

**NEAR EAST UNIVERSITY
GRADUATE SCHOOL OF SOCIAL SCIENCES
INNOVATION AND KNOWLEDGE MANAGEMENT
MASTER'S PROGRAMME**

MASTER'S THESIS

**KNOWLEDGE SHARING BEHAVIOUR IN
VIRTUAL COMMUNITIES**

MOTIVATING FACTORS IN THE ALGERIAN CONTEXT

SAMI ESSELIMANI

**NICOSIA
2016**

**NEAR EAST UNIVERSITY
GRADUATE SCHOOL OF SOCIAL SCIENCES
INNOVATION AND KNOWLEDGE MANAGEMENT
MASTER'S PROGRAMME**

MASTER'S THESIS

**KNOWLEDGE SHARING BEHAVIOUR IN
VIRTUAL COMMUNITIES**
MOTIVATING FACTORS IN THE ALGERIAN CONTEXT

**Prepared by:
SAMI ESSELIMANI
20144301**

**SUPERVISOR
ASSOC. PROF.DR. TUNC MEDENI**

**NICOSIA
2016**

ACKNOWLEDGMENTS

It is a great pleasure to express my deep gratitude to my supervisor Assoc.Prof.Dr. Tunc Medeni for supervising and reviewing my work and for his suggestions, support, encouragements and advice. I would like also to thank the head of innovation and knowledge management department, head of the graduate school of social sciences Assoc.Prof.Dr Mustafa Sagsan for his selfless efforts that he has been exerting to serve knowledge and students at Near East University. I would like also to thank all my other lecturers.

DEDICATION

I would like to dedicate this work to my loving family who stood with me and supported me all the time , my mother Khadidja, my father Abdlekader, my brothers Abdelmounaim and Mohamed, my sister Amina, and of course the little ones, my nephew Ahmed Yacin and my nieces Neima and Dhoha.

I would like also to dedicate this work also to all my friends, especially to my dear friends and brothers: Huzeyfe Çağatay Özdem , Dr. Abdikarim Mohamed Daud, Madjid Ahmed Yousfi, Badr El Maamery, Hassan El Madani, Abdelhak Ben Hadda and to all those who supported me.

ABSTRACT

Knowledge sharing is an important stage in knowledge management activities. However, understanding knowledge sharing behaviour and what factors motivate people to share knowledge in different contexts are vital to keep this activity ongoing. In this thesis, the factors that are influencing knowledge sharing behaviour in Algerian virtual communities are explored. Since it is an Arabic-French speaking and northern African country, Algeria seems to be presenting an interesting model to explore knowledge sharing behaviour in virtual communities. This thesis introduces a theoretical model based on Social Cognitive Theory SCT, Social Exchange Theory SET and Theory of Reasoned Action TRA. The theoretical model shows that commitment, reciprocity, knowledge quality, self-efficacy, trust and ideology will affect individual's knowledge sharing behaviour in virtual communities. It also shows that, individuals may share knowledge to transfer their ideologies and in the same time, ideology affects commitment and trust. In order to test the model, a survey was online administrated and data was collected from 184 participants of three virtual communities. The results demonstrated that commitment, reciprocity, knowledge quality, self-efficacy and ideology are positively affecting knowledge sharing behaviour in Algerian virtual communities whereas trust was dropped from the model due to non-significance. Respondents cited mutual respect as a factor which can replace trust. It is also found that ideology affects the individuals' commitment.

Key words: Knowledge sharing behaviour, Virtual communities, Theory of reasoned action, Social cognitive theory, Social exchange theory, Algeria.

ÖZ

Bilgi paylaşımı, bilgi yönetimi aktiviteleri içerisinde önemli bir aşamadır. Ancak, bilgi paylaşımı davranışının ve bu insanları farklı durumlarda bilgi paylaşımına motive eden faktörlerin anlaşılması, bu aktivitelerin devamlılığı için büyük öneme sahiptir. Bu tezde, Cezayirli sanal topluluklardaki bilgi paylaşımı davranışına etki eden faktörler incelenmektedir. Arapça-Fransızca konuşan ve Kuzey Afrikalı bir ülke olarak, Cezayir'in sanal topluluklardaki bilgi paylaşımı davranışı üzerine ilginç bir vaka sunduğu düşünülmektedir. Tez öncelikle Sosyal Bilişsel Kuram, Toplumsal Alışveriş Teorisi ve Akla Dayalı Davranış Teorisi üzerine kurulu bir kavramsal modeli sunmaktadır. Kavramsal model bağlılık, karşılıklılık, bilgi kalitesi, öz-yeterlik, güven ve ideoloji unsurlarının bireylerin sanal topluluklardaki bilgi paylaşımı davranışlarını etkilediğini göstermektedir. Yine model, bireylerin bilgilerini, ideolojilerini aktarmak için paylaştıklarını ve aynı zamanda ideolojinin bağlılık ve güveni de etkilediğini göstermektedir. Modeli test etmek için, çevrimiçi bir anket uygulanarak üç sanal topluluğun 184 katılımcısından veri toplanmıştır. Sonuçlar; bağlılık, karşılıklılık, bilgi kalitesi, öz-yeterlik ve ideolojinin; Cezayirli sanal topluluklardaki bilgi paylaşımını olumlu etkilediğini gösterirken, güvenin önemsiz kalmasından dolayı modelden çıkartılmasına sebebiyet vermiştir. Ankete yanıt verenler, karşılıklı saygının güvenin yerine geçebilecek bir faktör olduğunu belirtmişlerdir. Ayrıca, ideolojinin bireylerin bağlılığını etkilediği tespit edilmiştir.

Anahtar kelimeler: Bilgi paylaşımı davranışı, Sanal topluluk, Akla dayalı davranış teorisi Sosyal bilişsel kuram, Toplumsal alışveriş teorisi, Cezayir.

