GENERATIONAL DIFFERENCES IN THE ADOPTION AND USE OF MOBILE ELECTRONIC COMMERCE

Research full-length paper

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Abstract

Understanding the way people think and react is paramount for defining how to better serve them with tailored products, services, and marketing strategies. The younger generations have a great dependence on mobile devices and hyper-connectivity, providing a potential for leveraging this tools for adding value. This study aims at exploring the differences between the so-called generations X and Y, so that a general glance can be obtained to define the main factors that should be taken into consideration when adapting mobile technology to such markets via mobile e-commerce. Our observations are based on the qualitative information obtained by undertaking focus group, and applying common tools of Content Analysis. The results suggest that there are indeed important differences in the ICT use between the generations. Additionally, we applied a survey to prioritize constructs, found in the literature, related to adoption and appropriation theories, cultural issues, and quality perception. to propose a general model.

Keywords: Mobile commerce, Generational Differences, IT Adoption and Use.

1   Introduction

Much has been said about the great differences that exist between the Millennium generations (millennials and generation Z), and their predecessors (baby boomers and generation X). These differences are made evident both in work behaviour, and in consumption patterns. This may represent challenges and opportunities particular to the business rules of the current economy.

Ever more often, companies are seeking to reach new markets or add value to the existing ones, by taking advantage of the existence of hyper-connectivity and the huge penetration of mobile devices. Today, close to every transaction is available, not only on the Internet, but on applications for mobile phones. However, can it be assured that all people are adopting and using the mobile technology, particularly mobile electronic commerce, to the same degree, and in the same fashion? Most likely that is not the case, and generational differences may become an important factor affecting our previous knowledge of information technology (IT) adoption and use.

Older generations have been historically reticent to adopt IT innovations. Sometimes, the technology penetration has forced them to adopt IT to obtain services in a manner that may be uncomfortable for them. On the other hand, it is possible that companies take for granted that young individuals will embrace mobile applications and purchase options just because there were born in the digital area. Thus, it is important to explore what adaptations should exist to better cater every group, with more adequate technology, and a better focused business strategy.

We pose the following question as the main motivator for our research: *What are the generational differences in the adoption and use of mobile electronic commerce?*

To explore this phenomenon and try to shed some light on this matter, this work reviews several aspects that are relevant for context definition and literature review. A model will be presented, as a result of being adjusted based on the application of mixed methods for information retrieval and analysis, to finally discuss the results and layout an agenda for future research.

1.1   Generational Differences

In the literature, generational groups are defined as subcultures, and among them, there are differences, ranging from their personal grooming to their entertainment and consumption preferences (Maldonado, 2016). This leads to the definition of generations as a set of people, delimited by sharing the same conditions of existence, tastes, and trends. They are classified according to age. The most common classification include the one shown next.

1.1.1   Baby Boomers

They were born between 1946 and 1960, and they tend to be disciplined, orderly, and respectful, with great work stability, and a traditional structure (Mondy, 2005). They are also known as the liberated youth, and they were the creators of the hippie movement in their younger years. Rebel in their youth, they seem to be very peaceful family hierarchs, most of them in the process to retirement. Other, however, remain at the top of the organizational structures of their companies, and they are likely to lead teams full of younger but experienced members.

1.1.2   Generation X

They were born in the decades of the 60s and the 70s. They are characterized by being sceptic, pragmatic, and competitive. They are known as the competitive youth. They start having non-traditional families, and they are strong believers that doing merits, and starting at the bottom, are the best way to achieve and deserve a high rank at the organization. They are supposed to have troubles understanding

their younger co-workers, who seem to want immediate benefits without seeking the long road to earn them.

1.1.3   Generation Y or Millennials

Born in the decades of the 80s and 90s, these individuals are considered the first digital natives (Begazo Villanueva & Fernández Baca, 2015). They are well informed, and they seek immediate rewards, not believing in merit construction. They seem to interact better through social networks than in person, and they deal with a huge amount of information every day. Being digital natives does not necessarily provides them with a better way to discriminate information from the Internet. However, they seem comfortable and well equipped to learn a new technology very easily and quickly.

Fisher and Espejo (2018) found that millennials are compulsive buyers, probably as a result of having grown in a society that is largely driven by consumption, adding other factors that also encourage this behavior such as access to digital channels, and mobile devices, among others.

1.1.4   Generation Z

The members of this generation were born during the present millennium. They tend to be impatient, financially distracted, and very self-learning oriented through the intensive use of the Internet. Capturing their attention is very hard, and they do not have the patience to learn or discuss anything that is not of immediate interest to them. They learn in small chunks, based on whatever they need for a particular task in a particular moment of their life. They have volatile and short relationships, both in the affection field and at work, so they move on very often. They are probably the least understood generation at the moment.

