

Understanding the Usage of Whatsapp Among Malaysian Employees Through the Lens of Social Influence Theory

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Abstract

The study examines the social influence factors that affect the intention for using WhatsApp application among employees in a Malaysian organisation. The objectives of the study are to ascertain the reasons for the employees to currently use WhatsApp and to examine the factors that affect the use of WhatsApp based on Social Influence Theory perspective. The nature of the study's methodological design was qualitative. The main instruments for data collection were focus group discussions and in-depth interviews. Purposive sampling technique was adopted to ensure that the employees chosen had the relevant knowledge about WhatsApp. The findings indicated that compliance, internalization and identification were three important social factors that could influence the employees to use WhatsApp in their routine work as predicted by Social Influence Theory. This study contributes some insights regarding the factors that can contribute to the usage of social media and strengthen the ideas of Social Influence Theory in Malaysian context.

Keywords: *Mobile Applications, WhatsApp, Social Influence Theory, Social Media*

1. Introduction

The 21st century society makes great demands on its members because of the rapid development and ever-changing political, cultural, social, economic and technological situations. Personal computers, cell phones, and social networks, all of which were once considered frivolous, have made such a huge impact on our culture today that our daily lives will not be easy without them. Consequently, the society and organizations expect their members/employees to keep pace with such change, and adapt their skills and expertise in all aspects of life.

Malaysia's growing Internet penetration rate is certainly one of the main reasons why WhatsApp has become an important medium of interaction. WhatsApp is used extensively among users and friends daily. It is a useful tool of connecting people with common interests and shared concerns. With the widespread connectivity and constantly emerging tantalizing online activities, people are spending more and more time online for studying, learning, communicating, creating things, and entertaining themselves. WhatsApp Messenger is a proprietary, cross-platform instant messaging subscription service for smartphones and selected feature phones. It requires access to the internet for communication. In addition to text messaging, users can send messages, images, videos, and audio media as well as their locations. WhatsApp Inc. was founded in 2009 by Brian Acton and Jan Koum, who were both former employees at Yahoo!. The company was based in Mountain View, California and initially it only employed 55 people. As of October 2014, WhatsApp was the most globally popular messaging app with more than 600 million users.

With respect to organization context, messenger application that is mostly used by today's employees is WhatsApp Messenger. As a result, the usage of WhatsApp Messenger has increased the workload among employees. For work matters, employers sometimes give urgent instructions via WhatsApp Messenger that re-

quire their employees to always be alert, and ready for their upcoming tasks even at times when the employees are not at their workplace. As a result, the employees feel that work updates and instructions using WhatsApp Messenger give them more workload and distract their focus from other than work activities, hence making them frustrated to handle the jobs given. Although these situations are not faced by all employees, they still feel that work has become their priority as compared to their family, vacations, etc. With regard to this issue, the present study intends to achieve the objectives as follows:

- To understand the usage of WhatsApp as a communication medium in an organization from the perspective of superiors and subordinates.
- To identify the social factors that influence the usage of WhatsApp.

2. Literature review

Can the spontaneous and informal conversations on WhatsApp be useful in more formal work environments that require more careful planning and thinking before exchanging messages? There are two different viewpoints on how people choose different communication media. One view is that people choose communication media rationally, i.e., they choose a medium that can best convey their intended meanings, and their choice of a medium is restricted by work-related contextual factors such as the distance between communication partners. The other view is that people choose communication media in a social context, i.e., that social norms and cultures, in addition to rational reasons, affect their choice^[1]. However, some researchers argue that most traditional theories about interpersonal relationship development may not apply to online communication. For example, Parks and Floyd^[2] argue that an online communicator can develop an interpersonal relationship with someone met via an Internet newsgroup despite the

lack of synchronous or spontaneous interactions. Walther^[3] also suggests that even though it may take longer time than that in face-to-face settings, online communicators can develop interpersonal relationships by devising their own relationship strategies in Computer Mediated Communication (CMC) to deliver social and emotional cues.

Many traditional CMC studies, grounded in Media Richness Theory and Social Presence Theory, had focused on the bandwidth of media in determining their capability to convey the meanings or intentions of communication partners^[4]. Due to its low bandwidth, text-based online communication has been considered ineffective for developing interpersonal relationships, since there are greater chances for misunderstanding, and incorrect impressions are often generated,^[5] but still the application, messenger that is mostly used by current employees is WhatsApp Messenger as stated above.