CONTENTS

ACKNOWLEDGMENTS	i
DEDICATION	ii
ABSTRACT.....	iii
ÖZET	iv
CONTENTS.....	v
LIST OF TABLES	vii
LIST OF FIGURES	viii
CHAPTER ONE: INTRODUCTION.....	1
1.1 Introduction.....	1
1.2 Research aims	3
1.3 Research problem.....	4
1.4 Research hypotheses	4
1.5 Research model	5
CHAPTER TWO: LITERATURE REVIEW	8
CHAPTER THREE: THEORETICAL BACKGROUND.....	15
3.1 General notions and definitions related to knowledge.....	15
3.1.1 Knowledge	15
3.1.2 Knowledge Management	15
3.1.3 Knowledge Sharing.....	16
3.1.4 Knowledge transfer and knowledge sharing	16
3.2 Virtual Communities.....	18
3.3 Theories of knowledge sharing motives	20
3.3.1 Theory of Reasoned Action-TRA	20
3.3.2 Social Exchange Theory	20
3.3.3 The Social Cognitive Theory	21
3.4 Knowledge sharing motives.....	22
3.4.1 Knowledge sharing self-efficacy	22
3.4.2 Trust	22
3.4.3 Reciprocity.....	23
3.4.4 Commitment	23
3.4.5 Knowledge Quality	24
3.4.6 Ideology	24
CHAPTER FOUR: SOCIAL SOFTWARE	26

4.1 Introduction to the concept	26
4.2 Explained examples of key services	27
4.2.1 Weblogs	28
4.2.2 Wikis	29
CHAPTER FIVE: METHODOLOGY	31
5.1 Research design	31
5.2 Operationalization the constructs.....	31
5.3 Pre-test	34
5.4 Sampling and implementation	34
5.5 Statistical evaluation of the questionnaire.....	34
CHAPTER SIX: DATA ANALYSIS AND RESULTS	36
6.1 Data descriptions.....	36
6.1.1 Demographics	36
6.1.2 The result of the questionnaire items	38
6.2. Measurement reliability	43
6.3 Factor analysis	43
6.3.1 Convergent validity.....	44
6.3.2 Discriminant validity.....	47
6.4 Analysis of constructs and hypotheses tests.....	48
CHAPTER SEVEN : DISCUSSIONS AND CONCLUSIONS	54
7.1 Conclusions.....	54
7.2 Contribution	56
7.3 Limitations and future research.....	57
REFERENCES	58
Appendix A Questionnaire in English	66
Appendix B: Questionnaire in Arabic and French.....	69

LIST OF TABLES

Table	Page
Table 5.1: List of abbreviations.....	33
Table 5.2: Items representing the hypotheses	33
Table 5.3 List of tools	35
Table 6.1: Participants' Age	36
Table 6.2: Participants'Gender.....	37
Table 6.3: participants' educational level	37
Table 6.4: Professional experience	37
Table 6.4 The response on measurement items of knowledge sharing behaviour.....	38
Table 6.5 The response on measurement items of Commitment.....	39
Table 6.6 The response on measurement items of Reciprocity.....	39
Table 6.7 The response on measurement items of Knowledge Quality.....	40
Table 6.8 The response on measurement items of Self-efficacy.....	41
Table 6.9 The response on measurement items of Trust.....	41
Table 6.9 The response on measurement items of ideology.....	42
Table 6.10: Reliabilities of the items.....	43
Table 6.11 Significant and non-significant items.....	44
Table 6.12 Significant items.....	46
Table 6.13 Cronbach's Alpha, Composite Reliability and AVE.....	47
Table 6.14 : Correlation and Square root of the AVE.....	48
Table 6.15: R square and R square adjusted.....	51
Table 6.16 Structural model results.....	51
Table 6.17 Hypothesis testing results.....	52

LIST OF FIGURES

Figure	Page
Figure 1: Research model representing relationship between motives and behaviour.....	6
Figure 2 : Ideology affection on VC's commitment and trust.....	6
Figure 3: Research model.....	7
Figure.4: R square, path coefficients and the loadings.....	49
Figure.5: T-Values.....	50
Figure.6: Proposed Model.....	53

CHAPTER ONE

INTRODUCTION

1.1 Introduction

Knowledge is one of the most ancient and interesting topics humanity has ever discussed. Since the first human being ever existed, acquiring and using knowledge was a necessity. The way that Man learned new skills and developed them was crucial for his existence, however for a reason or another, Man shared his knowledge which gave the chance to a little deal of knowledge to spread and be developed separately in many different ways and fields.

Due to many facts and circumstances (Wars, trade, invasion and occupation ... etc), humanity knew an intensive knowledge transfer between civilisations. Early Muslims gave a great attention to the Greek philosophy and sciences. They translated them, developed them and gave the Europeans the chance to do the same with their knowledge. This act of knowledge transfer allowed many nations to make a great advance and take a better place among nations.

Nowadays, the issue of knowledge took a very important space in research arena. Its forming entities became huge field of study. All the same, the research gap is still vast which offers promising opportunities for research and new findings.

The emergence of the principles of Knowledge Management and its development in the 90s led to another understanding of knowledge under organizational settings, to knowledge as a value, to knowledge as an asset and to employees as value containers.

Nonaka and Takeuchi's SECI model (Nonaka and Takeuchi ,1995) based on Ba concept introduced a new perspective to approach knowledge as a phenomenon. They presented their revolutionary model in which they discussed knowledge creation.

Sharing knowledge is one of the most important activities of Knowledge Management. This topic which is considered vital for maintaining, accumulating and developing knowledge within organizations, was very attractive for many researchers to work on for their scientific and academic works. Researchers tried to understand and discover the best methods to share knowledge, how to deal with different types of knowledge in terms of knowledge sharing and especially what motivates people to share their knowledge with others.

The development of information and communication technologies ICT allowed many organizations to take advantage of modern tools in order to facilitate knowledge acquiring and sharing.

The idea of communities of practice moved to the next level to become virtual communities of practice where no geographical or time boundaries can prevent knowledge sharing and learning.

The technological advance of internet from web1.0 to web2.0 brought virtual communities of practice out from the organizational borders to an open virtual space where everybody can share knowledge and learn about others' experiences, ask questions to others and answer to others' questions.

In the current era, communities of practice in the virtual world are taking many shapes and successfully using different modern tools to facilitate knowledge exchange activities. Their importance is perpetually increasing and growing in a very fast pace. The new generation of learners depending on the internet to acquire professional knowledge and develop their skills, is giving more importance to the virtual communities, moreover virtual communities of practice are responding to their needs for professional knowledge which expresses how useful virtual communities are for their users.

