>			<b>Area of residence</b>		
Yes	358	29.3%	Urbanized area	466	38.2%
No	862	70.7%	Urban cluster	386	31.6%
Total	1220	100%	Rural	368	30.2%
			Total	1220	100%
<b>Social Commerce Use</b>			<b>Disability/Mobility</b>		
Yes	223	18.3%	No or minor disability/mobility issues	726	59.5%
No	997	81.7%	Major disability/mobility issues	494	40.5%
Total	1220	100%	Total	1220	100%

\*Population (Source: [70])

**Table 2: Items and Loadings**

Construct	Source	Loading			
		TR <sup>1</sup>	EC <sup>2</sup>	MB <sup>3</sup>	SC <sup>4</sup>
<b>Social Exclusion</b>					
I lack companionship	[42]	.788	.788	.851	.858
I feel left out.	[42]	.935	.935	.954	.971
I feel isolated from others.	[42]	.954	.954	.969	.951
I am unhappy being so withdrawn.	[42]	.864	.863	.874	.903
<b>Self-Connection with Channel</b>					
Shopping (via channel) reflects who I am.	[21]	.821	.862	.877	.891
When I shop (via channel) I feel a personal connection to the retailer.	[21]	.864	.865	.919	.915
I consider shopping (via channel) to be “me” (it reflects who I consider myself to be or the way that I want to present myself to others).	[21]	.880	.912	.912	.897
<b>Value Co-Creation - Dimension 1 - Participation</b>					
<b>Information Sharing</b>					
I give a retailer proper information.	[76]	.873	.895	.878	.904
I answer all the service-related questions by a retailer.	[76]	.863	.903	.893	.899
<b>Personal Interaction</b>					
I am friendly to the retailer	[76]	.939	.958	.919	.878
I am kind to the retailer.	[76]	.928	.967	.962	.927
I am polite to the retailer.	[76]	.945	.965	.932	.929
I do not act rudely to the retailer.	[76]	.816	.877	.838	.850
<b>Responsible Behaviour</b>					
When I interact with a retailer (via channel) I follow the retailer’s directives or orders.	[76]	.893	.942	.937	.937
When I interact with a retailer (via channel) I fulfil my responsibilities to the retailer.	[76]	.942	.960	.940	.946
When I interact with a retailer (via channel) I perform all the tasks that are required.	[76]	.916	.933	.910	.895
<b>Value Co-Creation - Dimension 2 - Citizenship</b>					
<b>Advocacy</b>					
I recommend a retailer to others.	[76]	.895	.920	.908	.925
I encourage friends and relatives to use a retailer.	[76]	.945	.936	.917	.958
<b>Helping</b>					
I help other customers of a retailer if they seem to have problems.	[76]	.820	.877	.878	.904
I give advice to other customers of a retailer.	[76]	.822	.912	.911	.834
<b>Feedback</b>					
If I have a useful idea on how to improve service, I let a retailer know.	[76]	.707	.753	.834	.836
When I experience a problem, I let a retailer know about it.	[76]	.647	.660	.788	.836
<b>Tolerance</b>					
If the service by a retailer is not delivered as expected, I am willing to put up with it and not make comments about it.	[76]	.804	.882	.936	.931
If a retailer makes a mistake during service delivery, I am willing to be patient and not make comments about it.	[76]	.906	.942	.936	.963
If I have to wait longer than I normally expect to receive the service by a retailer, I am willing to adapt and not make comments about it.	[76]	.854	.896	.920	.943
<b>Shopping Experience</b>					
<b>Hedonic Experience</b>					
Not Amusing: Amusing	[73]	.798	.805	.827	.844
Not Thrilling: Thrilling	[73]	.887	.893	.929	.920
Not Delightful: Delightful	[73]	.922	.925	.953	.955
Dull: Exciting	[73]	.877	.888	.870	.920
<b>Utilitarian Experience</b>					
Ineffective: Effective	[73]	.761	.866	.887	.865
Harmful: Beneficial	[73]	.799	.858	.850	.867
Inefficient: Efficient	[73]	.841	.928	.913	.890
Not Handy: Handy	[73]	.836	.879	.888	.889
<b>Channel Contribution to Wellbeing</b>					
Shopping (via channel) plays a very important role in my social wellbeing.	[28]	.929	.940	.942	.921
Shopping (via channel) plays a very important role in my leisure wellbeing.	[28]	.932	.898	.935	.951
Shopping (via channel) plays an important role in enhancing the quality of my life in my community.	[28]	.878	.927	.924	.926