When comparing generations, Medina (2009) states that Baby Boomers are hard working and loyal to their employer, whereas people from Generation X tend to love many transitions, including in their work life. The are the one generation that saw life as it was before IT changed life as we know it, but they adapted to technology and the new ways of interaction. Nonetheless, they do not like the way the millennials live. Millennials are characterized by having unrestrictive access to information, and an short-term results orientation. They are also tech savvy and they tend to do have an online purchase behavior (Ramírez, Arenas, and Rondán, 2012).

This is in alignment with Reisenwitz and Iyer (2009) whose study found that members of Generation Y are more satisfied with the use of Internet than members of Generation X. They went further to discover that members of Generation X have greater brand loyalty and are more risk averse than Millennials.

Barbery Montoya, et al (2018) also identified Risk as an important issue, but more relevant for Baby Boomers, who are afraid of Fraud, and failure of the supplier to deliver what was promised. In their assessment, they find members of Generation X to be consider internet shopping as a viable alternative to physical shops, provided that information can be evaluated without pressure, and there are no lines to pay. Furthermore, millennials consider, in their findings, that physical shopping is generally a waste of time and effort.

According to Masso, Slim and Ahas (2019), spatial mobility declines as age increases, One might think therefore, that the potential for profiting from mobile services would be greater than for those who have no limitations. However, the authors point out that mobility might as well be a function of socio-economic, external, and human internal factors.

Campbell, Campbell, Siedor and Twenge (2015) assert that generations are largely influenced by their immediate predecessor. They also state that personality traits vary, but not so significantly as behav-

iors, and attitudes. Thus, big differences can be found in technology use, and assigning baby names, as well as a tolerance for different lifestyles.

2   Literature Review

In this section, we seek to gain a comprehensive view of the adoption and use of mobile e-commerce by different generations, borrowing from the existing body of knowledge of different themes that may prove relevant.

Since our main intent is to study the generational differences in the adoption and use of a particular technology for a particular purpose, we will start our review from the classical adoption, and appropriation theories. Later on, we will incorporate some aspects about national culture, and web quality, as they may prove useful in exploring and complementing certain aspects of the phenomenon under study.

2.1   Theories of Adoption and Appropriation

A vast number of models have been developed and proposed to explain the IT adoption behaviour in organizations. Some of the most classic ones come from Psychology or other disciplines, and they include the Technology Acceptance Model (TAM) (Davis, 1989), the Theory of Reasoned Action (Fishbein & Azjen, 1975), the Theory of Planned Behaviour (Azjen, 1991), and the Motivational Model (Davis, Bagozzi & Warshaw, 1992), among others.

The individual aspects that affect the adoption and diffusion of innovations have also been studied widely, being perhaps the most representative that of Rogers (1983), who analyzed previous models, and identified five common factors for adoption: relative advantage, compatibility, Observability, Complexity, and Testability.

Venkatesh, Morris, Davis and Davis (2003) performed a review of eight previous models of adoption to obtain a unified view of adoption theory. They established a correspondence among the constructs included in the different models, when applicable, thus consolidating the constructs in a single model that was empirically validated. This model was named "Unified Theory of Acceptance and Use of Technology# (UTAUT). It is comprised by four constructs: Performance Expectancy, Effort Expectancy, Social Influence, and Facilitating Conditions. There are also four moderators in the relationships: Gender, Age, Experience and Voluntariness of Use. There is an extension to this model (UTAUT 2) that adds three constructs to the original model: Hedonic Motivation, Price Value, and Habit. The former refers to the liking or fun attained from working with the technology, the second relates to the cost that the adopter covers, and the latter refers to the their trend to have an automatic behaviour (Venkatesh, Thong & Xu, 2012).

Appropriation is different from adoption because it is by itself a wider concept. It involves not only the adoption of a new technology, but making it a part of one's life, and even adapting it or finding new uses for it. This is far more valuable than simply stopping at the initial adoption stage, especially in an exploratory phase where a richer context means more value to understand a phenomenon, than the statistical rigour that will be necessarily applied at later times to validate the findings.

When it comes to the phenomenon of appropriation, one model that outstands for its clarity and structure is the Technology Appropriation Model proposed by Carroll, Howard, Vetere, Peck, and Murphy (2001). Their model consists of three phases: an initial encounter with the technology as it is implemented, which results in the evaluation of expectations, and in the decision for adoption or no adoption. Second, there is a deeper evaluation that takes place with the use and adaptation of both the user processes, and the technology itself. This might result in either disappropriation, or continuing on to the third phase. In this phase, the technology becomes stable and there are few adaptations. Nonethe-