Browsing the scientific researches conducted in this area shows that many of them dealt with virtual communities of practice in organization, fewer studied the open virtual communities.

What provoke researchers' intention to such communities are the motives behind the behaviour of knowledge sharing in these virtual communities.

Theories such as Theory of reasoned actions, Social exchange theory and Social cognitive theory tried to give some answers to the question " why would skilled employees share their knowledge with their less skilled colleagues ?"

The theories mentioned earlier and others gave answers to that question but under organizational settings, however in other scientific works, some of the motives suggested by Theory of reasoned actions TRA, Social exchange theory and Social cognitive theory were adapted to study knowledge sharing motives in open virtual communities.

This research Investigates the validity of some of the motives established and confirmed in previous studies and suggests another motive that was not discussed before.

In this research, lucrative motives are not considered since the research model will be tested in an Algerian virtual community of practice where the possibility to earn money from the internet is still limited due to governmental policies and to the banking system that is still retarded. This situation is offering a unique opportunity to understand the effects of some non-lucrative motives on knowledge sharing behaviour in virtual communities.

1.2 Research aims

This research aims to:

- 1- Set aside some generalizations that were proven in the previous studies and prove that they fit for the populations that were studied.
- 2- Enriching the academic library with a new research in this field which is relatively new
- 3- Opening a new frontier of research opportunities and emphasizing on the outcomes of this study.
- 4- Applying a study on one of the themes of knowledge management in a country such as Algeria where this science is still not very known in the university and Academic environment.
- 5-Suggesting a model that clarifies the impact of non- lucrative motives on knowledge sharing behaviour in Virtual Communities.
- 6-Studying the nature of the relationship between the non- lucrative motives and knowledge sharing behaviour in virtual communities.
- 7- Examine whether Ideology is a factor influencing knowledge sharing behaviour in Virtual communities at least in some communities.
- 8-Studying an Algerian virtual community and knowledge sharing behaviour in Virtual communities.
- 9-Knowing how effective are the incentives on knowledge-sharing on Virtual Communities under the inability to achieve direct material profits.

1.3 Research problem

This research investigates the relationship between non-lucrative motives and the behaviour of sharing knowledge in virtual communities where lucrative motives are not an option.

Sharing knowledge in virtual communities with strangers is an interesting behaviour. In order to explore it, we propose the following research question:

How is the relationship between non-lucrative motives and the knowledge sharing behaviour in Algerian virtual communities?

To simplify this question we ask the following questions:

1. How is the relationship between Commitment and individual's knowledge sharing behaviour in Virtual Communities?

2. How is the relationship between Reciprocity and individual's knowledge sharing behaviour in Virtual Communities?

3. How is the relationship between Knowledge quality and individual's knowledge sharing behaviour in Virtual Communities?

4. How is the relationship between knowledge sharing self-efficacy and individual's knowledge sharing behaviour in Virtual Communities?

5. How is the relationship between Trust and individual's knowledge sharing behaviour in Virtual Communities?

6. How is the relationship between Ideology and individual's knowledge sharing behaviour in Virtual Communities?

1.4 Research hypotheses

In order to provide premium answers to the research problem, the following general hypothesis is suggested.

The relationship between non-lucrative motives and the knowledge sharing behaviour in Algerian virtual communities is significant.

The general hypothesis will be simplified to the following hypotheses:

H1: Commitment positively effects individual's knowledge sharing behaviour in Virtual Communities.

H2: Reciprocity positively effects individual's knowledge sharing behaviour in Virtual Communities.

H3: Knowledge quality positively effects individual's knowledge sharing behaviour in Virtual Communities.

H4: Knowledge sharing self-efficacy of Virtual Communities' members positively affects their knowledge sharing behaviour.

H5: Trust in virtual communities has a positive impact on an individual's knowledge sharing behaviour in Virtual Communities.

H6: Ideology has a positive relationship with knowledge sharing behaviour in virtual communities.

H7: Participants share knowledge to transfer their ideologies.

H8: Ideology has a positive effect on the virtual community's trust.

H9: Ideology has a positive effect on the members' commitment in Virtual communities.

1.5 Research model

Research model suggests two levels of study. The first level which is the initial one shows hypotheses from 1 to 7 as in figure 1 where motivational factors (Commitment, reciprocity, knowledge quality , self-efficacy , trust and ideology) represent the independent variables whereas knowledge sharing behaviour represents the dependent variable.

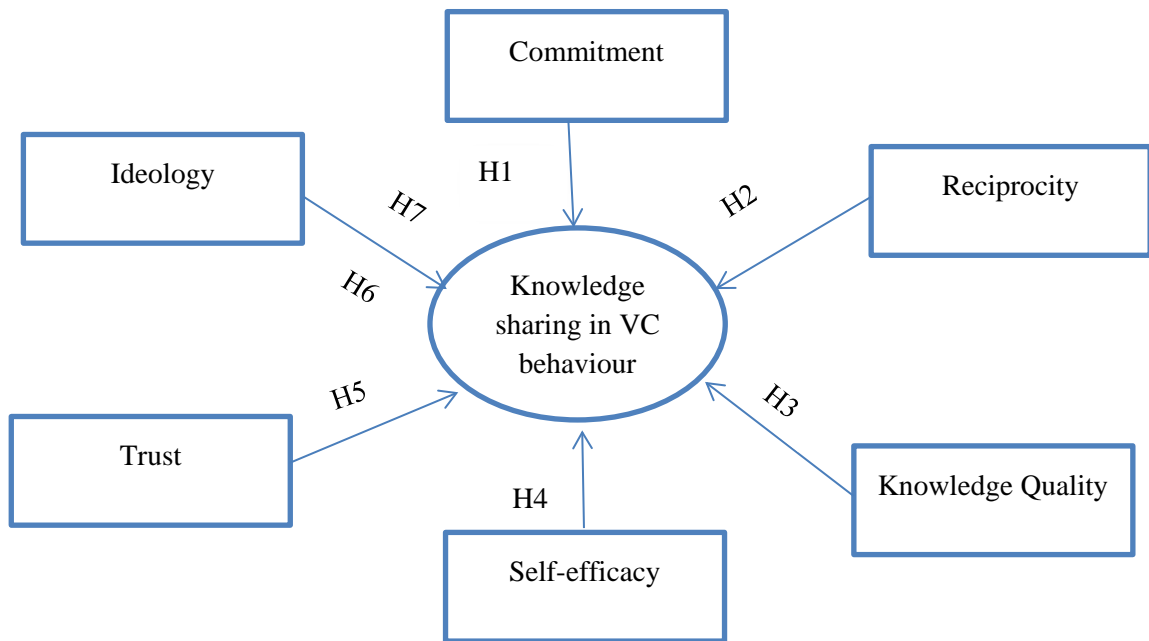


Figure 1: Research model representing relationship between motives and behaviour

Source: prepared by the researcher

The second level contains a secondary study that addresses the relationship between the motives, precisely between ideology and trust and between ideology and commitment.