Barhoumi^[6] defines WhatsApp as an instant messaging application for smart phones that allows users to exchange information like videos, audios, texts and images using the internet as a platform. Bouhnik and Deshen^[7] define WhatsApp as a social network application that offers its users the opportunity of sending and receiving instant messages and feedback. In education context, WhatsApp is relatively a new educational tool that supports teacher-student relationship which can be used in sharing information. Awake^[8] suggests that social networks are online service platforms or sites that focus on building and reflecting social relations among humans with the aim of sharing common interests.

WhatsApp has been seen as an effective communication and collaborative tool like in the aspect of teaching and learning due to its advantages over other forms of social media tools. Barhoumi^[6] believes that WhatsApp facilitates knowledge sharing among peers, improves learners' manipulative skills, facilitates learning process and fosters evaluation process. WhatsApp is seen as an educational mobile tool with great potentials for helping students in constructing their own knowledge while making use of the digital mobile devices. WhatsApp application is specially designed for educational activities which can enhance communication, creativity, critical thinking and problem-solving skills among learners. Fraser and Dutta^[8] highlight some of the advantages of social networking sites such as; 1) Creation of communicative and collaborative forums for learners, 2) Improvement of social relationships among learners, and sharing of information like videos, audios, texts, photos etc.

The usage of WhatsApp among employees using ICTs has also been reported to cause confusion pertaining to the boundaries between work and non-work. The confusion often leads to a situation where work may creep into the territory of a worker's private life. According to Fleck et al. (2015)^[9] ICTs can lead to invasion from one role to another, often with negative effects, hence causing heavier workload and work-life imbalance. Using ICTs has also been reported to cause confusion about the boundaries between work and non-work. ICT's can lead to invasion from one role to another, often with negative effects, hence causing heavier workload and work-life imbalance^[8]. However, in the context of Malaysia, the researchers believe that while there is no significant effect of WhatsApp Messenger on employees' workload, WhatsApp Messenger does provide significant and positive effects on employees' satisfaction with work-life balance^[10].

3. Social influence theory

Social influence describes a process in which an individual's opinions or behaviors are affected by the opinions or behaviors of the other members in a group. The discussion of herding behavior and social influence has a long history. For example, Trotter^[10] identified herd instinct as one of the primary instincts along with self-preservation, nutrition, and reproduction. Freud^[11] suggested an individual's tendency to follow the masses ("Herabsinken zum

Massenindividuum"). Subsequently, the studies of the influence of a group on the decisions or actions of an agent entered the disciplines of economics, sociology, and psychology.

The studies on social influence have discovered that normative social influence is strong when people belong to a group; their behavior is identifiable^[12], they are open to anticipated surveillance, they are under power to reward and punish, and the conspicuousness of product is high^[13]. On the other hand, informational social influence is greater when subjective uncertainty exists or it lacks objective evidence for evaluation^[14]. Informational social influence is operative in product selection when quality is somewhat ambiguous, one's own ability to discriminate is not satisfactory and decision complexity is high^[13].

The central theme of social influence theory, as proposed by Kelman^[15], is that an individual's attitudes, beliefs, and subsequent actions or behaviors are influenced by the referent others through three processes: compliance, identification, and internalization. Kelman^[15] posits that social influence brings about changes in attitude and actions, and that changes may occur at different "levels." This difference in the levels of changes can be attributed to the differences in the processes through which individuals accept influence.

Social influence theory has its roots in the early studies of group attitude and perceptual convergence^[16]. According to Kelman^[15], one of the key reasons why other people are able to influence one's perceptions and opinions is the identification one feels with others. Identification is argued to occur when people consider the relationship with the communicator to be salient. If people want to be a member of the group, or identify themselves with the communicator (an individual or the group represented by the individual), they adopt the induced behaviour or attitudes they perceive to represent the communicator. Conformity takes the form of identification if the persuasive power of the source arises out of attractiveness. Attractiveness is concerned with either physical attributes of the source (i.e. physical attractiveness), or similarity in values or beliefs (i.e. ideological similarity)^[16].