less, even at this point there may be disappropriation. Later adaptations were made to this model to include a fourth phase that related to the design of the technology. With this addition, the model became a cycle, where the use could actually influence the design of new versions of the technology at hand to better meet their requirements (Carroll, 2004). The early model, however, might result more valuable for the purpose of our research, provided that we do not seek to deepen into the design details of the technology at this point. Carroll's original model is depicted in figure 1.
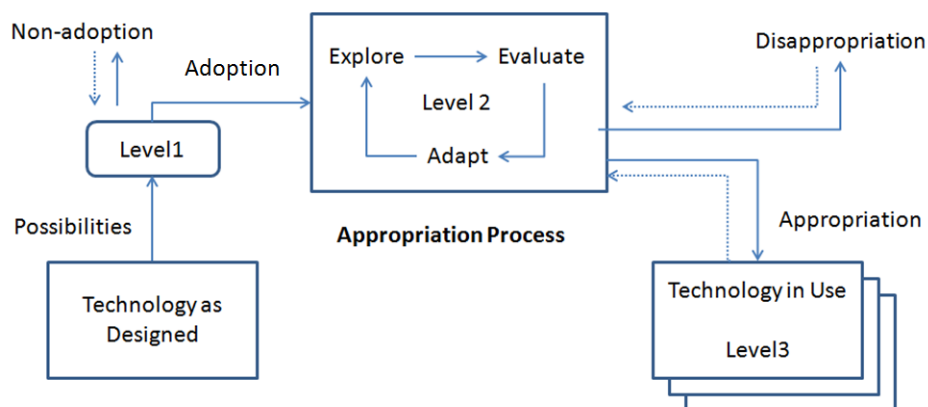

Figure 1.   Technology Appropriation Model (Carroll, et al, 2001).

Beaudry and Pinsonneault (1998) proposed a dual appropriation model, where there should be a fit between IT and the task to perform, along with a fit between IT and the user. These should co-exist for the appropriation to be effective. Additionally, DeSanctis & Poole (1994) emphasized the need for the technology to have a capacity for adaptation.

Provided its degree of comprehensiveness, we take Carroll's model as a basis for our study. This will be complemented by other existing theories and models that may help look further into each of its phases. Since level 1 is directly related to adoption, some elements of those theories reviewed may prove useful. For level 2, it seems that the value, and adaptation needs will be likely dependant on the traits of the individual adopting the technology to finally decide to appropriate. At this point, the alignment between the technology being adopted, its purpose, and the cultural background of an individual may be paramount. It is therefore worth it exploring classic models of national culture, as its elements may be traced down to an individual level of analysis, and it has been widely related to IT use and adoption. Finally, level 3 seems adequate to include technology quality aspects, given the constant use and adaptation that take place at this point. In the following subsection we will revisit the existing literature on culture, and quality.

2.2   Cultural Aspects

One of the most relevant and classic studies in cross-cultural research is that made by Geert Hofstede in 1980. He undertook a work that led to the identification of four National Cultural dimensions that affect the way people work.

2.2.1   Power Distance,

Power distance is the degree of inequality among people which the population of a country considers as normal. This dimension affects the chains of command, and the recognition of authority of a manager. People from cultures with low power distance scores, tend to question the courses of action set by the management, whereas people in high power distance groups tend to be aligned and obedient.

2.2.2 Uncertainty Avoidance

This dimension refers to the degree to which the people in a country prefer structured over unstructured situations. Structured situations are those in which there are clear rules as to how one should behave. People with high uncertainty avoidance scores tend to increase their level of stress when given a task where they need to define the steps themselves. Abstract contexts with uncalculated risks are very uncomfortable for them. They would prefer a routine job with few or no deviations from the norm.

2.2.3 Individualism

Individualism is the degree to which people in a country prefer to act as individuals rather than as members of groups. The opposite can be called collectivism. Highly collectivistic groups discourage anyone from standing out. In all cases, people act with favouritism towards the members of their clan. The difference then is in reason of the size of the clan, being this much larger in collectivistic cultures. This characteristic may affect the sense of belonging of an employee to a particular teal or organizational unit.

2.2.4 Masculinity

This is the degree to which values like assertiveness, performance, success and competition prevail over values like the quality of life, maintaining warm personal relationships, service, care for the weak, and solidarity (Femininity). This dimension is based on the typical roles observed in nature that depend on gender. Thus, males are providers of food and protection. They will be aggressive towards intruders and they will hunt for the herd. On the other side, the females will nurture and educate their children. They seem to be empathic and supportive. Other parts of the role is based on the concept of machism and favouring men over women. These two features of the dimension are often in contradiction with one another. For that reason, more recent models have addressed these as two different dimensions.

A fifth dimension, confucian dynamism, was later identified and found relevant, particularly for Asian cultures, and it refers to the people's tendency to act based on the consequences that will be obtained on the long term. This is associated to the concept of reincarnation, where actions in this life will define the conditions of the next.