Figure 2 shows hypotheses 8 and 9 where ideology is an independent variable whereas trust and commitment are dependent variables.

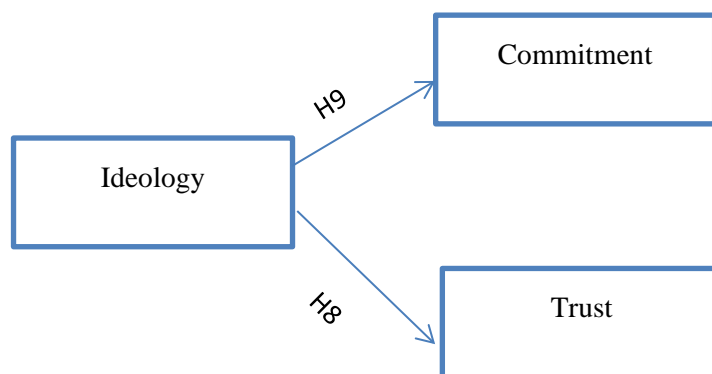


Figure 2 : Ideology affection on VC's commitment and trust

Source: prepared by the researcher

Figure 3 shows the study's research model that includes both previous levels which contain hypotheses from 1 to 9 and gathers figure 1 and figure 2 .

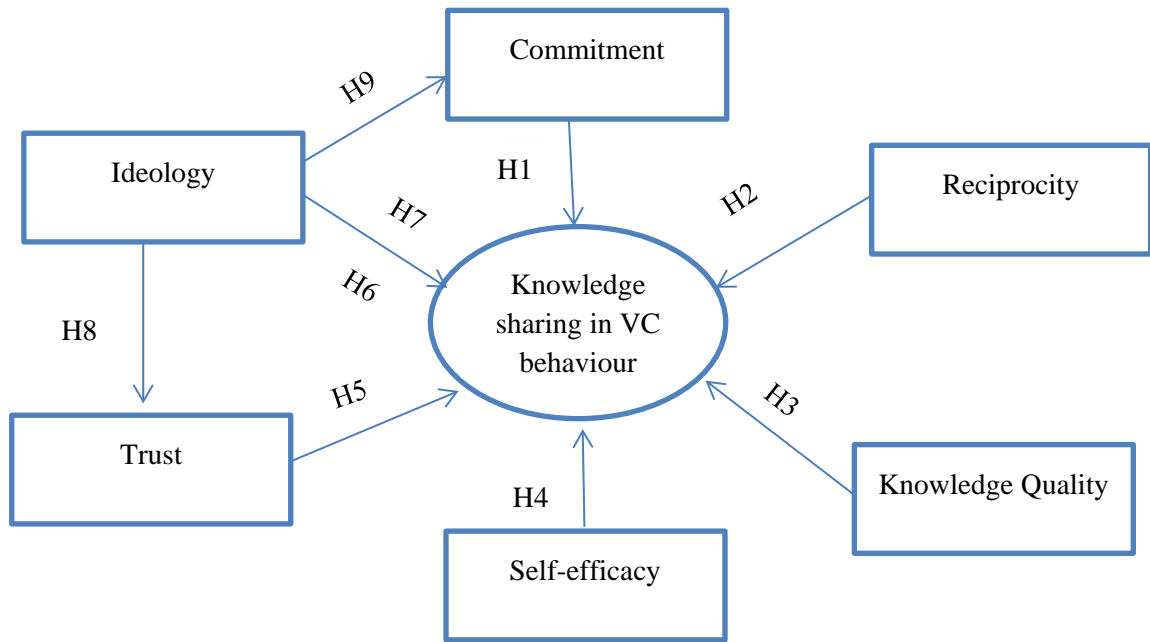


Figure 3: Research model

Source: prepared by the researcher

CHAPTER TWO

LITERATURE REVIEW

Sharing knowledge in virtual communities is gradually taking more space in research arena. However, studying the motives behind knowledge sharing behaviour within these virtual communities is still not well explored. Most relevant studies to the topic are reviewed in this chapter which can be categorized to: researches that studied knowledge sharing behaviour in open virtual communities and researches that studied knowledge sharing behaviours in organizational context.

Most of the studies conducted in open virtual communities of practice depended on the same ideas and theories that were adapted by the works that studied knowledge sharing behaviour in organizational context with respect to the differences and our research is no exception.

Nelson & Coopriider (1996) studied the concept of shared knowledge among information system groups and the contribution of their fine customers to information systems performance. Using path analysis in a study of eighty six information system departments, an empirical study tested the relationship of information systems performances with shared knowledge, mutual trust and influence.

The outputs of the study indicate that knowledge shared comes in the middle of the relationship between information system IS performance and trust. It also shows the impact and the increase in knowledge sharing between IS and line groups will affect positively Information System IS performance.

Kankanhalli, Tan, & Wei (2005) studied the use of electronic knowledge repositories EKR in organization in Asia (especially in Singapore) as an important tool for storing codified knowledge to be used in the future. The study points out that even if electronic knowledge repositories EKR were used for a while, employees' motives behind using these EKR were not clearly understood. Therefore this study tested a theoretical model that relates potential antecedents to electronic knowledge repositories for knowledge seeking.

A survey took a place in Singapore to investigate the validation of the model proposed. The survey covered 160 knowledge professionals working in public organizations among those who accessed electronic knowledge repositories EKR as part of their job.

The study's results show that perceived quality of the output has a direct affection on electronic knowledge repositories EKR's use for knowledge seeking. Moreover, results show that resource availability is reflected on electronic knowledge repositories EKR's usage for knowledge seeking especially when the tacitness of a task is low. Also motives can affect electronic knowledge repositories usage when task interdependence is significant.