Attractive communicators are expected to have stronger persuasive influence than unattractive ones. Ideological similarity stems from a similar experience or background, such as in terms of education, vocation, nationality, religion etc., which possibly results in similar ways of thinking, beliefs and preferences. Accordingly, message recipients tend to speculate that they share more in common with ideologically similar people, and probably have similar attitudes and make similar decisions. In the meta-analysis conducted by Wilson and Sherrell, ideological similarity was discovered to be one of the three most effective manipulations of source factors^[16].

Each of the three processes can be represented by a function of the following three determinants of influence: (a) the relative importance of the anticipated effect, (b) the relative power of the influencing agent, and (c) the prepotency of the induced response^[15]. However, for each process, these determinants are qualitatively different. Thus, each process has a distinctive set of antecedent conditions; and similarly, each process leads to a distinctive set of consequent conditions. Since social influence can shape an individual's attitudes, beliefs and actions, the impact of social influence on information systems (IS) acceptance and usage has been studied extensively. Nevertheless, the initial theorizing of IS adoption and use^[17] is contended to consider the perspective of social normative *compliance*, thereby overlooking the *identification* and *internalization* processes of social influence^[18]. It is argued that the *subjective norm* is the dominant conceptualization of social influence and the way it is operationalized involves typical emphasis on compliance^[19]. Subjective norm is theorized in several behavioral models such as the Theory of Planned Behavior (TPB) and the theory of reasoned action^[20]. Technology-related subjective norm appears in different IS-specific models, including TAM2 and UTAUT^[17].

Realizing that only one aspect of social influence i.e., *compliance* may not predict the true relationship between the

system users' belief and behavior, and IS use, other researchers attempted to bring the perspectives of all three processes of social influence to provide the integrated impact of them^[19]. They believe that the effect of compliance-based social influence may reduce over time, whereas the effects of identification and internalization would persist over longer periods. Therefore, the studies that theorize all three processes of social influence indicate that social influence may differ significantly across groups in organizations^[19]. Such conceptualization helps us to understand how the system users' own beliefs and judgments also influence their commitment to adopt and use technology, complementing the understanding of the previous studies that focus on how the system users *comply* and *conform* to the beliefs of salient others.

4. Research methodology

The study used interview method among the managers (representatives of superiors) and focus group discussion with the subordinates. An interview can be defined as a purposeful discussion between two or more people. It can help researchers to gather valid and reliable data that are relevant to the research questions and objectives. An interview could be classified as one of structured, semi-structured, or unstructured interview. For the structured interviews, researchers always prepare questionnaires based on an identical set of questions. Unstructured interviews are informal conversations between respondents and researchers (interviewers). They give respondents the opportunities to present their opinions freely. As for semi-structured interviews, they are based on a list of themes and questions. For the present study, focus group discussions involving a group of ten respondents who consisted of subordinates who used WhatsApp in their routine work. The protocol of the focus group discussions and interviews which contained eight questions related to the use of WhatsApp and the factors for selecting WhatsApp as their communication channel was created. The discussions were recorded and the transcripts of the focus group discussions were analyzed thematically based on the assumptions of Social Influence Theory.

5. Findings and discussion

The findings revealed three dominant themes as predicted in Social influence theory that were compliance, identification and internalization.

(i)

5.1. Compliance:

Compliance is assumed to occur when individuals accept influence and adopt the induced behavior to gain rewards (or, approval) and avoid punishments (or, disapproval). Hence, "the satisfaction derived from compliance is due to the *social effect* of accepting influence." The same phenomenon was found to occur in the context of acceptance and the use of WhatsApp amongst the employees in Malaysia. One of the reasons stated by Informant 1 was the fact that everybody in the organisation was using WhatsApp and everybody had a smart phone. This factor influenced them to use WhatsApps. This can be proven based on the following respondent's statement:

I use WhatsApp since everybody is using it.
(Subordinate: Informant 7)
Furthermore, everybody has a handphone.
(Subordinate: Informant 6)

If the employees did not own a mobile phone, there would be some pressure of answering questions from their co-workers as described by Informant 1:

When we don't use it, people will ask...it's weird...where in the world do you live in ..since you do not use WhatsApp while everybody else does)
)

5.2. Identification

Identification is said to happen when individuals adopt the induced behavior in order to create or maintain a desired and beneficial relationship with another person or a group. Hence, the satisfaction occurs due to "the *act* of conforming." In the context of organizational staff in Malaysia, the use of WhatsApp is also affected by this factor. The use of WhatsApp is said to be one of the staff's actions to stay in contact with others. This is in line with the culture of the Malaysian people who favor maintaining good relationships with each other.