Hofstede's dimensions have been widely used in both qualitative and quantitative studies that relate to cross-cultural research. One of the main issues that makes these dimensions so attractive for research, besides the richness of its theoretical grounding, is the fact that scores are provided by Hofstede for each dimension in a large list of countries that were involved in the original study.

In 1991, the so-called GLOBE project emerged (House, et. al., 2004). The name is the acronym of Global Leadership and Organizational Behaviour Effectiveness. This project enriched greatly Hoftede's work for several reasons, standing out the fact that it is a more recent study and it can capture temporal changes in cultural patterns, as well as the fact that it was wider and more sophisticated, and also because it included different metrics that could expand what was achieved in previous studies. This project involved 62 cultures in the world, 170 researchers, and 17,300 middle managers in 951 organizations, testing 27 hypotheses. The results allowed to group the cultures in 10 clusters, and identify 9 cultural dimensions: performance orientation, institutional collectivism, gender egalitarianism, uncertainty avoidance, in-group collectivism, future orientation, humane orientation, assertiveness, and power distance (Grove, 2005). Many of these dimensions, are direct derivations from Hofstede's work. Others complement or adapt Hofstede's dimensions to provide greater richness and understanding. This project has been renewed, and the latest version of the study was released in 2014.

Even though the cited studies treat with culture at a national level, behaviour and culture interact with the same dimensions that can be measured at the individual level. Hofstede's original study was indeed measured at the individual level, and then aggregated at the national level. He warned that the dimensions would only apply at the national level. Nonetheless, a growing interest in the academic commu-

nity led to many studies trying to find if there was, in fact, not a structural isomorphism between the two levels. In spite of failing at finding a perfect isomorphism, there is a great deal of structural similarity that argues in favour of using the dimensions at the individual level, using some variation in the measuring method (Fischer, Vauclair, Fontaine, and Schwartz, 2010). Thus, it is reasonable to think that these cultural dimensions may shed light on the behaviour of different generations, provided that the components of culture, that is believes, values and facts, are different from one another.

2.3   Technology Quality

There are many attempts to measure quality in a computer application or technology. Some of them are very technology specific. Web quality seems to be in direct correspondence with good user interface designs that may be used in any context, and that affect the end user directly. No model of web quality has been so tested and validated as WebQual (Lowry, et. al., 2008). WebQual (Loiacono, Watson & Goodhue, 2007) is an instrument to measure the quality of a website, and capture its characteristics that will impact the user's intention to use it again. In particular, WebQual is comprised of five categories that include twelve dimensions for website quality: ease of use, usefulness, entertainment, complementary relationship, and customer service. Ease of use indicates how easy one can navigate the site. Usefulness refers to the benefits obtained by the customer through the use of the website and the information that it contains. A third dimension represents the entertainment value perceived by the user of the site. The customer´s ability to trust in the company, and the site administrators when personal information is being exchanged, also influences the attitude and behaviour of the customer towards the site (Gruman, 1999). Finally, the website must have a tolerable response time (Galletta, Henry, McCoy & Polak, 2004), and the level of digital fluency that a user holds may be paramount in the quality perception (Wang, Myers & Sundaram, 2013).

2.4   Initial Model

Taking the model proposed by Carroll, et. al. (2001) as a foundation, we will identify the factor that affect each one of the three levels that it comprises. This will shed light in rich details for each one of the levels, that are not explicitly addressed by the model itself.

Reaching level 1 triggers the effect of the factors that determine technology adoption, including those that are considered in the integrating model UTAUT2 (Venkatesh, Thong & Xu, 2012), and the level of digital fluency (Wang, Myers & Sundaram, 2013).

As a result, if the adoption takes effect, the second level of the model is reached, where technology is in actual use. It is in this phase where the cultural influence of an individual grows in relevance. Thus, the dimensions included in the GLOBE Project (House, et. al., 2004) are included to bring specificity to this level. Depending on its cultural compatibility, a technology may reach level 3, where it is appropriated.

Level 3 means that the technology forms part of the daily life of the individual, and it is use in various ways, on top of being adapted by the user. Then, the factors that affect quality perception, like those proposed in the WebQual model (Loiacono, Watson & Goodhue, 2007) take a major role at this stage, as well as the capacity for adaptation and structuration of the technology (DeSanctis & Poole, 1994), and the task-tecnology and user-technology fit (Beaudry & Pinsonneault, 1998). A schematic view of the proposed model is presented in figure 2, where grey boxes with the detailing factors have been added to understand each level of the original appropriation model.

