Effects of intangible assets such as Technology and assertive leadership on efficient systems in a Cuban institution

Naivi Montané Marsal

Degree in General Psychology, Master in Science in Labor Psychology and Organizations, PhD Student, School of Management, Wuhan University of Technology, Wuhan, P. R. China, 430070

Received: 09 Dec 2020; Received in revised form: 25 Jan 2021; Accepted: 25 Feb 2021; Available online: 22 Mar 2021

©2021 The Author(s). Published by Infogain Publication. This is an open access article under the CC BY license (https://creativecommons.org/licenses/by/4.0/).

Abstract—In the work field, leaders develop assertiveness to establish their relationship with their employees. However, technology is increasingly opening up in Cuba and stimulates the use of systems platforms such as roads or channels of indirect communication of leaders with their employees. Assertiveness could be influenced by the use of technology and generate a new asset of intangible knowledge. To learn about this relationship, a descriptive non-experimental transactional empirical study was conducted at a Cuban financial institution. Questionnaires and expert judges’ criteria were used to analyze the relationships of variables and to triangulate the results. Metrics revealed that there is a significant relationship between the assertive behavior of leaders and the use of technology. It was found that subjects with a high degree of use in technologies developed assertive behaviors in the exercise of their work.

Keywords—Assertiveness, Technology, Leader’s behaviors, intangible assets.

I. INTRODUCTION

Since 2011, the Cuban business system has been going through a new stage of transformations that among other purposes, seek to unleash old ties, grant greater powers and achieve more efficiency and organization. Like any change process, it has not been without complexities, successes and misadventures. The government's top direction led to a diagnostic in the main organisms of the state in order to know the deficiencies, their causes and measures to solve them. Also, changes that consider organizational transformations to be complex processes and that need to be studied and implemented gradually were made.

In Cuba, the expanse of information science has achieved a development in the use of information technology spreading in the business world; this technology has become an inevitable part of working life. The studies associated with the influence of technology on the leaders appropriate the work contributed by various models and theories. Such is the case with the Unified Theory of Adoption and The use of technology (UTAUT) which is the latest model that has been designed to understand the nature of use of technology. Leaders in organizations are not exempt from this influence but on the contrary technology has been the most effective steering tool that they can use in the exercise of their profession. The change of economic paradigm requires adopting a new strategic perspective, where it must identify and manage those resources and innovation capacities that make it sustainable over time (Borrás F. 2015). In the knowledge economy, these resources and capacities will be - basically - of an intangible nature, delimiting the potential of the organization (Pickola H. 2020). It is necessary to know the relationship of influence between the use of technology and assertive leadership Cuesta-Santos A., Fleitas-Triana S., García-Fenton., Hernández-Darias, Anchundia-Loor A., Mateus-Mateus L. (2018), because both variables constitute intangible assets that are
necessary to manage in the organization (Brookings A. 1996; Cuozzo B., Dumay J., Palmaccio M. (2017). If the institution is able to properly manage the technology and its relationship with the assertive behavior of the leaders, then the management of these intangible assets will provide greater efficiency and effectiveness in the management of the company (Alhabshi, S.M., Rashid, H.M.A., Khadijah Syed Agil, S. and Ahmed, M.U. 2017).

Intangible assets such as technology and leadership have been studied with the intention of knowing their effect on the productivity of companies' work. Roth F. (2020) found a significant relationship between labour productivity growth and the effect of intangible assets on ledgers. The company's added value increases and becomes a source of productivity growth (Vanderpal G., 2019, Cuesta A. 2014; Ferdaous, J. and Rahman, M.M. 2019; Shaper S., Nielsen Ch., & Roslender R. 2017).

Therefore, it is necessary to determine whether technology influences the assertive behaviors of leaders, and whether the style of indirect assertiveness is common in the behavior of leaders, with email, chat and the Internet being one of the main tools that make the results of the work more efficient. The objective of this study is to know whether the leaders of the Cuban financial institution whose purpose is to seek the greatest economic efficiency through the management of their intangible assets, are being influenced by technology, and whether they have developed styles of indirect assertiveness, or if they exert a direct assertiveness in their relationship with employees.

The growing progress of technology in the world has generated new ways of acting and perceiving human relations, and Cuba has not been exempt from it. Despite the emerging development of technology compared to highly developed countries, it can be said that yes, they are present in industrial relations.

The use of a mobile phone to receive and make calls, email and financial and accounting computer systems typical of the Cuban banking system, show the existence of a relationship by bank leaders regarding technology in the exercise of management. It is common to use email to give and receive guidance and cell phone to develop work issues, other actions such as video online conferences or meetings with leaders throughout the national territory take place today. From which the research question arises: How technology influences the assertiveness of leaders and their development. Taking into account international experiences, empirical research focuses on the diagnosis of the assertiveness of the leaders in their work.

The literature review shows that human factors are related to the use of technology, which is why the attitude to the use of technology is recognized as a factor to be studied in the labor organization. In behavioral science, assertiveness is conceived as a social skill that has a kind of attitude or willingness to express desires and defend rights. Indirect assertiveness is recognized by the ability to express desires and defend rights using other indirect channels such as traditional telephone, cell phone, email or postcard, chat, or other. The leader’s assertive behavior tends to be necessary for the exercise of direction and for the relationship with subordinates. Also, the use of technologies has become a daily and necessary activity for leaders in the labor organization.

The Cuban banking system has no scientific research to provide information on how technologies are influencing the behavior of leaders. In addition, what are the most common attitudes regarding the use of technologies? The relationship between the assertive behavior of leaders and the use of technologies is unknown. Both variables are intangible assets that deserve to be properly managed, because they create value in the organization.