According to Informant 6, almost all messages were transmitted through WhatsApp. Without the use of WhatsApp, the organizational staff believed that they would be left behind, and would not receive up-to-date information related to the organization and their jobs as mentioned in the statement below:

Anyway, the information is transmitted all through WhatsApp, so we have to use it. If you do not use the tool, it makes it difficult to do the work. (Subordinate: Informant 6)

It means we have to follow the trend...Nowadays, we have to make use of technology and thus we have to use it (Subordinate: Informant 3)

Another example provided by the respondent indicated the idea about identification as presented below:

Sometimes the boss is in his office, he does not send emails nowadays. He uses WhatsApp because WhatsApp is quicker for people to see. It's like a handset on the desk. When we open, we look at it. And with an instant reply to what the boss asked. Sometimes when my boss is in the meeting, he will ask me to be ready and check my WhatsApp in case he need any information for example about the fee So he wants to ask us quickly to get any information. (Subordinate: Informant 1)

Another statement by respondent 5:

.... it has been like there is a need for this. We will be afraid if we do not have Whatsapp, we will not be able to get any info anymore. Subordinate: (Informant 5)

Internalization

Internalization is assumed to occur when individuals accept influence after perceiving the content of the induced behavior is rewarding in which the content indicates the opinions and actions of others. It is also claimed that individuals who adopt the induced behavior realize that it is congruent with their value system. In this case, therefore, the satisfaction occurs due to "the *content* of the new behavior."

According to Informant 1 (Superior):

....Still in use, all staff can indeed access. If I'm outstationed, I still feel like I'm in the office because I'm still able to communicate (with my staff) and also get the real time updates of the report. For example, Mr Mazlan's (while the informant pointed to the second informer) he is in charge of traffic, sometimes when we wanted to clamp any vehicle that was wrongly parked, we had to ask other co-workers if they happen to know who the owner of the vehicle is...probabaly an OKU...may be our members in the WhatsApp Group know who the owner is, so that we can first give the warning. When an accident occurs in the campus too, we can get the information quickly....

Informant 1 provided another example of the use of WhatsApp to maintain good relationships:

Ermmmm ...I have a group of UUM golf club members that are more toward social activities. Just as you like to play golf, all of it,

so the goal of using WhatsApp is for the official purpose of work and another reason is for the purpose of social activities. (Superior: Informant 1)

Sometimes I use Whatsapp to communicate with old friends...and ask them, what's up, how's the job? It's just enough for that purpose. (Superior: Informant 2)

Informant 3 (Superior) also mentioned the same thing:

To me it's very useful. Like me, I've been around for 60 years. The old, the old school, my friends of the past time all seem to come back. Our lives are so colorful. We meet again the people who we have not seen for 40 years or 50 years. Networking that we see is not everything we want, so we have a choice. What we choose is what we have to say. What is irrelevant is the fact that it is relevant to us. That's very positive.

On the other hand, some of the respondents mentioned that they were passive WhatsApp users but they still received the benefits of connecting with other people within the WhatsApp group. The following Informant elaborated this :

I can be considered a relatively passive user where I'm not very active. In the group, I rarely reply to the messages. And also it depends on the situations and my needs. Sometimes if the group is unofficial, there are friends who only chat among them, not with anyone else even though they are also in the group.. So it is not fun to be in the group. If the group is a family group, I don't dare to leave the group because of the fear that I might hurt my siblings. But the advantage of the group, is if there is a story/news about the family, we can know it straight away. Sometimes there are people who use the group for business purposes. It is not fun to be in this kind of group but we have to keep silent... What is not fun is that many of our groups are hard to manage. But it's out of my mind. So we're just keep silent. (Superior: Informant 2)

The same view was further strengthened by Informant 3:

Well, I'm a member of many WhatsApp groups, but only when I'm free I will check the messages from the Whatsapp groups. Usually the unofficial groups have indeed hundreds of junk messages. Because we are not the kind of active WhatsApps users, we always follow...and I have no time ~~not~~ to look at all messages to reply them or just simply provide simple replies. I will read the messages after two or three days and sometimes I decide not to get involved. Thus, the messages will come to a number of almost hundreds and this does not concern me, I will just ignore this...it is good for me since I do not become the victim of technology. No doubt there are some advantages of WhatsApp like I can get the current information without having the trouble to look for it. Just check WhatsApp or Facebook... (laugh) (Superior: Informant 3)