It is important to be aware that no causal relationships are being proposed at this point, as the objective of this study is simply to identify perceived relevance of the potential effects. Additionally, constructs that may lack relevance a-priori or simply would be redundant have been eliminated from the model or assimilated into another. This is the case of age and experience, although included in the UTAUT2 model as a moderator, it is not considered in our model because it is related to the main focus of this

study, that is the generational differences. On the other hand, gender is not deemed relevant at this point.
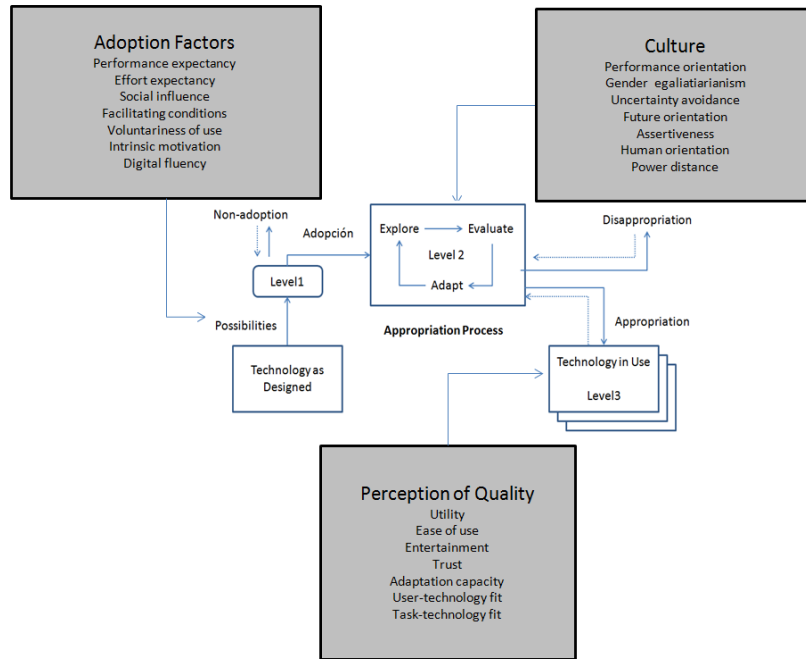

Figure 2.   *Initial Proposed Model.*

3   Methodology

We followed a methodology of an exploratory nature. Information was obtained from recordings and the transcription of focus group sessions that were undertaken, and Content Analysis was performed. Additionally, a survey was applied to the focus groups participants at the end of each session, addressing the importance that each of the elements identified in the model had for decision making. The methodological process is represented in figure 3.
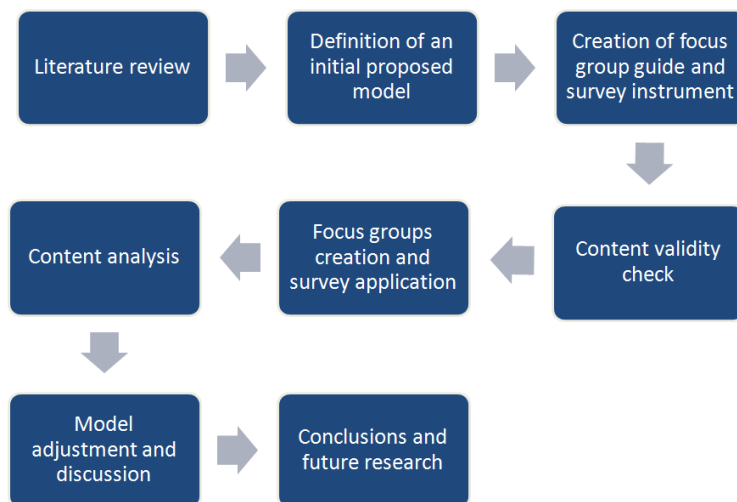

Figure 3.   *Methodology Steps.*

Several focus groups were undertaken, gathering the viewpoints of 18 people who are considered members of the generation "Y" or millennials, and 12 from the so-called generation "X". It was sought not to include members of extreme generations, that is Baby Boomers and generation "Z", provided that the former are in a great proportion already retired and may not engage in mobile e-commerce intensively, and the latter do not yet have a considerable purchase power or economic activity. On the other hand, it is expected that, if there is enough effect size and significant differences may be found between the intermediate generations, these will be even stronger between the extremes.

The generation X group was comprised by 10 women and 2 men, whose ages ranged from 39 are 60 years old. In contrast, the generation Y group included 9 men and 9 women, between 22 and 30 years of age. Both groups were diverse in the fields of education of their members.

Both groups were recruited on a convenient sampling base from students and workers at a university.

The sessions consisted in an quick introduction of participants, and the presentation of the general purpose of the study, so that an appropriate ice-breaking effect could be achieved. They were requested their agreement for being recorded. There was a moderator of the session and one assistant taking notes and observing the participants' interactions. A semi-structured session guide was prepared and followed for all sessions consisting on three sections after the introduction. The first section included questions to gain knowledge about their habits and use of mobile devices, as well as their dependency on them, and how comfortable they felt using them. The second section involved questions specific to mobile e-commerce trying to identify their purchasing behaviour, frequency, motivators, inhibitors, interface aspects, and types of purchases. Finally, the third section included questions regarding desired improvements and future possibilities.

