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SPECIFICATION OF A MODEL FOR THE STUDY OF UTILITY PERCEPTION

Especificación de un modelo para el estudio de la percepción de utilidad

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Abstract

A model is a data management, production and transfer system organized in explanatory trends of past, current and future relationships. The emphasis on each suggests decision making and strategy execution. The objective of this work was to specify a model for of the perception of utility. An exploratory and cross-sectional study was conducted with a selection of 186 students from a public university in central

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Mexico, considering their participation in the system of professional practices and social service in local organizations. The validity of the instrument that found a one-dimensional variable that explained 43% of the variance was established, but the research design limited the results to the research scenario, suggesting the extension of the work.

Keywords: globalization, perception of utility, use of mobile Internet.

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1. INTRODUCTION

Globalization implies less social equality and greater freedom in the individual. This imbalance characterizes the most globalized and localized liberal democracies. These open societies that hold individuals accountable by disintegrating their groups, their communities, their societies and their present and future cultures (Martínez, Espinoza and García, 2019).

The process of financial globalization and community location is gestated through the use of technology. In the case of the Internet connection from root servers, the United States, Japan, Holland and Sweden are the main nodes. Japan is the nation with the highest connection speed (61.0 mbps), Sweden ranks fourth (18.2 mbps), Holland is sixth (8.8 mbps) and the United States occupies tenth place (4 .8 mbps).

In economically emerging countries, the benefits of information communication technologies (ICT) have only been exploited by organizations for insertion into the global market. In contrast, in the communities of these countries where ingrained localization processes are developed, ICT have not been a factor of individual growth and much less of community development (Carreón, Villegas and García, 2019).

Indeed, economic and technological globalization has only benefited corporations by widening the economic and digital divide with the communities (Carreón, Hernández and García, 2019). This process of globalization, in its social dimension, implies the decision-making of groups, communities, unions, unions, organizations and corporations based on ICT. Such entities are transformed into networks and power flows that first compete and then monopolize the market (see the scheme).

This is how the objective of the present work was to specify a model for the study of the perception of utility, considering the dimensions that literature contributes with

respect to the acceptance of technology, the propensity to information and the motivation for achievement.

2. THEORY OF UTILITY PERCEPTION

The economic, technological and social consequences of globalization are described to propose the Theory of Mobile Consumption that explains the consumption of products and services through mobile telephony. A model is presented in which it is included and demonstrates that the perception of utility is the determinant of the use of mobile Internet (Villegas, Carreón & García, 2019).

Based on the above scenario, it is proposed that individuals, being immersed in information communication flows and networks, become potential consumers when acquiring a mobile phone. Precisely, in the following section, the Mobile Consumption Theory (TCM) is explained, which explains the determinants of consumption through a mobile phone (Villegas, Carreón and García, 2019).

The Theory of Mobile Consumption states that individuals carry out their purchases through a mobile phone based on their utilitarian perceptions and purchase decisions. The TCM maintains that people consume basic products and services through the consumption of secondary products. Individuals when buying a mobile phone or any product and technological information communication service, are exposed to the consumption of basic products and services that are advertised and sold through the aforementioned technologies (Carreón, Espinoza and García, 2019). Therefore, the TCM argues that it is the perceptions of utility, innovation and efficiency that determine the consumption of products and services that are advertised and sold through the mobile phone.

TCM provides the indirect effect of perception of a technological innovation on the consumption of products and services via said mobile technology (Hernandez, Carreon and Garcia, 2019). It explains the relationship between ICT with individuals saturated with multiple activities, people who buy and people who work as supervisors or vendors. The TCM predicts the use of the mobile Internet from a cognitive process that begins perceptually and ends behaviorally. From the TCM, the study detailed below was carried out.

3. STUDIES OF THE PERCEPTION OF UTILITY

In the process of converting human capital into intangible assets for organizations, the perception of utility explains the intensive use of information and communication technologies provided that organizations adopt management, production and knowledge transfer systems (Carreón, Fierro & García, 2019).

It is a process in which the formation of intellectual capital assimilates knowledge, knowledge, experiences and skills to achieve objectives and goals through specific protocols for information processing (Carreón, Hernández and García, 2019).

The perception of utility is the central axis of the knowledge management agenda because it translates statistical data into meanings of commitment, entrepreneurship and innovation, as well as generates new protocols for information processing whenever the objectives and goals are subject to the climate of tasks, supports and relationships between stakeholders (García, Martínez and Quintero, 2019).

4. MODEL FOR THE STUDY OF UTILITY PERCEPTION

The TCM raises three explanations of the consumption of products and services through the mobile phone.

The first trajectory includes: perception of innovation → propensity to consumption → use of mobile Internet. Such is the case of people who acquire a sophisticated and multifunctional mobile phone that exposes them and leads them to accept and consume seasonal promotions. However, this type of consumer can acquire a phone only for some function (Villegas, 2019). It may happen that the consumer buys a phone for its functions of playback of files digitized in mp3 and is not interested in seasonal promotions. It can be inferred that technological innovation translated into multiple functions is an added value for users that can lead to secondary consumption.