The considerations referred to above demand an investigation that solves the following scientific problem: There is a lack of scientific evidence in the Cuban population demonstrating how assertive behavior is developing, based on the subject's interaction with new technologies. To do this, it is necessary to know: ¿How technologies are influencing the assertive behavior of leaders?

H1 The use of technology is positively related to assertive behavior

H1.2 The use of technology is positively related to indirect assertive behavior

H1.3 The use of technology is positively related to non-assertive behavior

H0 The use of technology is not positively related to assertive behavior
1.1 Theoretical framework: Assertiveness in leaders

The changes that occur in the Cuban socioeconomic model at present have a significant impact on their labor organizations. This new scenario calls for a greater role of executives and workers in the sense of adopting different ways of acting and managing the processes of working life.

The conception of assertiveness from the perspective of labor organizations has as its premise the analysis of the labor organization as a system, characterized by its complexity, constant transformation and exchange with its variables and subsystems, that make it bear their own identity and which in turn guarantee their development and stability over time (Andrey D. 2019).

The professional role of the leader increasingly demands creative and proactive behavior in the interests of being more efficient in the search for solutions, hence assertiveness constitutes an essential social skill for performance in the organization (Manesh, R. S., Fallahzadeh, S., Panah, M. S. E., Koochehbiuki, N., Arabi, A., & Sahami, M. A. 2015). Being assertive, operating with emotional intelligence, having communication and leadership skills, is today a demand at work, not only for those who serve in management positions, but also for all workers (Allahyaril B., Jenaabadi H., 2015).

Assertiveness begins to play an important role, recognized as one of the most outstanding and common skills to positions within the organization. The term assertiveness appears as an objective form of assessment of employment skills, becoming in many cases a form of unity of competence, which is necessary for the successful performance of a worker or manager, as well as for the selection of staff for their tangible character, within Human Capital Management (Manesh, R. S., Fallahzadeh, S., Panah, M. S. E., Koochehbiuki, N., Arabi, A., & Sahami, M. A. 2015; Shafer A. Ortiz R, Thompson B., Huemmer J. 2017).

It is then considered that the more complex the functions of a given position are, the greater the need to be assertive. For the organization, having assertive people ensures superior performance, not only from a human point of view but from its operation in general, so that the different systems that make up it achieve a better articulation, and impact positively in the quality of work. That is why it is essential to train assertive skills in the employees (Valliammal Sh.et al 2017).

Assertive behavior develops when there is an understanding or awareness of the need to change established standards in the organization, which can impair the success of the task and brings to affect efficiency and results (Maloney M., Moore P. 2020). Acting assertiveness provides the possibility to seek solutions and communicate it.

Assertiveness occupies an important place in teamwork, ensuring the achievement of common goals, an anxiety-free working climate in which its members can freely express their personal opinions, counter disagreements socialize and diminish complacency that reinforces a personal and individual stance, above the collective’s decisions. The development of assertive behaviors when working in a group, exchange and development meetings, allows achieving better established objectives and better consolidated strategies (Manesh, R. S., Fallahzadeh, S., Panah, M. S. E., Koochehbiuki, N., Arabi, A., & Sahami, M. A. 2015; Ames D. Flynn F. 2007).

1.2 Theoretical approaches to the concept of assertiveness

The word assertiveness has its origins in the word Assert, which according to the dictionary of the Royal
Spanish Academy means: To declare or affirm positively, with certainty, with simplicity and force; the word assertiveness is derived from the Latin asserere, assertum; which still means affirming. So assertiveness means affirmation of one’s personality, self-confidence, self-esteem, aplomb, safe and efficient communication. (Zaldivar D., 2002; Dincyürek S., Güneyli A., Çağlar M. 2012).

The origins traditionally attributed to the study of social skills fall on the work of Salter (1949), related to the development of Conditioned Reflections Therapy, which was recognized for the development of techniques to increase expressiveness in the individual. (Alberti, R., & Emons, M., 1970; Zaldivar D., 2002; Ames D., Lee A. Wazlawek A. 2017).

The first researcher to use the term assertive behavior was Wolpe (1958). The studies carried out in this field were followed by the works of Lazarus (1966), both of which developed research on assertive behavior promoting the use of this word. But it wasn’t until the publication of Alberti and Emmons’ book “Your perfect right” that the term was popularized among the scientific community of the time (Alberti, R., & Emons, M. 1970).

The definition of assertiveness has been conceptualized by various authors: Wolpe (1977), Lazarus (1966), McFall y Lillesand (1971), Libet y Lewisson (1973), Lange y Jakubowaki (1976), Rich y Schroeder (1976), Mac Donald (1978), Carboles (1979), Walter Riso (1988), Rimm y Master (1990), Zaldivar D. (1994), Caballo (1995), L. Sánchez (2000), Flores, G. M. & Díaz-Loving, R. (2002), Pérez Pincheira R. (2007); have made their considerations based on a certain characteristic of assertiveness. The definition of assertiveness is related to behavior that allows decreased anxiety and defense of personal rights (Aktop A., Özçelik M., Kaplan E., Aeferoğlu F. 2015). Kim Y., Lee E. & Lee H. (2019) offers some light on the differences in assertiveness between men and women in unsafe situations. For the author the assertiveness is the personal capacity expressed through behavior, which guarantees the open expression of desires, intentions, it is the defense of personal rights and feelings without anxiety.

Assertive people tend to use negotiation to achieve successful social interactions. That is why communication is one of the indispensable ways or tools for assertiveness to be expressed, so it is the type of communication that determines whether the individual managed to be assertive or not with his interlocutor (Andrey D. 2019). They are also characterized by the intention of achieving communication that satisfies the need to express ourselves (Guo, W., Li, T. and Wu, N. 2015).