<sup>1</sup>Traditional Retailing; <sup>2</sup>Electronic Commerce; <sup>3</sup>Mobile Commerce; <sup>4</sup>Social Commerce

**Table 3: Discriminant Validity and Average Variance Explained**

Traditional Out-of-Home Retailing									
Construct	C.R.	AVE	Participation	Utilitarian	Hedonic	Social Exclusion	Self-Connection	Citizenship	Wellbeing
Participation	.830	.620	.788						
Utilitarian	.884	.656	.508	.810					
Hedonic	.927	.761	.265	.591	.872				
Social Exclusion	.937	.788	-.151	-.190	.003	.888			
Self-Connection	.891	.732	.341	.305	.621	.137	.855		
Citizenship	.867	.630	.732	.364	.505	.033	.664	.794	
Wellbeing	.938	.834	.137	.287	.660	.202	.722	.487	.913
Electronic Commerce									
Construct	C.R.	AVE	Participation	Utilitarian	Hedonic	Social Exclusion	Self-Connection	Citizenship	Wellbeing
Participation	.868	.688	.829						
Utilitarian	.934	.780	.618	.883					
Hedonic	.931	.772	.345	.548	.879				
Social Exclusion	.936	.788	-.089	-.114	.089	.887			
Self-Connection	.911	.774	.307	.324	.685	.191	.880		
Citizenship	.865	.623	.747	.412	.554	.088	.653	.790	
Wellbeing	.944	.850	.118	.180	.622	.254	.821	.547	.922
Mobile Commerce									
Construct	C.R.	AVE	Participation	Utilitarian	Hedonic	Social Exclusion	Self-Connection	Citizenship	Wellbeing
Participation	.908	.769	.877						
Utilitarian	.935	.783	.677	.885					
Hedonic	.942	.803	.582	.761	.896				
Social Exclusion	.953	.834	.060	.099	.203	.913			
Self-Connection	.930	.815	.570	.515	.702	.307	.903		
Citizenship	.923	.750	.804	.563	.701	.205	.783	.866	
Wellbeing	.953	.872	.412	.406	.643	.321	.870	.722	.934
Social Commerce									
Construct	C.R.	AVE	Participation	Utilitarian	Hedonic	Social Exclusion	Self-Connection	Citizenship	Wellbeing
Participation	.911	.774	.880						
Utilitarian	.931	.771	.684	.878					
Hedonic	.951	.829	.512	.863	.911				
Social Exclusion	.958	.850	.086	.166	.194	.922			
Self-Connection	.928	.812	.605	.698	.757	.252	.901		
Citizenship	.900	.698	.835	.580	.578	.159	.782	.835	
Wellbeing	.953	.870	.422	.622	.736	.324	.847	.637	.933

The diagonal of the table presents the square root of AVE. Numbers below the diagonal represent the correlations between the factors



**Table 4: Multicollinearity Test**

Regression Model Variable	VIF			
	Traditional Retailing	Electronic Commerce	Mobile Commerce	Social Commerce
Social Exclusion	1.093	1.078	1.122	1.079
Self-Connection	1.874	2.079	2.523	3.163
Participation	1.879	2.173	2.566	2.847
Citizenship	2.241	2.391	3.221	3.636
Hedonic	1.982	2.140	3.110	4.148
Utilitarian	1.697	1.867	2.631	4.112

**Table 5: Common Methods Bias Test**

Covariance	Traditional Retailing		Electronic Commerce		Mobile Commerce		Social Commerce	
	T test	Correlation	T test	Correlation	T test	Correlation	T test	Correlation
(1) Citizenship ↔ Participation	15.015***	.784	16.915***	.805	9.837***	.818	8.149***	.837
(2) Citizenship ↔ Financial Stress	2.160*	.074	.142ns	.005	.065ns	.004	-1.478ns	-.117
(3) Participation ↔ Financial Stress	3.914***	.139	1.569ns	.053	.265ns	.017	-.727ns	-.058
T-test for differences between parameters	TR <sup>1</sup>		EC <sup>2</sup>		MB <sup>3</sup>		SC <sup>4</sup>	
(2) – (1)	-9.578		-12.547		-7.032		-6.323	
(3) – (1)	-8.999		-11.599		-6.712		-5.994	