Before its application, both the focus group guide and the survey were content and face-validity checked by six experts, fellow researchers. There was no need for reliability test for the survey, since it was only a set of questions that recorded relevance scores given by the participants to each of the elements in the model, so that a ranking could be obtained, as a preliminary means for adjusting the model.

4   Results and Discussion

Transcriptions were made from the discussions at the focus groups. After each session, participants were asked to fill out a short survey that contained one five-point Likert-scale item per variable in the proposed initial model. This was made to determine, at least in an initial approach, those constructs in the model that were perceived as most influential in the decision making for adopting and using mobile e-commerce. A word count was first obtained from the transcriptions, whose results are shown in figure 4. Word clouds were created to graphically represent the frequencies. Larger bold words are considered more important than the smaller ones based on an assumed correlation to importance by the qualitative methodology. It is important to notice that, for clarity purposes, some words were eliminated only in the cloud in English, given than in Spanish they may have different contextual meaning and may be relevant. One example is the word *do*, which may be a grammatical auxiliary word only in English. Those words that were different for both generations are marked in red.

Y

agreement application buy purchases **things** generation **better** music nothing

sale/offers question networks social **time** everything WhatsApp

X

years applications house **buy purchases** communication mail outside hours

matters information book **books** better notes supplier **network** security social

tablet telephones **I have** time **everything's** work

Figure 4.   Graphic representation of word frequencies in focus groups.

To elaborate further in the analysis, semantic networks were generated for each group, allowing to compare the relationships between the constructs between the generations. This is shown clearly in figure 5, where both semantic networks are overlapped for comparison purposes, and those features that are unique to the millennials are marked in blue, whereas those features that are unique for the generation X members are marked in orange.
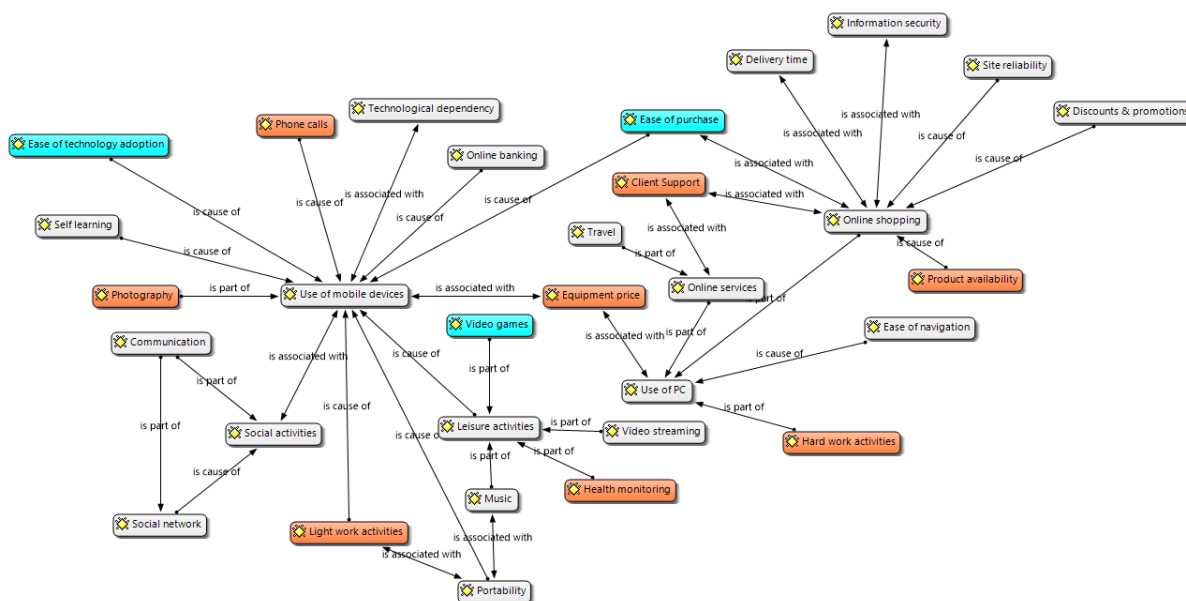

Figure 5.   Overlapped semantic networks for both generations.

The semantic networks are obtained by coding the words, clustering them in conceptual groups, and establishing relationships between them. This may increase our knowledge of the phenomenon by learning the nature of the interactions.