Communicating effectively is a basic requirement to get the desired answer from our interlocutor, that is why it is necessary to improve communication as a mode of expression of assertiveness and stimulate or train it using positive thoughts (Hamidi F, Otaghi M, Paz FM. 2020). Assertive communication offers a broad opportunity for human well-being. Leaders can use it to visualize scenarios where the best job and personal performance is achieved (Manesh, R. S., Falahzadeh, S., Panah, M. S. E., Koochehbiuki, N., Arabi, A., & Sahami, M. A. (2015).

Assertive communication is essential to develop a good exercise in leadership. The exercise of management involves structuring styles of behaviors that ensure the success of the fulfillment of the goals of the group, of the task for which it was designated and for which it is responsible (Guo, W., Li, T. and Wu, N. 2015; Oana, J., & Ionica Ona, A. 2019).

One of the ways that bring us closer to achieving this goal is the use of assertive styles in the direction and in trading in companies. If as leaders of organizations we do not defend our wishes, rights, work needs, the common objectives within the group will not be achieved, the guidance and direction of that group will be lacking. That's why one of the features a manager should have is assertiveness. The role of communication for the exercise of leadership in decision-making is recognized. Assertive communication is important to gain greater knowledge of subordinates and a better management exercise (Guo, W., Li, T. and Wu, N. 2015); Oana, J., & Ionica Ona, A. 2019).

Assertive leadership is based on the transformation of those behavioral styles that limit the development of skills and attitudes in the leader. It's about the leader being able to achieve greater capacity for change, greater flexibility to understand others and themselves, as required by the organization. As well as accepting and transforming institutional and own constraints (Guo, W., Li, T. and Wu, N. 2015).

It is necessary to catalyze the processes stagnant by the poor decision-making or immobility caused by the exercise of management. The leader must be able to express his mistakes, limitations and successes to others without fear. Maintain self-esteem and achieve their professional and personal realization (Zaldivar D. 2002; Ames D. 2009).

The studies carried out by Díaz-Guerrero (1972 - 2006), highlight that cognitive and personality development is obtained as a result of a constant dialectic between the bio-psycho individual and his sociocultural field. Other authors such as Flores M. (2002); Díaz-Loving...
R. (2019); Henderson, M. and Furnham, A. (1983), take these postulates into consideration and analyze assertive behavior in different fields and cultures. In addition, they determine that some factors influence assertiveness, such as: sociodemographic variables, personality variables, the person in interaction, the situational context and the psychological context (Díaz-Loving R. 2019).

At this point Henderson, M. and Furnham, A. (1983), define that assertiveness is influenced by the culture in which the individual develops, by the situational and psychological context. In addition, by the people involved in social interaction and by personality. In addition, Flores Galaz, M., & Díaz-Loving, R. (2004) recognizes three types of assertive behavior styles.

The assertive style is when the person is able to express their limitations, feelings, opinions, desires, rights, is able to give and receive praise, make requests and handle criticism. He’s a socially qualified individual. Indirect assertive style is the person who has no ability to say or express himself openly, it is difficult to have direct face-to-face confrontations with other people in everyday or work situations whether with family, friends, bosses and co-workers, so it is seen in the need to express their opinions, desires, feelings, requests, personal limitations, say no, give and receive praise, and handle reviews by indirect means such as letters, phone, cell phone, email, video calls, chat or others. The non-assertive person is one who does not have the ability to express his desires, opinions, feelings, or praise. Has limitations for initiating interaction with others, and for handling criticism (Flores Galaz, M., & Díaz-Loving, R. 2004, Cortés ML., Góngora E. 2009).

1.4. Technology UTAUT Model

Leaders make use of technologies to develop steering activity. In their performance, the leaders communicate with the subordinates through e-mail or through the mobile phones in order to speed up the communication processes and reduce the waiting times of the feedback (Dwivedi Y., Nripendra P., Jeyaraj A., Clement M., Michael D. 2017). This has become the last few times in a daily practice, as it is a common interest in labor organizations to achieve greater efficiency in work, and the use of technologies offers that opportunity for leaders (Sekyere A. 2016).

Recent research in the educational area has demonstrated the advantages of using technologies to achieve greater competitiveness and levels of management and performance (Yong Liu. 2015; AttuquayeFio S. Addo H. 2014). They also recognize that expectations, social influence and willfulness or intention in the use of technology have a direct impact on student performance (Ukut, I.I.T. & Krairit, D. 2019; Arif M., Amen K. 2018). This idea can be easily extrapolated to the area of organizations, because phenomena develop with similar characteristics.

Technology can be seen as an effective driver for work. The fourth industrial revolution, eminently technological, is also a revolution of values expressed through the assertive conduct of leaders (Idorenyin T. 2019; Arif M., Amen K. 2018). What we need today are assertive leaders who not only understand the complexities of technology, but also use this technology assertively to promote further development within the organization (Sarfaraz J. 2015).

The UTAUT model explains the acceptance of the technology and is based on eight theories or models of acceptance. The UTAUT is based on the Theory of Reasoned Action (TRA), the Technological Acceptance Model (TAM), the Motivational Model, the Theory of (TPB), the combined TAM and TPB, the Personal Computer Utilization model, Theory of the dissemination of innovation and social cognitive theory. (Venkatesh, Viswanath, Michael G. Morris, Gordon B. Davis, and Fred D. Davis 2003; Kuciaiški M. 2017; Thongsri N., Shen L., Bao Y. Alharbi I. 2018; Rahi S., Othman M., Alghizzawi M., Mi Alnaser F. 2019).

The model requires a socio-psychological analysis of the relationship between the user's perception of technology and the behavior of acceptance or rejection (Apostolos G., Costas A., Christos S. 2019). It is important to study the characteristics of the subject's performance expectations and the degree of social influence to which the subject is exposed and the conditions of the environment to facilitate access to technology. These variables in offer a gradient of acceptance or rejection of the use of technology that is valid for studying (Goswami A., Dutta S. 2016: p. 52; Troy Devon Thomas, Lenandlar Singh & Kemuel Gaffar. 2013).