Informant 3 also mentioned the positive aspect of WhatsApp:

If it's positive, in terms of human relationships... if it's a social relationship, if we're good at choosing, I think it will be very useful. For example...If there are so many things that we do not know, around us for our knowledge. In the past, if we wanted to know something, we had to find a book, find a teacher, find someone who was knowledgeable about what we wanted to know. But if we do not want it nowadays, suddenly there is that thing for us. Then when there is something suspicious, we have to cross check it. (Superior: Informant 3)

He also added:

Something like WhatsApp is really good, but we have to choose wisely. Cleverly choose something. Things we do not want, we ignore them, just like that. One more thing, we as human beings have network. We have networking, the circle of networking, it has to be extensive, it must be a big deal, we just think it's a bit hard. We do not like that.

As for informant 4, the use of WhatsApp was viewed to be able to bring various rewards in terms of strengthening relationships, not only in the context of work but also in other aspects such as social relations:

I do use WhatsApp intensively. Whether for personal, official or any purposes. WhatsApp is used because it is one of the ways to convey information. In addition to emails, correspondence and so on. The first reason we prefer WhatsApp is more because of the latest haulage and the way the delivery of information is done is more than it ever used to be, as opposed to emails that sometimes require a PC. If we see Whatsapp all in mobile phones. We know that everyone has a mobile phone. So one factor, if the information is spread through Whatsapp we know it's fast, that's the two messages we want to communicate to a friend. The third is Whatsapp...we know when someone has access to the messages. Because if you have a phone, when you read the message from the phone and it should be faster than on a PC.

WhatsApp because it's in everybody's mobile phone. It does not matter if we look at elementary school kids, they also have WhatsApp. It's from primary school age to our age since there are handphones and at the same time also, WhatsApp is free. Provided that it has to be connected with the Internet. It's in that sense. In short, WhatsApp is faster and we can reply messages quickly. (Superior: Informant 4)

Emails are delayed, sometimes if we cannot get access to emails, we have to wait for another day to check and reply them. (Superior: Informant 4)

To summarize, the results of the study showed the factors of using WhatsApp amongst the staff of the organization. WhatsApp is widely used for the purpose of social connections and there is also usage of it as the means for the distribution of information pertaining to work. The findings had also identified three important themes presented based on Social Influence Theory.

6. Conclusion

The world is celebrating the improvement in communication technology which has broadened the scope of communication through information, and communication no doubt has turned the entire world into "a global village". It helps people to be better informed, enlightened and kept abreast with the world development. Technology exposes mankind to better ways of doing things. Social media networking sites can include Twitter, Yahoo Messenger, Facebook Messenger, WhatsApp Messenger, Instagram, WeChat, Skype, Google Talk, Google Messenger etc. These networking sites are used by most people to interact with their old and new friends, non-virtual or internet friends who are also part of the findings of this study. The findings indicated that compliance, internalization and identification were three important social factors that influenced the employees to use WhatsApp in their routine work as predicted by Social Influence Theory.

The theoretical implication of this research is the strengthening of Social Influence Theory to explain the factors that contribute to usage of WhatsApp among Malaysian employees. The results highlight the relevance of the theory from information systems and communication disciplines to social media studies. Being consistent with the previous research on the socialization of the employees through social media, the study showed that the social interaction of the individuals influenced social media acceptance and usage. The research also provides some ideas on the implications for the managers. This research has shown the key role of WhatsApp as an information sharing and exchange channel among the employees in an organization. Building and maintaining relationships through WhatsApp is the main managerial implication of this study. This is consistent with the previous research

that revealed the role of social factors in influencing the employees' attitudes towards WhatsApp. The results also provide some insights on managerial implication for the policy makers to enhance the quality of social networking gadgets, as this research shows that improving the access to Internet will enhance the perception on the usefulness of WhatsApp among employees. This research, like other studies, is not without its limitations. The sample was only collected from a single organization and work needs to be expanded to include other areas. Further studies can focus on a specific social networking site that is WhatsApp and the gathering of data through their members. Future research perhaps can take further steps to examine the cumulative usage of WhatsApp which is more relevant to understand the process of social influence. The present study's researchers' predictions lend themselves to be tested in an experimental setting or on data which are both left for future research. Keeping an open eye on such development will help us to learn more about the driving forces behind social media usage and to further challenge our ability to develop flexible but suitable theories. While doing so, it is crucial for researchers to remember that social media such as WhatsApp are highly dynamic systems that will constantly require scholarly attention, analyses, and responses.