From the discussions, it was clearly stated by the participants that young people tend to need the mobile phone in a greater proportion than their older counterparts, seeking to spend leisure time and purchase just about everything. Videogames are common ways for distraction. When it comes to deciding on adopting mobile technology, it is surprising that the so-called digital natives, pay a great deal of attention at the ease of use. This is counter-intuitive since they are supposed to be more capable of using technology than their counterparts. For them, it is also very important that Apps have as much functionality power as the desk websites, especially when it comes to purchasing products and services online. This is especially true for banking, where most prefer to do all operations on the mobile

device, rather than a website. According to them, it is common that the mobile versions of an application lack many of the features of the desktop versions, hence limiting their use.

On the other hand, people from the generation X, use their mobile devices mainly for making calls, keeping track of their family members, monitoring their own health, and as a photographic camera. They pay attention to the price of technology, so that they can decide better what to buy and use. For work activities, it is more common to use personal computers. Nonetheless, this is true when comfort is more important than mobility. When it comes to being on the move, they use their mobile devices intensively for simple applications like e-mail and keeping an agenda. They are concerned about trust in their shopping activities, so the presence of customer support plays a major role, even if it is provided online only. As expected, when in technical trouble, they prefer to contact a human being.

From the survey results, the constructs in the model were prioritized, as shown in figure 6. It is clear that the five factors of greater impact are shared between the generations, and there is a great deal of coincidence in the least important factors as well. It stands out that digital fluency is no longer an important aspect for generation X, as it could have been expected. Nonetheless, it also make sense since their digital involvement has grown considerably in the past decade. To discriminate the variables that actually make a difference in the model explanatory capability, it is advisable to eliminate those who have a very low score, and who are shared between the groups. That is, those who don't have a considerable discrimination power. As a rule of thumb, we could get rid of the constructs with a value under 3, provided that it is the middle of the scale, and two thirds of the variables are above it, hence minimizing the possibility of excessive elimination.
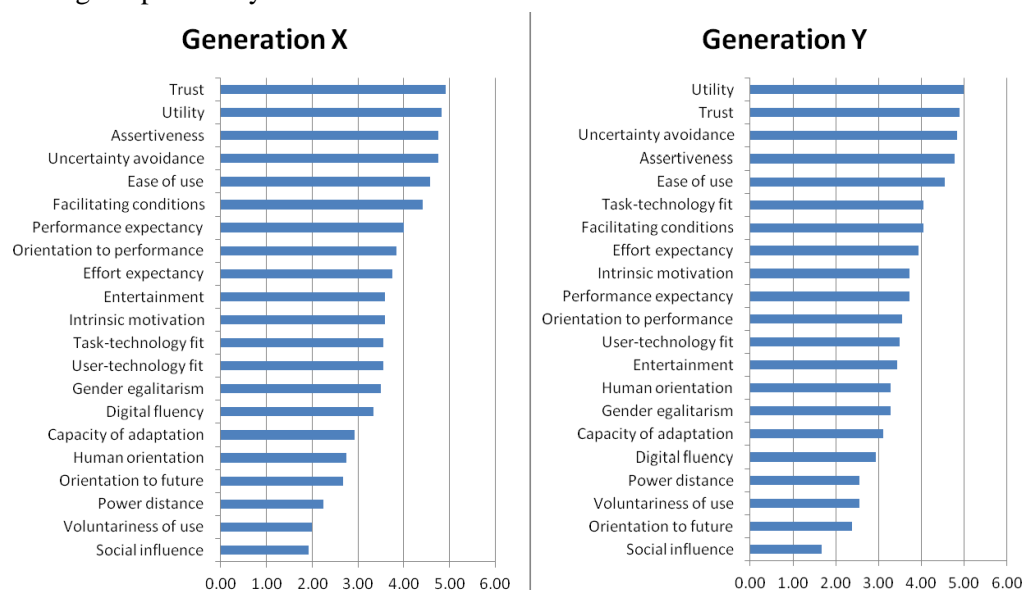

Figure 6.   Comparison of importance hierarchies between generations.

Constructs of greater importance, on the one hand, should be considered to guarantee addressing them in a strategy for technology functionality, and interface and business design of mobile e-commerce applications, regardless of the generation in question. On the other hand, if what really matters to our study is to be able to discriminate what matters to one generation that is not important to the other, then they should also be eliminated from the model.