Many authors have found significant relationships between performance expectation, resistance to innovation and social influence, with respect to the actual use of technologies (Moghavvemi S., Mohd N., Standing C. 2016). These variables are considered the main determinants of adoption intentions. However, other authors have analyzed other components associated with the individual and recognized the role of human attitudes in the process of adopting technologies (Dwivedi Y. et al 2017).

The factors that make up the model have been as follows:

Performance Expectation is understood as the percentage in which a subject considers the information system to be a key factor for successful performance.
Second, the expectation of effort is considered as the comfort or ease that information systems are associated with social influence relationships and or communication with people. Social influence represents the type of perception a subject manifest about the positive assessment of the use of the system in others and their positive attitude of use. On the other hand, the condition of facilitation is understood as the value of the subject about the existence of a logistical infrastructure to support the use of the system. And finally the behavioral intention based on the disposition or attitude of a subject to develop a type of motivated behavior (Goswami A., Dutta S. 2016; Troy D. et al 2013; Venkatesh, Viswanath, Michael G. Morris, Gordon B. Davis, and Fred D. Davis 2003; Lwoga, E.T. and Komba, M. 2015; Khatun F., Palas MU, Ray PK. 2017).

Recent research in this field has used the UTAUT model to learn about behavioral trends related to the use of technology. These studies have made significant inferences regarding the influence of perceived credibility with respect to the intent of the use of technology. Even, with its relationship with the female genus (Kriti Priya Gupta, Rishi Manrai & Utkarsh Goel. 2019; Goswami A. 2016). Others explain the relationship between Internet trust and performance expectations, as predicting indicators of the intent to use the technology (Mansoori K.A.A., Sarabdeen J., Tchantchane A. 2018). Psychological empowerment has also been found to influence the intent of electronic participation as a form of social interaction (Naranjo-Zolotov M. Oliveira T., Casteleyn S. 2019).

These studies show the autonomy of the subject with respect to the use of technologies, as well as the possibility of selecting applications that reveal a personal intention. Apparently the intent of use occurs more often in young people, so age is an aspect to consider (Kuciapski M. 2017; Sobti N. 2019). This provides lights that allow to influence relationships and or communication. The model has been studied by several authors and the results have not been coincidental in establishing the relationship between attitude towards technology and its impact on behavior (Isaias, P., Reis, F., Coutinho, C. and Lencastre, J.A. 2017). Positive influence has been shown between performance expectation and effort on attitudes. The influence of personal rules on the intent of actual behavior and behavior has also been demonstrated (Maity M., Bagchi K., Shah A., Misra A. 2019). The UTAUT model is useful for predicting the use of systems and making decisions related to technology adoption. The UTAUT model has had followers and detractors, and has received criticism about its effectiveness. However, it provides a possible scenario for studying the human behaviors associated with the use of technology, which is very useful and necessary (Serife Nur Yıldız, Alev Ates Cobanoglu, Tarik Kısla 2020; Troy D. et al 2013; Ayman A. 2014).

II. METHOD

The research methodology used for the determination of specific hypothesis and sub hypotheses was realized using the scientific inquiry scheme commonly used by authors studying assertiveness.

Non-experimental, descriptive transactional research is performed. We chose non-experimental research design because it allows us closer to hypothesized as real variables. The research that the program is based on a metal transactional design. It is a descriptive study as it establishes descriptive hypotheses. The universe for determining the size of the sample was composed of all the dependencies of the institution under study.

The population in our study was composed of leaders of the institution specifically of the middle managers. 258 leaders were selected. This population is chosen to know the degree of assertiveness and the predominant response styles in their interpersonal relationships, so that research contributes to the development of social skills applied to the exercise of leadership.

Probabilistic sampling was used to minimize the standard error. It has as advantages that all the elements of the studied population have identical possibilities to be selected. On the other hand, it should be noted that the values obtained in the sample are very similar to those of the population. For the selection of the probabilistic sample we use a simple random sampling; to calculate the size of the sample under study was proceeded as follows:

Calculation of sample size:

\[
P = 99\% \quad e = 0.01
\]

\[
N = 258 \quad \frac{S^2 \cdot p \cdot (1-p)}{e^2} = \frac{0.69}{(0.02)^2} = 0.0004
\]

\[
n = \frac{900}{0.0004} = 225 \quad \text{or}\quad n = \frac{900}{200.89} = 201
\]

The research sample was formed by a group of 258 leaders of the middle managers of the institution, after conducting the survey. As it is a descriptive study as it establishes descriptive hypotheses. The universe for determining the size of the sample was composed of all the dependencies of the institution under study.
N: population size, n: subset of population, S: standard error, estimated by us, V2: population variance, its definition (Se) squared error.

The procedure for determining the sample is the systematic selection of sample elements. To apply the systematic selection procedure for sample elements, it is necessary to calculate the selection interval. The K value will depend on the size of the population and the sample. Two types of research sources were used to conduct research: Primary Data Source: Interview with institution leaders to classify the degree of assertiveness and build the groups: Assertive, Non-assertive, Indirect Assertive. Application of the EMA test, to diagnose the type of assertiveness of the subjects. Interview, to know the access that the leader has to the technology and what is the most used channel to communicate with subordinates: mobile, email, chat, video call or other.