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References

- [1] Trevino, L. K., Webster, J., & Stein, E. (2000). Making connections: Complementary influences on communication media choices, attitudes, and use. *Organization Science*, 11(2), 163–182.
- [2] Parks, M. R., & Floyd, K. (1996). Making friends in cyberspace. *Journal of Communication*, 46(1), 80–97.
- [3] Walther, J. B. (1992). Interpersonal effects in computer-mediated interaction: A relational perspective. *Communication Research*, 19(1), 52–90.
- [4] Sproull, L., & Kiesler, S. (1986). Reducing social context cues: Electronic mail in organizational communication. *Management Science*, 32(11), 1492–1512.
- [5] Preece, J. (2000). *Online Communities: Designing Usability, Supporting Sociability*. Chichester and New York: John Wiley & Sons.
- [6] Barhoumi, C. (2015). The Effectiveness of WhatsApp Mobile Learning Activity Theory on Students' Knowledge Management. *Journal of Contemporary Educational Technology*, 6(3), 221-238.
- [7] Bouhnik, D. & Deshen, M. 2014. WhatsApp Goes to School: Mobile Instant Messaging between Teachers and Students. *Journal of Information Technology Education: Research*, 13, 217-231.
- [8] Awake, (2011, July). What Should I know social networking? Part 1, pp. 24.25.
- [9] Fraser N, & Dutta C. (2008). Defining online learning. Retrieved. 2018 from <http://www.learningspace.org>.
- [10] Fleck R, Cox A, and Robinson R (2015). Balancing boundaries: Using multiple devices to manage work-life balance. In the 33rd Annual ACM Conference on Human Factors in Computing Systems, ACM, Seoul, Republic of Korea: 3985-3988. <https://doi.org/10.1145/2702123.2702386>
- [11] Omar MK, Zakaria A, and Ismail ZIA (2017). WhatsApp messenger, workload and satisfaction with work-life balance among employees of a Malaysian government office. *International Journal of Advanced and Applied Sciences*, 4(9): 114-118.
- [12] Prentice-Dunn, and Rogers, R.W. (1985). "Effects of Public and Private Self Awareness on Deindividuation and Aggression. *Journal of Personality and Social Psychology*, 43, 503-513.
- [13] Lord, K.R., Lee, M.S., & Choong, P. (2001). Differences in Normative and Informational Social Influence. *Advances in Consumer Research*, 28, 280-285.
- [14] Abrams, D., Wetherell, M., Cochrane, S., and Hogg, M.A. (1990). Knowing What to Think by Knowing Who You Are: Self-categorization and the Nature of Norm Formation, Conformity, and Group Polarization. *The British Journal of Social Psychology*, 29, 97-119.
- [15] Kelman, H.C. (1958). 'Compliance, Identification, and Internalization: Three Processes of Attitude Change'. *The Journal of Conflict Resolution*, 2 (1), 51-60.
- [16] Bamberger, P. and Biron, M. (2007). Group norms and excessive absenteeism: The role of peer referent others. *Organizational Behavior and Human Decision Processes*, 103 (2), 179-196.
- [17] Wilson, E. and Sherrell, D. (1993). Source effects in communication and persuasion research: A metaanalysis of effect size. *Journal of the Academy of Marketing Science*, 21 (2), 101-112.
- [18] Venkatesh, V., Morris, M. G., Davis, G. B., and Davis, F. D. 2003. "User Acceptance of Information Technology: Toward a Unified View. *MIS Quarterly*, 27 (3), 425-478.
- [19] Malhotra, Y., and Galletta, D. (2005). A Multidimensional Commitment Model of Volitional Systems Adoption and Usage Behavior. *Journal of Management Information Systems* 22 (1), 117-151.
- [20] Wang, Y., Meister, D. B., and Gray, P. H. 2013. Social Influence and Knowledge Management Systems Use: Evidence from Panel Data. *MIS Quarterly*, 37 (1), 299-313.
- [21] Ajzen, I. (1991). *The Theory of Planned Behavior*, *Organizational Behavior and Human Decision Processes*, 50 (2), 179-211.