Jashapara & Tai (2006) highlight the importance of knowledge availability for e-learning proposes. It studies the role of self-efficacy and computer anxiety distinguishing between stable and situational individual variances and perceived abilities of use.

The study's results indicate that many factors influence perceived ease of use such as e-learning system self-efficacy, computer experience, computer anxiety, computer playfulness, and personal innovativeness with IT.

The study's out puts emphasise that computer anxiety and e-learning system self-efficacy comes in the middle of the computer experience's effect on perceived abilities of use, but for personal innovativeness and computer playfulness , they mediate the effects of on perceived ease of use partially.

Constant, Sproull & Kiesler (1996) examine the practice of distant employees who have no personal relations (strangers) but exchange technical advice through a large network in an organizational context.

When friends and colleagues cannot be helpful, strangers' kindness can become an option represented in what this study called "Weak ties relationships".

In this study, theories of organizational motivation and theories of weak ties were integrated to hypothesize that usefulness of advice in organizations depends on motivation of people who provide advice.

These theories were investigated in a study on global computer manufacturer's employees. A survey on the relationships between those who seek information and those who provide information was collected. The survey also covered the amount of information, diversity of information, resources information and motivations of information providers. It has also included whether the information seekers could solve their problem depending on the advice provided by information providers.

The study's results show that although the lack of personal relations with the seekers, the information provided by information providers was useful and could solve information seekers' problems.

Hsu, Ju, Yen & Chang (2007) focused on the both perspectives; personal and environmental motives for knowledge sharing in Virtual communities. To inspect the knowledge sharing behaviours in professional virtual communities of professional societies, this research suggests a theoretical model based on a social cognitive theory (SCT). The model composed by the both perspectives mentioned earlier, personal and environmental. for the personal influences, self-efficacy and outcome expectations were considered, and for environmental influences, the research model included multidimensional trusts. The research model proposed was confirmed after it was evaluated using structural equation modelling, and applied confirmatory factor analysis.

Ardichvili, A. (2008) argues that there is a need for a better understanding of the key factors of success for online knowledge sharing.

An extensive review of the literature online learning and communication and also knowledge management was the base of this research which led to suggest a theoretical model that combines motivators, barriers, and enablers. The proposed model aims to understand what makes a successful online knowledge sharing and knowledge learning.

The theoretical model includes as Motivators: Personal Benefits, Community-Related Considerations and Normative Considerations, as Barriers: Interpersonal barriers, Procedural barriers, Technological barriers and Cultural barriers and as Enablers: Supportive Corporate, Trust and adequate Tools.

As a conclusion, the research suggests recommendations for developing and supporting more active and productive virtual communities of practice.

Correia, Paulos, & Mesquita (2009)'s study aims to determine the motives and the constraints that virtual communities' members experience when they participate in knowledge creating and sharing within these virtual communities. This research studies organizational virtual communities. It inspects the motives and the constraints of knowledge sharing in organizational virtual communities through interviewing employees from three different organizations and analysing their discourses.

The results show that commitment, solidarity with other colleagues and organizational culture are the motivator factors in these organizations. Financial rewards were not a

motivator factor for the interviewees. Constraints were difficult to determine for the interviewees and all of them rejected that technology can be a constraint for them but in the contrary, it is an enabler.

Usoro, Sharratt, Tsui & Shekhar (2007) Tried to explore the role of trust in knowledge sharing behaviour within virtual communities.

Since trust is accepted as a major facilitator of knowledge sharing processes, this research proposes a theoretical model that presents trust in three different dimensions which are: integrity, competence and benevolence; the study tests hypotheses claiming the effect of these dimensions on knowledge sharing by conducting a survey in an intra-organisational global virtual community of practice.

Results demonstrate that the three facets of trust are positively associated with knowledge sharing behaviour.

Chiu, Hsu & Wang (2006) inspect the willingness toward knowledge sharing with other members as knowledge supply to virtual communities is becoming the biggest challenge for these virtual communities to survive.

This research suggests a theoretical model based on two theories: the Social Cognitive Theory and the Social Capital Theory to explore the factors motivating individuals' knowledge sharing behaviour in virtual communities.

The theoretical model shows that trust, social interaction ties, shared vision and shared language, identification and norm of reciprocity (as the facets of social capital) will affect people's knowledge sharing in virtual communities. It also shows that, community-related outcome expectations and personal outcome expectations (as outcome expectations) can enhance knowledge sharing in virtual communities.

In order to test the model, data was collected from 310 participants of a professional virtual community. The results confirmed suggestions of the proposed research model.

Shu & Chuang (2011) explored people's motives to share knowledge in a virtual community setting.

The study that took place in Taiwan, came up with an interesting model for the study of knowledge sharing in online communities due to huge number of users of these communities in Taiwan.

The used model in this study is modified from the theory of reasoned action whereas the data was collected in Taiwan, the study's findings showed that the expected return did not have an impact on knowledge sharing, but it found that trust, self-esteem and absorptive ability not only did, but they were the real driving forces to share.

Unlike many previous studies, Liao & Hsu (2013)'s work about knowledge sharing focuses on non-professional virtual communities. It has introduced four key forces for knowledge sharing in virtual communities which are: utilitarian motivation, control belief, contextual force and hedonic motivation. The results confirmed all the four driving forces that research model included: utilitarian motivation represented in reciprocity and reputation, hedonic motivation represented in enjoying helping, self-efficacy under a heading of control belief and contextual force using sharing culture.

The study also claimed that the intention to continue sharing knowledge is effected by an existing sharing culture, self-efficacy and users' attitude toward knowledge sharing.

Wasko and Faraj (2000) introduce a different perspective of knowledge. They argue that knowledge is a public good that is owned and maintained by a community. This understanding encourages the knowledge exchange and suggests moral obligation and community interest to be more important for a pro-sharing attitude rather than some narrow self-interest. A survey was made to examine peoples motives to share knowledge in three different electronic communities of practice provide support for the public good perspective by providing results. Research's findings show that reciprocity and prosocial behaviour are the major reasons for sharing knowledge.