Taking as a reference the UTAUT model, aspects of the original questionnaire were taken and an evaluation guide was prepared with the aim of knowing the degree to which leaders use technology in their work. The evaluation guide was provided by the experts who evaluated each of the leaders and ranked them into three groups. First, those who had a high degree in the use of technology, defined by a daily frequency. A second group that is classified as a middle degree. The frequency of use of the technology was at least three days a week. A third group classified as a low, with a frequency of use of technology to interact with subordinates, consisting of once or never a week. The degree of use of the technology was classified on an ordinal scale of 1 to 5, to determine whether the subjects possessed the attribute.

Experts analyzed the expectation of performance, understood as the degree to which a person believes that using the technology would help them achieve gains in job performance. They also assessed the expectation of effort, understood as the degree of ease associated with the use of technology and its social influence on workers. Three other traits were analyzed by judges as the degree to which leaders perceive other important people to believe they should use technology. Also, evaluate the condition of facilitation, which is only the degree to which a person believes that there is an organizational and technical infrastructure to support the use of technology. In addition, the behavioral intent of leaders known as an individual's willingness to perform particular behavior. All these aspects were evaluated by the expert judges according to the UTAUT questionnaire, Cronbach Alpha's Alpha was calculated to confirm the internal consistency of the question guide for each model factor.

Then the weight matrix was formed. Using Kendall W status, and the goodness of the W coefficient that allows to obtain the level of concordance of the judges between 0 and 1. Considering that the value 1 means a total criterion match and the value 0 means a total disagreement, concordance was obtained among the experts of 0.8.

After summarizing the responses from both data sources, the mean value was calculated and the hypothesis test determined using Spearman's Rho coefficient for non-normal data. Since, the answers in a questionnaire are not directly related to the average values of the evaluation carried out by the experts. To contrast the hypotheses a correlation coefficient of 0.195 was obtained and the significance of 0.015, that demonstrates a significant correlation according to the scale estimates. In addition, a significance level of 0.05% was taken as an acceptable value. The null hypothesis H0 is rejected, which explains that: The use of technology is not positively related to assertive behavior, so we can conclude that it is possible to work with the hypothesis H1: The use of technology is positively related to assertive behavior.

Subsequently, the correlation and relationships between the variables were determined by the contingency tables and the Coefficient Rho Spearman.

III. RESULTS

The sample under study was characterized by being predominantly female at 71% with an average age of 39 years. The ethnic composition had 69% belonging to the white race, 14% of the black race and 17% of the mestizos. 74% of the sample corresponds to the University school level, 24% is average technician and 9% is the Higher Middle level. The expert judges' approach was obtained from the application of the peer-to-peer comparison method.

Managers of the institution under study were interviewed, who had the responsibility to classify the leaders (subjects of the investigation), according to the criteria outlined in this work, in three groups: high degree in the use of technology to communicate with its employees, the average degree in the use of technology, up to three times per week, and the low degree of use of technology. The value of 1 was used to define low degree of use of the technology. Values of 2 and 3 were used to define the average degree of use of the Technology, and values of 4 and 5 to represent the high degree of use of the technology. The results obtained in the application of this method are detailed as follows.

A pair of expert judges were compared to see if leaders make use of technology in their relationship with their employees. An internal consistency analysis was carried out on the modified UTAUT questionnaire to determine whether the questions asked measure what they
are intended, and whether they are perfectly understood by the judges.

For each factor a high reliability Cronbach Alpha was obtained. The Performance Expectancy factor got a value of 0.910 for a total of 4 items evaluated. The Effort Expectancy factor obtained a coefficient of 0.918 through 4 items evaluated. The Social Influence factor reached a Cronbach Alpha of 0.745 and was evaluated by 3 items. The Facilitating Conditions factor was worth 0.792, and was evaluated by 2 items. The Behavioural Intention factor reached 0.731 and was evaluated by 3 items.

Out of a total of 201 subjects who made up the sample; 194 subjects were identified with a high degree of use of technology according to the judges. In the category average degree of use of the technology were cataloged 4 leaders and in the low degree only 3 leaders.

The reliability coefficient Alpha de Cronbach obtained 0.78 in the Multidimensional Scale of Assertiveness EMA test indicates that the test is reliable, corresponding to the default value as a high reliability indicator. The internal coherence of the questionnaires is adequate, demonstrating that each question contributes significantly to the variable to be measured and that the questionnaire is consistent.

The diagnosis made with the Multidimensional Scale of Assertiveness, EMA, showed that the 98.5% of leaders develop styles of assertive behavior. Scale scores were found within normal in linear T-scores of 40 to 60 on average, set by Flores Galaz, M., & Díaz-Loving, R. (2004). Only 5 leaders scored on the scale within the average range, the rest of the scores were found above average. This diagnosis shows that leaders tend to behave assertively in their relationships with their employees.

An Indirect assertive behavior style diagnosis was obtained for 3.7% of leaders. The scores obtained by the leaders are within the average range. This shows that subjects with above-average scores 40-60 develop indirect assertive styles in the relationship with their employees through letters, emails, cell phone or other indirect means of communication. Below-average scores found in this style indicate that subjects are assertive and do not use indirect means to express feeling desires or defend personal rights.

The results of the diagnosis of indirect assertiveness correspond to the findings of Flores M. (2002) and Díaz-Loving R. (2019), assuming that indirect assertiveness is more common in Mexicans than in Cubans, where assertive style is the most common in the Cuban population.

With a non-assertive diagnosis only rated 1.8% and this result was within the average range of 40 - 60. This shows that leaders develop non-assertive styles in the relationship with their employees, although being scored on average, it indicates that this style of behavior is not fully accentuated.

In order to know if the variable, Use of technology is related to Assertiveness, Spearman's correlation coefficient was used and Contingency Tables were also used.