<sup>1</sup>Traditional Retailing; <sup>2</sup>Electronic Commerce; <sup>3</sup>Mobile Commerce; <sup>4</sup>Social Commerce

**Table 6: Structural Equation Models**

Path	TR <sup>1</sup>	EC <sup>2</sup>	MB <sup>3</sup>	SC <sup>4</sup>
	Coef.(t-test)	Coef.(t-test)	Coef.(t-test)	Coef.(t-test)
Social Exclusion -> Self-Connection	.131(4.220***)	.189(6.181***)	.309(5.641***)	.254(3.650***)
Self-Connection -> Participation	.418(11.291***)	.377(11.305***)	.659(11.548***)	.676(9.122***)
Self-Connection -> Citizenship	.721(19.149***)	.714(19.421***)	.834(13.182***)	.832(12.958***)
Social Exclusion -> Participation	-.222(-7.022***)	-.181(-5.848***)	-.145(-2.894**)	-.087(-1.439ns)
Social Exclusion -> Citizenship	-.014(-.535ns)	.009(.330ns)	-.040(-.974ns)	-.039(-.770ns)
Participation -> Hedonic	-.018(-.564ns)	.096(3.266**)	.156(2.546*)	.072(.859ns)
Citizenship -> Hedonic	.175(3.676***)	.093(2.141*)	.257(2.743**)	-.147(-1.183ns)
Self-Connection -> Hedonic	.502(11.165***)	.592(14.323***)	.411(4.892***)	.833(7.105***)
Hedonic -> Utilitarian	.649(16.627***)	.495(14.077***)	.684(10.788***)	.698(9.769***)
Participation -> Utilitarian	.499(12.685***)	.585(17.734***)	.482(8.185***)	.448(6.814***)
Citizenship -> Utilitarian	-.209(-4.446***)	-.277(-6.523***)	-.268(-3.103**)	-.254(-2.883**)
Self-Connection -> Utilitarian	-.131(-2.885**)	-.014(-.326ns)	-.036(-.458ns)	.079(.806ns)
Social Exclusion -> Channel Contribution to Wellbeing	.100(4.626***)	.059(3.148**)	.028(.884ns)	.097(2.365*)
Participation -> Channel Contribution to Wellbeing	-.184(-5.110***)	-.261(-7.628***)	-.293(-4.681***)	-.279(-2.615**)
Citizenship -> Channel Contribution to Wellbeing	.087(2.145*)	.226(5.957***)	.283(3.638***)	.103(.913ns)
Self-Connection -> Channel Contribution to Wellbeing	.489(11.974***)	.629(16.820***)	.749(10.155***)	.724(6.063***)
Hedonic -> Channel Contribution to Wellbeing	.343(8.793***)	.135(4.171***)	.060(.890ns)	.211(1.685#)
Utilitarian -> Channel Contribution to Wellbeing	.017(.479ns)	.003(.077ns)	.008(.125ns)	.044(.301ns)

<sup>1</sup>Traditional Retailing: Method: ML; Model fit:  $\chi^2(569)=2623.315$ ,  $CMIN/DF=4.610$ ,  $CFI=.946$ ,  $RMSEA=.054$ .

<sup>2</sup>Electronic Commerce: Method: ML; Model fit:  $\chi^2(569)=2834.675$ ,  $CMIN/DF=4.982$ ,  $CFI=.951$ ,  $RMSEA=.057$ .

<sup>3</sup>Mobile Commerce: Method: ML; Model fit:  $\chi^2(569)=1539.507$ ,  $CMIN/DF=2.706$ ,  $CFI=.935$ ,  $RMSEA=.069$ .

<sup>4</sup>Social Commerce: Method: ML; Model fit:  $\chi^2(569)=1487.033$ ,  $CMIN/DF=2.613$ ,  $CFI=.906$ ,  $RMSEA=.085$ .