Hung & Cheng (2013) aimed to study the relationship that combines the members of Virtual communities' intentions toward knowledge sharing and the perceptions of technology users. It suggests that being ready to accept technology as psychological state of an individual and compatibility are the factors affecting individual's acceptance of technology.

An empirical study investigated Technology Readiness Index, Technology Acceptance Model, and the factor of compatibility was integrated to inspect users' perceptions of technology. A structural equation modelling was used in this study to analyse the answers of 218 participants from these virtual communities.

The research's results showed that if individual's degree of adaptability to technology is improved then it could increase his knowledge-sharing willingness in virtual communities. In the same time, the degree of the individual's inadaptability with technology did not

restrain knowledge-sharing intentions. Also, feelings of insecurity while using new technologies demonstrated an important effect on the individual's opinions about how technology is useful.

Chen, I. Y. (2007) argued that professional virtual communities are facing failure most of the times due the member's discontinuity of participations; therefore his work aims to formulate a theoretical model that can explain the different factors affecting individual's intention to keep participating in these virtual communities in terms of knowledge sharing.

This research adopts two perspectives which are information system perspective and knowledge management perspective and relates them to participation continuity.

Research model suggests that contextual factor and technological factors are the factors influencing individual's intention to remain in a professional virtual community. The model also posits that antecedents intention of the virtual community members to keep sharing knowledge include social interaction which gathers capital and at post-usage satisfaction.

The study has covered 360 members of a virtual community.

Results demonstrate that both, the contextual factor and technological factors have a significant influence on the virtual community members' continuance intentions.

Gang & Ravichandran (2015) investigate members' motivations to be involved in knowledge exchange in professional virtual communities. In this research, social exchange theory (SET) and the theory of reasoned action (TRA) were synthesized to identify what determinants can affect individual's attitudes toward knowledge exchange in virtual communities. The theoretical model includes as determinants: trust, reciprocity, and the relevance to the members' jobs. The study in addition, suggests that attitudes will affect members' intention to participate in the virtual community and the quality of information/knowledge will moderate this relationship.

The research model was tested using data gathered from a virtual community of scientists from South Korea.

The results demonstrate that trust among the community members has a positive effect on attitudes toward sharing knowledge and learning. Reciprocity has a positive influence on attitudes toward learning, while job relevance has a positive influence on pro-knowledge-sharing attitudes. The results show also that member's attitudes toward learning influence attitudes toward knowledge sharing whereas members' attitudes related to knowledge

sharing positively affect intentions to participate in a virtual community. The information quality is negatively moderating the relationship between user's intentions to participate in a virtual community and users' attitudes toward knowledge sharing.

After having reviewed the previous studies, research gap should be determined in order to show the value added to this topic that we seek to achieve through this research . The research between our hands depends largely on the outputs of the previous studies. Since we could find contradictions in results between different studies about the same motive, this research is supposed to reproduce new results demonstrating whether knowledge sharing behaviour is effected or not by Trust, Self-efficacy, Reciprocity, Commitment and Knowledge Quality.

The new factor that is making this research unique is Ideology. Although it was studied previously as a factor that affects behaviour like in helping situations (Robbin, Chatterjee, & Canda, (1999), it was not used in the same context as this research. It is meant to be the very first time to hypothesize ideology as a motive for knowledge sharing behaviour in virtual communities of practice. It is also suggested as a factor effecting commitment and trust.

Besides ideology, this study stands out from previous studies that it is applied in Algerian virtual communities of practice.

CHAPTER THREE

THEORETICAL BACKGROUND

This chapter is dedicated to cover the fundamental theoretical concepts upon which this research stands on. Therefore, it is divided to four main parts. The first part is dedicated to explore some General notions and definitions related to knowledge. The second part defines virtual communities and reviews what written about it in the literature. The third part introduce the main three theories adapted by researchers in order to study knowledge sharing motives in virtual communities while the fourth part provides an overview of the six knowledge sharing motivating factors included in the research model.

3.1 General notions and definitions related to knowledge

In this part, we will discuss and define general notions of knowledge, knowledge management, knowledge sharing and the development of terms knowledge sharing and knowledge transfer

3.1.1 Knowledge

It is a wide idea that characterized an epistemological contemplations range in western theories since the old Greek time. Within the last few decades, there has been another propensity prompting a developing enthusiasm for knowledge to be considered as an imperative asset for any organization. Alavi and Leidner (2001) argue that knowledge is the consequence of intellectual handling brought on by the deluge of new jolts. Nonaka (1994) recognized human knowledge in its nature as two types: explicit and tacit knowledge. The explicit knowledge alludes to a sort of knowledge that is verbalized, systematically, able to be codified, transmittable, and tacit type of knowledge is personalized and it is hard to codify it. Therefore, the explicit type can be exchanged between individuals and within the organization pursuing codification strategy, yet tacit type cannot be possessed by studying and reading, rather it must be obtained through experience and learning by doing.

3.1.2 Knowledge Management

Managing knowledge is characterized as the predetermined procedures to deal with the aggregate knowledge of a firm for the securing, association, maintenance, application, sharing and recharging both tacit knowledge and explicit knowledge of its workers to upgrade the general performance of an organization and bring out value (Davenport and Prusak 1998). At first, there are two distinct strategies for knowledge management: the

codification and personalization strategies (Hansen et al., 1999). Firms that adopt a codification strategy focus on arranging, storing and operating knowledge in information systems that facilitate access and learning by workers. In the case where the firm is pursuing a personalization strategy, knowledge is basically transmitted by an immediate contact from individual to individual. The crucial use of technological tools, for example, telephone, e-mails and professional resources are techniques to enable customization and localization specialists instead of storing knowledge. This research does not aim to study knowledge sharing in organizational context, yet codification strategy is the option for sharing knowledge in virtual communities.

3.1.3 Knowledge Sharing

Sharing Knowledge is an act in which knowledge, expertise, aptitudes or skills are exchanged between individuals, colleagues, relatives or a community within a certain space. In this study, sharing knowledge as behaviour is related to the will of people inside a virtual community toward sharing their accumulated knowledge with others. Generally, knowledge sharing happens through a face to face contact or through some of learning materials. The firm's knowledge resides in individuals. Indeed, even with the codification, knowledge of objects stays unavailable and requires the ones who own it to make it available (Bock et al., 2005). As indicated by Gibbert and Krause (2002), knowledge sharing can be motivated, can be enabled but cannot be compelled.