### IV. DISCUSSION

The analysis of the contingency table carried out showed that there is a significant relationship between the two variables studied. The relationship between assertiveness and low degree of use of technology reached 9.3%. The relationship between assertiveness and the average degree of use of technology showed a percentage of 18.5. The relationship between the high degree of use of technology and assertiveness showed a percentage of 68.5%. It is confirmed that there is a positive relationship between assertiveness and high degree of use of technology. See Table 2

| Table 2 Relationship between assertiveness in leaders and the Degree of Use of Technology |
|-----------------------------------------------|---|---|---|---|---
| Contingency Table Assertiveness *Degree of Use of Technology |
| Low Degree Use of Technology | Average Degree Use of Technology | High Degree Use of Technology | High Use Degree of Technology | Total |
| Count | 5 | 2 | 10 | 20 | 17 | 201 |
| Assertiveness % of the total | 9.3% | 3.7% | 18.5% | 37.0% | 31.5% | 100.0% |

Graph 3 represents the relationship between the Technology Degree of Use variables and the Assertive style. It is clear that leaders who develop assertive behaviors tend to use technology to a high degree. It is also noted in the graph that the leaders studied have a medium and low degree of use, which means that they do not use technology as often for their working relationships with employees. It can be concluded that the three degrees of use
are present, although in greater percent the high degree of use of technology. See graph 3

*Graph 3. Contingence table result, Assertiveness variables and Degree of Use of Technology*

![Graph 3](image)

In the case of Cuba, that the use of technology does not yet reach the levels of other countries in the region, we consider these findings to be interesting, since they allow to draw strategies that warn of the need to stimulate the use of technology in the leaders. The study found that technology, being related to assertive behavior, stimulates the expression of feeling desires, and defends personal rights in employee relations.

Graph 4 describes the behavior of the Indirect Assertive style with respect to the Degree of Use of Technology. In this respect, a higher percentage ratio of variables was found in the average degree of technology use. Although they are also present the high degree, and low use of technology. Indirect assertive leaders scored above the linear 40 T value of the scale, where it is reaffirmed that they possess the indirect assertive style. Leaders below this average do not possess this indirect style. Note that leaders below average 40 with assertive styles gained the highest percent in the High Degree of Technology Use. See graph 4

*Graph 4. Contingence table result, Indirect Assertiveness variable and Degree of Use of Technology*

![Graph 4](image)
Spearman’s Rho coefficient was used to establish the positive and negative correlation between the variables studied. With the use of this coefficient, the correlation between the variable Degree of use of technology and Assertiveness style, Indirect Assertiveness style, and Non-Assertiveness style could be found. Table 5 details the values obtained. Analyzing the significance level, the correlation is significant at level 0.05, bilateral. The values are below the estimated range, which shows that there is correlation between the variables. See table 5.

Table 5 Spearman correlation. Relationship between variables, assertiveness and degree of use of technology

| Correlation                  | Style Assertive | Style Indirect Assertive | Style Non Assertive | Degree of Use of Technology |
|------------------------------|-----------------|---------------------------|---------------------|----------------------------|
| Rho de Spearman Style Assertive | 1.000           | -.293*                    | -.103               | .195                       |
| Sig. (bilateral)             |                 | .031                      | .045                | .015                       |
| N                            | 201             | 201                       | 201                 | 201                       |
| Style Indirect Assertive     | -.293*          | 1.000                     | .032*               | .141                       |
| Sig. (bilateral)             | .031            | .016                      | .018                |                           |
| N                            | 201             | 201                       | 201                 | 201                       |
| Style Non Assertive          | -.103           | .032*                     | 1.000               | .179                       |
| Sig. (bilateral)             | .045            | .016                      | .017                |                           |
| N                            | 201             | 201                       | 201                 | 201                       |
| Degree of Use of Technology  | .195            | .141                      | .179                | 1.000                      |
| Sig. (bilateral)             | .015            | .018                      | .017                |                           |
| N                            | 201             | 201                       | 201                 | 201                       |

* The correlation is significant at level 0.05 (bilateral).

Low positive correlation was found between the Degree of Use of Technology and Assertiveness, as the correlation values obtained are 0.195. In addition, 0.141 of positive correlation was obtained between the Degree of Use of Technology and the indirect assertiveness style and, 0.179 of correlation between the Degree of use of technology and the non-assertive style.

In relation to the assertive variable and assertive style, indirect assertive and non-assertive, significant correlation was found. For example, a negative correlation of -0.293 was obtained between indirect assertiveness style and assertive style. A negative correlation of -0.103 was also found between non-assertive style and assertive style.

Significant correlation was found in relation to assertive variable, assertive style, indirect assertive style, and non-assertive style. For example, a negative correlation of -0.293 was obtained between indirect assertiveness style and assertive style. A negative correlation of -0.103 was also found between non-assertive style and assertive style.

V. CONCLUSION

A low positive correlation was found between the Degree of Use of Technology and Assertiveness, with values close to zero 0.195 observed when Spearman’s Rho correlation coefficient was applied. In addition, a significant correlation of the assertive variable and assertive style, indirect assertive style and non-assertive style was found. Indirect assertive style and assertive style showed a negative correlation of -0.293. The non-assertive style and assertive style showed a negative correlation of -0.103. The above confirms that the variables are correlated.

The study used as a reference the adapted questionnaire of UTAUT Model, confirms that there is a positive relationship between the Degree of use of technology and the assertive behavior of the leaders. The three degrees of use of High, Medium and Low technology are present in the leaders, although in greater percentage the high degree of use of the technology.
The objective of this study was to identify the influence of The Use of Technology on assertive behavior, very often used by leaders in the exercise of management. In applying the EMA Multidimensional Scale of Assertiveness, largest percent of leaders develop the style of assertive behavior.

Leaders working in work environments where the use of technology is high developing an assertive behavior in their relationship with subordinates, finding that social factors have a significant effect on the behavioral intent in terms of interaction.