The discussion should therefore concentrate on the variables that remain in the middle of the table and that do not match positions in both generations. From these, we can identify Orientation to Performance, Performance Expectancy, and most of all, Task-technology Fit. It has to be noted that, in absolute values, the greatest differences between the groups are those of Voluntariness of Use, and Human Orientation, followed by Power Distance, Digital Fluency, Orientation to the Future, Performance Expectancy, and Social Influence. With the exception of Digital Fluency, the constructs with the greatest

difference are more important for millennials. Therefore, the constructs that are in the middle of the table and/or generate a considerable difference between generations are the ones to remain in the model. The resulting model is shown in figure 7.
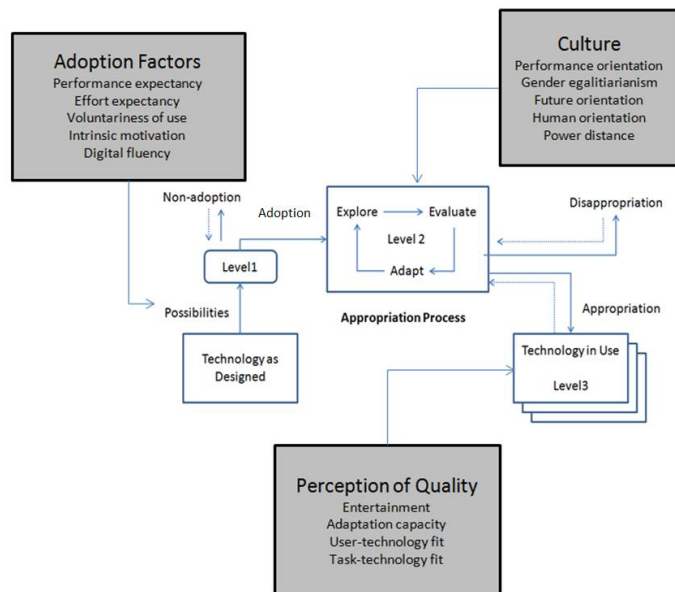

Figure 7.   Adjusted model.

It can be observed for level 1, that the older generation is surprisingly less concerned about how difficult it will be to use the application than the millennial. This could be related to their conception of lack of digital skills that is reflected in the digital fluency variable. It is reasonable to think that, knowing they are not technology competent, they assume and accept the fact that using it will not be easy, so it is not a decision criterion. Nonetheless, they have a clear motivation to achieve some benefit in order to use the mobile e-commerce application. Voluntariness of use, although of little relevance, stays in the model because it is one of the most contrasting variables between the groups. Not being forced to use the technology is of more importance for the younger generation. The use of this variable, however, should be cautious since it is likely to be dropped in later studies, due to its lack of relevance to appropriate the technology. This is however related and in accordance to the results of intrinsic motivation, and maybe both variables could be combined.

Regarding level 2, the cultural aspects have mixed results. On the one hand, the members of generation X have higher values of gender egalitarianism, future orientation, and performance orientation, and lower for human orientation and power distance. Future orientation and performance orientation are somewhat expected, and consistency with the higher score on performance expectancy obtained in level 1. Gender egalitarianism, on the other hand, seem counter intuitive, especially considering that generation Y members are considered more tolerant and inclusive than the generation X ones. This is also not consistent with the fact that human orientation is, as expected, higher for generation Y participants. Another surprise is the fact that power distance be greater for millennials, since their respect for authority seems to be descending. Both variables require further examination before drawing anticipated conclusions.

In terms of the quality variable at level 3, there is a clear relevance for millenials for having a technology that actually is appropriate for the task at hand. This is not the case for generation X participantes, where they treat task-technology fit with the same importance as user-technology fit. The latter, remains in the middle of the table for both groups. This may be caused by the fact that millennials are more technology savvy, and they engage in the use of IT for as many activities in their life as they can. In contrast, generation X members may not have the necessary distinctions to provide it more impor-

tance. This is consistent with the fact that millenials require more adaptation capacity than generation X members, thus increasing the task-technology fit. At this level, it was surprising that generation X members actually give more importance to entertainment features of the interface over millennials. This may be due to the direct relationship that this variable may have in making an application more friendly, thus reducing the stress produced by simply using the technology at hand.

5   Conclusions and Future Research

Generational differences are made clear for their consumption and technology adoption behaviours. Even though some may not seem surprising, they are seldom considered when designing a mobile interface and application functionality, as well as the support behind it. Ever more, business and market strategies should be developed in a differentiated fashion for each target market, especially as a result of the accelerated changes in the digital life. The technology to support those strategies should vary accordingly. Failure to adapt the technology and the business strategy to a generational group, may result in easy losing market share, since the shifting cost become smaller by the day. Mobile devices, especially telephones, are of vital importance for the new generations, and they become fundamental instruments of everyday life. Hence, the potential market of mobile electronic commerce is enormous.

Some differences, as well as absolute coincidences, have started to be identified with this work, but it has only been a first approximation. There is a need for a confirmatory study that allows for a deeper analysis of the model, thus making it more useful. Further studies are intended by the authors to contribute towards the attainment of such goal, identifying causal relationships. However, alternative methods should be used to triangulate results, gaining both internal and external validity. Also, there is a strong need to obtain larger samples, with strict random selection, and enough effect power, including as well other generational groups. There is a clear limitation in the sample of this study since it was made from university students and employees, and this may bias the results, thus needing to increase the representativeness.

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