As a result of the nature of knowledge sharing activity we mentioned earlier, it is not a secret that individuals changing attitudes are viewed as a big challenge confronting organizations that are looking for improving knowledge sharing between their employees. The factors that incentivize such behaviour are by virtue of Szulanski (1996) who recommends that the motivating factors stem from either, individual conviction structures or social structures. The values, benchmarks and acknowledged practices that assume a critical part in affecting people conviction structures (David and Fahey, 2000).

3.1.4 Knowledge transfer and knowledge sharing

It is commonly known that the issue of knowledge acquisition has long been debated ever since or earlier to the existence of Greek philosophers such as Aristotle and Plato. It would be argued that those debates gave birth to the terms knowledge transfer and Knowledge sharing; besides, they went on to serious discussions over efficient and effective knowledge transfer and sharing.

Obviously, there are two research streams that highlighted the re-emergence of the terms: The first is based on works like Allen (1977) and Clark Fujimoto (1991) where the aim of their researches were the inspection of the relationship between technology transfer and units of product innovation.

The second includes the terms 'tacit' and 'explicit' knowledge like in the works of Michael Polanyi. Ikujiro Nonaka (1991) mentioned the notions of Knowledge Transfer and Knowledge Sharing but he did not name them. He describes explicit knowledge as a systematic and formal knowledge which facilitates the process of communicating and sharing it. He also argues that it enables creating a "common cognitive ground" with and between employees and makes the transfer of tacit knowledge easier.

This latter article by Nonaka paved the way for the two streams to combine. Several of his later influential writings like (Nonaka and Takeuchi, 1995) embodied Knowledge Sharing as an important phase in Knowledge Transfer, and therefore, had the research community to adopt the re-emergence trend.

Ever since, there has been some development in the use of those terms. They were used as synonyms like in (Badaracco, 1991) and (Hansen, 1999).

Knowledge Transfer was normally treated in accordance with the thoughts of the knowledge Management during its first year of re-emergence (Kogut and Zander, 1992; Grant, 1996). In his writings, Szulanski has built up the concept of Knowledge Transfer, particularly the concept of intrafirm knowledge. He says that knowledge is viewed as stock for the firm (Szulanski, 1996).

In the late years of the last century and with the beginnings of this one, the concentration was on the strategic level. Works studied subjects such as weak ties in knowledge sharing (Constant, et al, 1996), knowledge across organization subunits (Hansen, 1999), other people who concentrate on intra-corporate knowledge streams inside multinational companies (Gupta and Govindarajan, 2000) . Other works studied business unit development and execution (Tsai, 2001). One work stand out among the other works is when psychological and sociological concepts were used to study and analyse the motivating factors that influence Knowledge Transfer inside organizations (Osterloh and Frey, 2000).

Late researches say that the concept of knowledge transfer is related to higher level of analysis. Wijik et al. (2008) and Easterby-Smith, et al. (2008) concentrated on intra-organizational and inter-organization knowledge transfer.

In Nonaka's Harvard Business Review article, Knowledge transfer and Knowledge Sharing are utilized as synonyms, most of the times referring to knowledge transfer concept.

Appleyard (1996) used the term knowledge sharing for both levels, organizational level by comparing two organizations in terms of knowledge sharing activity, and national level by comparing Japan to the US. Dyer and Nobeoka (2000) followed the same steps. They found that the increase of employees' productivity in Toyota is partly explained by their aptitude to create knowledge sharing process within network-level.

The psychological and the sociological perspectives in knowledge sharing issue dominated research area. In order to study individuals' likelihood to share knowledge, Cabrera and Cabrera (2002) adopt psychological notion.

Studies came later such as Fernie, et al. (2003) focused on personal knowledge and individual level for knowledge sharing. They argued that knowledge is more individualistic referring to tacit knowledge where explicit knowledge can be valuable only when it becomes tacit. In the same orientation, Ipe (2003) determined four dimensions for knowledge sharing which are : type of knowledge, motivation , possibility to share and the general atmosphere.

3.2 Virtual Communities

It is a fact that virtual community could be defined in various ways, but most researchers define it in two categories: the first is concerned about the metaphysical properties of virtual communities (Coon, 1998; Etzioni and Etzioni) whereas the second is concerned about the practical types of virtual communities (Bagozzi and Dholakia, 2002). Both perspectives represent the academic and the practicing fields. Many researchers accept that the concept of virtual communities is bound to the sociological concept of community which is controversial (Coon, 1998; Etzioni and Etzioni, 1999; Rothaermel and Sugiyima, 2001).

Tönnies (1912; 1967), was ahead to discuss the concept of community in his definition of community (Sugiyima, 2001), he distinguished between the concept of society and community. He characterized community with intimacy, privacy, and exclusive living together, whereas society according to him is the public life.

Tönnies' concept of community is made in spatial form by considering that the model of a community can be found in the rural village. He suggests that there are three types of communities which are community by kinship, community of locality and community of mind. This last one is related to this research since it resembles the communities that are shaped on the Internet.

Virtual community's definitions in other researchers were not different. A virtual community is considered similar to what Tönnies called community of mind, with the exception that it is not constrained by time and space since it is formed through an electronic space (Rothaermel and Sugiyama; 2001).

Another definition suggested by Bagozzi and Dholakia (2002) defines a virtual community as social spaces that mediate the electronic environment in order to enable people to form and be sustained essentially through continuing communication processes.

Bonding and culture are the key words that define a virtual community according to Etzioni and Etzioni (1999), they are the two essential elements.

Hagel and Armstrong (1997) see that the first virtual communities were begun by lovers who shared the same interests, and spontaneously were the consequences of social events.

Engaging in virtual communities is normally unconstrained and voluntarily. A virtual group is normally open to any intrigued individual. In the event that one needs to join a specific group, they can join without fees. Likewise, leaving a virtual community is up to the will of the members. Supposing that members' interests decline or they have no longer a will to take part any longer in a virtual community, they are always able to choose not to access into or to leave the community.