For future research it is suggested to use other Cuban financial institutions as primary data sources with similar characteristics. As limitations of this study it is recognized that the number of managers of the financial institution studied is less than the total number of workers, so it is complex to expand the sample within the same institution, so it would be advisable for leaders of other Cuban financial institutions to participate in the study.

To deepen the relationship between the variables studied, factorial analysis can be used to analyze each factor of the UTAUT Model, and include the attitude variable studied by Troy D. et al (2013) and Dwivedi Y. et al (2017) as contributions of the model. Also, contrast it with the assertive behavior of leaders. This analysis might reveal which of the factors in the model directly affect assertive behavior. This would allow new inferences about the relationships between the Use of Technology and the Assertive behavior of leaders.

The study analyses the behavior of intangible assets in modern enterprise and the peculiar way in which they manifest themselves in practice. They are considered in their grouped form and in context. It confirms that the study of intangibles assets such as leadership and technology can be important management axes in the organization. At present, the relationship between assertiveness in leaders and their relationship to the use of technology has not been thoroughly studied, so the contributions of this work offer lights that may be interesting for the practical management of these intangibles’ assets. By the nature of the numbers, which are used to respond to an ordinal scale, for the measurement and evaluation of these intangibles assets, the results become theoretical approximations which constitute research findings.

REFERENCES

[1] Alberti, R., & Emons, M. (1970). Your Perfect Right: A Guide to Assertive Behavior. San Luis Obispo, CA: Impact Press. p.15

[2] Alhabshi, S.M., Rashid, H.M.A., Khadijah Syed Agil, S. and Ahmed, M.U. (2017). "Financial reporting of intangible assets in Islamic finance", ISRA International Journal of Islamic Finance, Vol. 9 No. 2, pp. 190-195. https://doi.org/10.1108/IJIF-08-2017-002

[3] Allahyari, B., & Jenaabadi, H. (2015). The Role of Assertiveness and Self-Assertion in Female High, School Students’ Emotional Self-Regulation. Journal Creative Education, 6, 1616-1622. p. 1617 http://dx.doi.org/10.4236/ejke.2015.614163

[4] Ames D., Flynn F. (2009). Pushing up to a Point: Assertiveness and Affectiveness in Leadership and Interpersonal Dynamics. Journal Research in Organizational Behavior. 29, 111-133. 010 https://doi.org/10.1016/j.jorh.2009.06.010. p.11-12

[5] Ames, D., Flynn F. (2007). What Breaks a Leader: The Curvilinear Relation Between Assertiveness and Leadership. Journal of Personality and Social Psychology, 2007, Vol. 92, No. 2, 307–324. doi: 10.1037/0022-3514.92.2.30

[6] Ames D., Lee A. Wazlawek A. (2017). Interpersonal assertiveness: Inside the balancing. British Journal of Developmental Psychology. 2017 John Wiley & Sons Ltd. 10.1111/sps3.12317. p. 2-3

[7] Andrey D. (2019). The Influence of Leadership Art on Modern Enterprise Management. Open Journal of Business and Management, 2019, 7, 998-1006 ISSN Online: 2329-3292, ISSN Print: 2329-3284. p. 1000. DOI: 10.4236/ojbm.2019.72067 Apr. 26, 2019 998

[8] Aktop A., Özcelik M., Kaplan E., Aeferoğlu F. (2015). An examination of assertiveness and aggression level of amateur soccer players in different age groups. Procedia - Social and Behavioural Sciences. http/DOI: 10.1016/j.sbspro.2015.01.857

[9] Apostolos G., Costas A., Christos S. (2019). Adoption of mobile self-service retail banking technologies The role of technology, social, channel and personal factors. International Journal of Retail & Distribution Management, Vol. 47 No. 9, 2019. pp. 894-914. DOI 10.1108/IJRDMM-05-2018-0089

[10] Arif, M., Ameen, K. and Rafiq, M. (2018). "Factors affecting student use of Web-based services: application of UTAUT in the Pakistani context", The Electronic Library, Vol. 36 No. 3, pp. 518-534. https://doi.org/10.10118/EL-06-2016-0129

[11] Attuquayefio S. Addo H. (2014). Using the UTAUT model to analyze students’ ICT adoption. International Journal of Education and Development using Information and Communication Technology. (IJEDICT), 2014, Vol. 10, Issue 3, pp. 75-86. Available: http://ijedict.dei.uwi.edu/viewarticle.php?id=1895

[12] Borras P., Ruso F. (2015). Capital intelectual: visión crítica y propuesta para organizaciones cubanas. 2015. Editorial UH. La Habana, Cuba