Significant at p: ns = > .1; # = < .1; \* = < .05; \*\* = < .01; \*\*\* = < .001

**Table 7: Electronic Commerce: Moderation: Mobility**

Path	$\Delta\chi^2$	Sig	No Major Mobility Issues Coef.(t-test)	Major Mobility Issues Coef.(t-test)
Social Exclusion -> Self-Connection	10.476	***	.043(1.093ns)	.251(5.164***)
Self-Connection -> Participation	17.543	***	.278(6.362***)	.518(10.164***)
Self-Connection -> Citizenship	8.991	**	.644(13.806***)	.803(13.578***)
Social Exclusion -> Participation	0.847	ns	-.145(-3.550***)	-.134(-2.896**)
Social Exclusion -> Citizenship	3.211	#	-.034(-.957ns)	.011(.298ns)
Participation -> Hedonic	.49	ns	0.085(2.184*)	.113(2.349*)
Citizenship -> Hedonic	.034	ns	.091(1.772#)	.104(1.219ns)
Self-Connection -> Hedonic	.414	ns	.591(11.942***)	.571(7.340***)
Hedonic -> Utilitarian	.021	ns	.477(10.245***)	.532(9.988***)
Participation -> Utilitarian	1.493	ns	.517(11.738***)	.655(12.636***)
Citizenship -> Utilitarian	.041	ns	-.280(-5.410***)	-.205(-2.636**)
Self-Connection -> Utilitarian	1.592	ns	.054(1.038ns)	-.148(-1.993*)
Social Exclusion -> Channel Contribution to Wellbeing	1.533	ns	.042(1.720#)	.069(2.353*)
Participation -> Channel Contribution to Wellbeing	1.536	ns	-.287(-6.647***)	-.228(-3.814***)
Citizenship -> Channel Contribution to Wellbeing	2.368	ns	.253(5.490***)	.168(2.385*)
Self-Connection -> Channel Contribution to Wellbeing	3.224	#	.591(12.893***)	.710(10.174***)
Hedonic -> Channel Contribution to Wellbeing	.344	ns	.140(3.381***)	.134(2.459*)
Utilitarian -> Channel Contribution to Wellbeing	.372	ns	.048(1.145ns)	-.073(-1.244ns)

Significant at p: ns = > .1; # = < .1; \* = < .05; \*\* = < .01; \*\*\* = < .001

**Table 8: Mobile Commerce: Moderation: Mobility**

Path	$\Delta\chi^2$	Sig	No Major Mobility Issues Coef.(t-test)	Major Mobility Issues Coef.(t-test)
Social Exclusion -> Self-Connection	17.269	***	-.033(-.423ns)	.469(5.972***)
Self-Connection -> Participation	20.192	***	.488(6.441***)	.838(9.937)
Self-Connection -> Citizenship	7.154	**	.764(8.644***)	.906(10.505***)
Social Exclusion -> Participation	5.196	*	-.176(-2.458*)	.08(-1.208ns)
Social Exclusion -> Citizenship	2.444	ns	-.099(-1.609ns)	-.033(-.574ns)
Participation -> Hedonic	..242	ns	.195(2.252*)	-.042(-.396ns)
Citizenship -> Hedonic	1.703	ns	.288(2.281*)	.145(.926ns)
Self-Connection -> Hedonic	5.523	*	.312(2.915**)	.722(4.366***)
Hedonic -> Utilitarian	4.604	*	.610(7.294***)	.784(7.564***)
Participation -> Utilitarian	3.162	#	.433(5.308***)	.591(5.912***)
Citizenship -> Utilitarian	1.909	ns	-.242(-2.021*)	-.401(-2.868**)
Self-Connection -> Utilitarian	2.586	ns	.011(.112ns)	-.041(-.257ns)
Social Exclusion -> Channel Contribution to Wellbeing	.163	ns	.029(.726ns)	.034(.608ns)
Participation -> Channel Contribution to Wellbeing	.748	ns	-.201(-2.881**)	-.628(-3.345***)
Citizenship -> Channel Contribution to Wellbeing	.383	ns	.151(1.660#)	.743(3.857***)
Self-Connection -> Channel Contribution to Wellbeing	3.720	#	.798(9.435***)	.562(2.892**)
Hedonic-> Channel Contribution to Wellbeing	1.250	ns	.135(1.867#)	-.222(-1.132ns)
Utilitarian-> Channel Contribution to Wellbeing	.193	ns	-.060(-.866ns)	.346(1.805#)