The second path includes: perception of innovation → perception of utility → propensity to consume → use of mobile Internet. In addition to analyzing the impact of technological innovations on human behavior, the second path explains the association between an innovation and its usefulness as the determinants of mobile decision and consumption. The perception of utility being a variable that indicates the selection and categorization of objects, influences consumption decisions and the subsequent purchase of a product or service (García, Espinoza and Carreón, 2018). A person who buys a mobile phone with the latest technology differs from the consumer who seeks secondary benefits derived from the use of technologies. It is a potential consumer who acquires some technology to consume products and services exclusive to the network or elite flow of communication information. A person looking for mp3 files only available in virtual stores will buy a mobile phone connected to the virtual store.

The third route includes: perception of innovation → perception of efficiency → propensity to consumption → use of mobile Internet. The behavior of the consumer, explained by this third route, denotes a person engaged in the purchase and sale of products and services. Precisely, the perception of efficiency suggests the use of a technology for its competitive advantages rather than for its comparative advantages. A sales supervisor will acquire a phone with multiple functions as long as he perceives that these functions will allow him to supervise his salesmen.

Do perceptions of the level of utility and the degree of innovation have an indirect, positive and significant effect on the level of use?

5. METHOD

There were 186 students selected from the Metropolitan Autonomous University. 65 men (25 studied in CBI, 26 in CBS and 14 in CSH) and 121 women (22 in CBI, 59 in CBS and 40 in CSH)

The perception of the level of utility. It is the evaluative, attitudinal and motivational expectation of greater benefits and lower costs around the consumption of a product or service.

The perception of the degree of efficiency. It is the handling of a product and / or service for consumption purposes.

The level of use. It is the time of purchase of a product or acquisition of a service.

Perceptions of the level of utility and the degree of innovation have an indirect, positive and significant effect on the level of use.

In the first phase, the reliability and validity of the instruments that measured the five variables was built and established.

In the second phase, the likelihood of adjusting indirect and direct, negative and positive, and significant causal relationships between the study variables was modeled and demonstrated.

From the Mobile Consumption Theory, twelve indicators were established that configured three dimensions for the five variables of the measurement model that were subjected to a confirmatory factor analysis of the main components with varimax rotation and maximum likelihood. The results reject the hypothesis of factorial unidimensionality for three variables of the measurement model.

Scale of the perception of the level of utility. 12 items with response options from “strongly disagree” to “strongly agree”. The table shows the convergence (indicated by the factor weight) of the reagents with respect to the factor.

Scale of the perception of the degree of efficiency. 12 items with response options from “never” to “always”. Considering the factor weights of the perceptual variable of self-efficiency, the convergence of four reagents is demonstrated.

Scale of the level of use. 12 items with response options from “less than ten minutes” to “more than twenty minutes.”

The psychometric properties of the instruments that measure the study variables are detailed in the table where it can be seen that they meet the requirements for multivariable analysis.

During the first week of the spring quarter of 2006 at the UAM-I library, students were asked how often they used their phone to download images, sounds and speeches to select the ideal sample. Subsequently, the questionnaire was provided indicating a response time of 30 minutes to answer it.

6. RESULTS

From the Mobile Consumption Theory a new model was designed with the variables that met the criteria of reliability (alpha greater than .60) and validity (factorial weight greater than .300).

Multiple linear regressions were calculated to establish the determinants of the dependent variable and the non-linear relationship between independent variables. The scheme shows that the perception factor of academic utility is the main determinant of the level factor of Internet use for academic purposes.

This finding indicates a modification of the TCM measurement model by proposing a direct, positive and significant effect ($\beta = .30$; $p < .05$) of the utility factor on the use for academic purposes. That is, a person looking to buy for example a book, could get it if there was a virtual library connected to the mobile phone.

Similar reasoning would imply the perception factor of self-efficiency as a determinant of academic mobile use. An individual looking for academic information could find it through his mobile phone. However, the causal relationship lacking the required significance suggests the exclusion of the variable.

The strength of association ($r = .07$; $p < .05$) between independent variables indicates its spurious implication.

Finally, the level of mobile Internet use for academic purposes is explained by the two independent variables in 22 percent of their variability ($R^2 = .22$).

It can be seen that from the original measurement model only two variables maintain a causal relationship that selects them for inclusion in another measurement model. These consequences and implications are discussed below.

7. DISCUSSION

The perception of utility has been the fundamental construct in the models developed to predict the behavior of a consumer on the Internet. This research has shown that the academic factor of said perception determines another factor referred to mobile use for academic purposes.

However, the relationship between the perception of utility with other variables such as the perception of self-efficiency, reported by other studies, has been spurious. This means that the variables could belong to different cognitive processes. The perception

of utility could belong to a set of affective variables while the perception of self-efficiency could belong to a group of rational variables.

This would explain why in the use of the mobile Internet for academic purposes the perception of utility is the variable that predicts it. However, it will be necessary to demonstrate the relationship of the perception of utility with affective variables. Values, norms and identity could be those variables that associated with the perception of utility, could configure a measurement model with the likelihood necessary to explain the use of the mobile Internet.

8. CONCLUSION

The objective of the present work was to specify a model for the study of the perception of utility, considering the dimensions reported in the literature, as well as those established in the present work, but its design limited the contributions to the analyzed sample, suggesting the extension of work towards other scenarios and other study samples.

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