[13] Brooking, A. (1996). Intellectual Capital: Core Assets for the Third Millennium Enterprises, International Thomson Business Press, London.
of Health Volunteers of Yazd. Psychology, 6, 782-787. http://dx.doi.org/10.4236/psych.2015.66072
[38] Maloney M., Moore P. (2020). From aggressive to assertive. International Journal of Women’s. Dermatology. https://doi.org/10.1016/j.jwld.2019.09.006
[39] Mansoori, K.A.A., Sarabdeen, J. and Tchantchane, A.L. (2018), “Investigating Emirati citizens’ adoption of e-government services in Abu Dhabi using modified UTAUT model”, Information Technology & People, Vol. 31 No. 2, pp. 455-481. https://doi.org/10.1108/ITP-12-2016-0290
[40] Moghavvemi, S., Mohd Salleh, N.A. and Standing, C. (2016), "Entrepreneurs adoption of information system innovation: The individual impact of perception and exogenous factors on entrepreneurs behavior", Internet Research, Vol. 26 No. 5, pp. 1181-1208. https://doi.org/10.1108/IInfR-01-2014-0024
[41] Naranjo-Zolotov M. Oliveira T., Casteleyn S. (2019). Citizens’ intention to use and recommend e-participation Drawing upon UTAUT and citizen empowerment. Journal Information Technology & People. Vol. 32 No. 2, 2019. pp. 364-386. DOI 10.1108/ITP-08-2017-0257
[42] Oana, J., & Ionica Ona, A. (2019). Assertiveness in Self-Fulfillment and Professional Success. Interpersonal Dynamics in the Didactic Relation. Psychology Journal. 10, 1235-1247. https://doi.org/10.4236/psych.2019.108079
[43] Pickkola, H. (2020), “Intangibles and innovation-labor-biased technical change”, Journal of Intellectual Capital, Vol. 21 No. 5, pp. 649-669. https://doi.org/10.1108/JIC-10-2019-0241
[44] Rahi S., Othman M., Alghizzawi M., Mi Alnaser F. (2019). Integration of UTAUT model in internet banking adoption context The mediating role of performance expectancy and effort expectancy. Journal of Research in Interactive Marketing. Vol. 13 No. 3, 2019. pp. 411-435. DOI 10.1108/JRIM-02-2018-0032
[45] Roth F. (2020). Revisiting intangible capital and labor productivity growth, 2000-2015. Journal of Intellectual Capital. Vol. 21 No. 5, 2020. DOI 10.1108/JIC-052019-0119
[46] Sarfaraz J. (2015). Unified theory of acceptance and use of technology (UTAUT) model-mobile banking. Journal of Internet Banking and Commerce. ISSN: 1204-5357. Available at: http://www.icommercecentral.com/open-access/unified-theory-of-acceptance-and-use-of-technology-utaut-model-mobile-banking.php?aid=86597
[47] Sekyere A. (2016). Exploring the Factors that Influence the Adoption of Internet Banking in Ghana. Journal of Internet Banking and Commerce, April 2016, vol. 21, no. 2, p.3, p.14. Available at: https://www.icommercecentral.com/open-access/exploring-the-factors-that-influence-the-adoption-of-internet-banking-in-ghana.php?id=73171
[48] Serife Nur Yildiz, Alev Ates Cobanoglu, Tarik Kisla (2020). Perceived Acceptance and Use of Scratch Software for Teaching programing: A Scale Development Study. International Journal of Computers. August 2020. Vol. 4 No.1. ISSN 2513-8539. DOI 1021585/jicses. v4i1.59
[49] Sivathanu, B. (2019), “Adoption of digital payment systems in the era of demonetization in India: An empirical study”, Journal of Science and Technology Policy Management, Vol. 10 No. 1, pp. 143-171. https://doi.org/10.1108/JSTPM-07-2017-0033
[50] Sobti, N. (2019), “Impact of demonetisation on diffusion of mobile payment service in India: Antecedents of behavioral intention and adoption using extended UTAUT model”, Journal of Advances in Management Research, Vol. 16 No. 4, pp. 472-497. https://doi.org/10.1108/JAMR-09-2018-0086
[51] Shafer A. Ortiz R, Thompson B., Huemmer J., (2017). The Role of Hypermasculinity, Token Resistance, Rape Myth, and Assertive Sexual Consent Communication Among College Men. Journal of Adolescent Health. https://doi.org/10.1016/j.jadohealth.2017.10.015
[52] Shaper S., Nielsen Ch., & Rosslender R. (2017). Moving from irrelevant intellectual capital (IC) reporting to value-relevant IC disclosures. Journal of Intellectual Capital. Vol.18, No. 1. 2017. DOI 10.1108/JIC.07.2016-0071. p.81-101
[53] Thongsi, N., Shen, L., Bao, Y. and Alharbi, I.M. (2018), "Integrating UTAUT and UGT to explain behavioural intention to use M-learning: A developing country’s perspective", Journal of Systems and Information Technology, Vol. 20 No. 3, pp. 278-297. https://doi.org/10.1108/JSIT-11-2017-0107
[54] Troy Devon T., Lenandlar Singh & Kemuel Gaffar. (2013) The utility of the UTAUT model in explaining mobile learning adoption in higher education in Guyana. International Journal of Education and Development using information and communication technology. ISSN Online: 2152-7199 ISSN Print: 2152-7180. Available at: http://ijedict.dec.uwi.edu/viewarticle.php?id=1687
[55] Ukut, I.T. & Krairit, D. (2019), "Justifying students’ performance: A comparative study of both ICT students’ and instructors’ perspective", Interactive Technology and Smart Education, Vol. 16 No. 1, pp. 18-35. https://doi.org/10.1108/ITSE-05-2018-0028
[56] Valliammal Sh. Kathyayin B.V. (2017). Assertiveness and self-esteem in indian adolescents. Galore International Journal of Health Sciences and Research vol.2; issue: 4; oct.-dec. 2017. P-ISSN: 2456-9321. p. 8. Available at: https://www.gijhrs.com/GIJHSR_Vol2_Issue4_Dec2017/2.pdf
[57] VanderPal, G. (2019). How Intangible Assets Affect the Corporate Financial Performances and How It Varies from Sector–to–Sector? Journal of Accounting and Finance, 19(8), DOI/10.33423/jaf.v19h8.2624, Available at SSRN: https://ssrn.com/abstract=3521962
[58] Venkatesh, Viswanath, Michael G. Morris, Gordon B. Davis, and Fred D. Davis (2003), “User Acceptance of Information Technology: Toward a Unified View.” MIS Quarterly 27, no. 3: 425-78. Accessed October 17, 2020. doi:10.2307/30036540.
[59] Yong Liu. (2015). The influence of network technology on higher educational management and its optimization method. Journal of Social Sciences. 2015, 3, 242
[60] Zaldivar D. (2002). Assertive training. Instruction manual. Book. Editorial Félix Varela, Havana 2002