Significant at p: ns = > .1; # = < .1; \* = < .05; \*\* = < .01; \*\*\* = < .001

**Table 9: Social Commerce: Moderation: Mobility**

Path	$\Delta\chi^2$	Sig	No Major Mobility Issues Coef.(t-test)	Major Mobility Issues Coef.(t-test)
Social Exclusion -> Self-Connection	5.097	*	.011(.102ns)	.360(3.746***)
Self-Connection -> Participation	17.509	***	.514(4.391***)	.809(8.040***)
Self-Connection -> Citizenship	11.301	***	.714(7.771***)	.925(10.150***)
Social Exclusion -> Participation	2.055	ns	-.114(-1.127ns)	-.036(-.496ns)
Social Exclusion -> Citizenship	.368	ns	-.019(-.229ns)	-.045(-.717ns)
Participation -> Hedonic	1.941	ns	-.113(-.962ns)	.267(2.050*)
Citizenship -> Hedonic	.072	ns	-.110(-.815ns)	-.132(-.553ns)
Self-Connection -> Hedonic	.196	ns	.913(7.575***)	.650(2.543*)
Hedonic -> Utilitarian	.105	ns	.787(6.705***)	.620(6.992***)
Participation -> Utilitarian	.264	ns	.303(2.899**)	.574(5.993***)
Citizenship -> Utilitarian	.026	ns	-.123(-1.066ns)	-.346(-2.149*)
Self-Connection -> Utilitarian	.003	ns	.008(.059ns)	.129(.723ns)
Social Exclusion -> Channel Contribution to Wellbeing	.000	ns	.069(1.231ns)	.063(.964)
Participation -> Channel Contribution to Wellbeing	.007	ns	-.190(-1.763#)	-.583(-2.061*)
Citizenship -> Channel Contribution to Wellbeing	.135	ns	.099(.928ns)	.113(.409ns)
Self-Connection -> Channel Contribution to Wellbeing	.000	ns	.796(6.094***)	.809(2.948**)
Hedonic -> Channel Contribution to Wellbeing	1.043	ns	.186(1.241ns)	.149(.559ns)
Utilitarian -> Channel Contribution to Wellbeing	1.116	ns	.083(-.618ns)	.336(.848)

Significant at p: ns = > .1; # = < .1; \* = < .05; \*\* = < .01; \*\*\* = < .001

**Table 10: Traditional Retailing: Moderation: Mobility**

Path	$\Delta\chi^2$	Sig	No Major Mobility Issues Coef.(t-test)	Major Mobility Issues Coef.(t-test)
Social Exclusion -> Self-Connection	16.199	***	-.025(-.614ns)	.234(4.749***)
Self-Connection -> Participation	8.959	**	.390(7.901***)	.496(9.057***)
Self-Connection -> Citizenship	4.992	*	.664(13.764***)	.796(13.579***)
Social Exclusion -> Participation	1.765	ns	-.179(-4.275***)	-.128(-2.695**)
Social Exclusion -> Citizenship	2.063	ns	-.053(-1.498ns)	-.023(-.562ns)
Participation -> Hedonic	5.884	**	-.085(-1.950#)	.001(.021ns)
Citizenship -> Hedonic	2.637	ns	.159(2.849**)	.286(3.009**)
Self-Connection -> Hedonic	.182	ns	.533(9.728***)	.421(5.196***)
Hedonic -> Utilitarian	1.625	ns	.672(13.031***)	.623(9.748***)
Participation -> Utilitarian	.874	ns	.451(8.588)	.482(7.672***)
Citizenship -> Utilitarian	2.232	ns	-.212(-3.769***)	-.132(-1.353ns)
Self-Connection -> Utilitarian	1.59	ns	-.131(-2.271*)	-.129(-1.590ns)
Social Exclusion -> Channel Contribution to Wellbeing	2.07	ns	.062(2.235*)	.138(4.006***)
Participation -> Channel Contribution to Wellbeing	.049	ns	-.184(-3.948***)	-.188(-3.311***)
Citizenship -> Channel Contribution to Wellbeing	.847	ns	.103(2.130*)	.056(.688ns)
Self-Connection -> Channel Contribution to Wellbeing	.743	ns	.486(9.437***)	.503(6.973***)
Hedonic -> Channel Contribution to Wellbeing	1.224	ns	.351(6.884***)	.339(5.503***)
Utilitarian -> Channel Contribution to Wellbeing	.479	ns	.020(.428ns)	.007(.130ns)

Significant at  $p$ : ns = > .1; # = < .1; \* = < .05; \*\* = < .01; \*\*\* = < .001

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