Members of virtual communities can likewise decide the extent to which they involve. They can choose to be unobserved, not to talk, or talk as effectively as they can. More often than not, a virtual group is overseen by an administrator, a discussion board chief, or a Listserv supervisor, who is in charge of overseeing participant's identifying information and shared content. Board chiefs are also in charge of arranging and raising discussions about topics that concerns the members. The posted messages that are by various individuals from the virtual community create a base.

Hagel and Armstrong (1997) called attention to the fact that virtual groups could fulfil four sorts of customer needs which are interests, relationship building, exchanges and dreams. In the same direction, Ridings et al. (2002) referred in their definition to another four sorts of virtual communities: MUD (multiple user domains or dungeons), Chat room, Listserv, bulletin boards or newsgroups according to the used technology. Taking into account time delays, we can distinguish two types : asynchronous (Listserv, announcement loads up, newsgroups) and synchronous (MUD, chatrooms, and projects, for example, MSN Messenger, Yahoo Messenger, and Facebook Messenger).

Interestingly, online forums have both synchronous and asynchronous functions which deny an absolute classification of virtual communities based on time delay. Kozinets (2000) gave a more practical classification based on two dimensions. He separates virtual communities into social structure and primary group focus.

3.3 Theories of knowledge sharing motives

Many socio-psychological based theories were adopted by researchers to study and explain human behaviour toward knowledge sharing. In this part, there significant theories are reviewed and explained.

3.3.1 Theory of Reasoned Action-TRA

To study IT-related human behaviour, Reasoned Action Theory (Fishbein and Ajzen, 1975) was constantly considered as the most viable intention–behaviour models. Reasoned Action Theory (TRA) says that if the disposition of a person toward a specific behaviour is positive, then he will probably have the intention to engage in that behaviour; and if the standard is subjective then it influences emphatically his intention to adopt that behaviour; and in the long run, as much the quality of the individual's intention to engage in a behaviour is , as likely the person perform that behaviour will be (Alavi and Leidner, 2001; Fishbein and Ajzen, 1975). Theory of Reasoned Action has been effectively adapted in numerous social research studies to clarify the distinctive sorts of behaviour of individuals. Additionally, according to Bock and Kim, (2002), TRA has been utilized to study Knowledge Management. Clark and Soliman (1999) applied the concept of Theory of Reasoned Action in the assessment of knowledge based systems to give an approach to evaluate the value of investments Knowledge-Based Systems. Lin (2007) utilizes the Theory of Reasoned Action to explore the different factors influencing knowledge sharing intention and discovered that self-efficacy and enjoying helping other people are positively associated with sharing attitudes and attention toward knowledge. Bock et al. (2005) argue that the extrinsic motives, socio-psychological motives and organizational atmosphere variables could influence knowledge sharing attention.

3.3.2 Social Exchange Theory

Exchanging rewards and costs to measure the values of results under different circumstances for a person, are the basis of theory of social exchange. People endeavour to minimize expenses and maximize payoff and then base the likelihood of building up a relationship with people on the perceived possible results. When outcomes are meant or supposed to be increased, they build up a closer relationship between individuals. Bock et al (2005)

suggested that knowledge sharing behaviour can be considered as a type of social exchange because individuals will be offering to share their knowledge and skills with their associates and will be expecting to be treated the same way (reciprocally) so they can be offered others' knowledge. Researches have been conducted on Social Exchange Theory as a tool to explore individual's behaviour toward knowledge sharing.

Social exchange is a complicated action; therefore different research works have addressed different facets of it. Kankanhalli et al. (2005) used cost/benefit analysis based on Social Exchange Theory to investigate motivator factors and barriers influencing knowledge sharing behaviour. While Chua (2003) focused on reciprocity in knowledge sharing, Constant, Kiesler, and Sproull (1994) highlighted context and self-interest. Also Weir & Hutchings, (2005) argued that social exchange facilitates developing relationships and personal social network.

3.3.3 The Social Cognitive Theory

The Social Cognitive Theory (Bandura, 1989) has been used in knowledge sharing literature demonstrating its reliability. It considers human behaviour as a triadic, dynamic, and reciprocal interaction of personal factors, behaviour, and the social network (Bandura, 1989). Of the considerable number of elements that influence human behaviour, the theory suggests self-efficacy and outcome expectations. A number of studies based on the Social Cognitive Theory have inspected the relationship between the motives suggested by the theory (self-efficacy and outcome expectation) and Internet users' behaviours (Compeau and Higgins, 1995; Hsu and Chiu, 2004; Luarn and Lin, 2005).

People with common interests meet in virtual communities and exchange knowledge and information performing an online interaction and taking advantage of the social nature of these types of networks. Two factors support virtual communities and make it last for long are their social interaction nature and knowledge/resources they provide. Thus, unlike the studies mentioned earlier where only personal cognition was focused on in computer and internet behaviours, social network and personal cognition both should be considered while studying sharing behaviour in virtual communities.

The social cognitive theory however, is constrained in studying to what elements are in a social networks and how they affect people's behaviour.

3.4 Knowledge sharing motives

Knowledge sharing motives has been broadly discussed as it is indicated in the literature. In the previous section, main theories from which those motives were derived were explored. Needless to say that there are so many motives, however in this section, the motives that are included in the research model, namely: Self-efficacy, trust, reciprocity, commitment, knowledge quality and ideology, will be explored and discussed.

3.4.1 Knowledge sharing self-efficacy

Self-efficacy is an idea of importance in social psychology science. Its origins are derived from Social Cognitive Theory SCT. It can be characterized as convictions in one's capacities to compose and execute actions needed to create a given accomplishments (Jashapara and Tai, 2006). Knowledge sharing self-efficacy in this study alludes to the trust in one's capacity to contribute with knowledge that is profitable to others (Kankanhalli et al., 2005). Research works show that highly skilled people, people with outstanding capacities and experts will probably give valuable advice on virtual communities (Constant et al., 1996). By sharing valuable knowledge to the virtual communities, members feel more sure about what they can do (Constant, Kiesler, and Sproull, 1994; Wasko and Faraj, 2000). This impression of upgraded self-efficacy can spur individuals to share their knowledge with others (Bock and Kim, 2002).

3.4.2 Trust

Trust includes an eagerness to make one's self helpless against others and includes trust has different features which are trust in their capability; trust in their openness and genuineness; trust in their intentions and concerns; and trust in their dependability (Mishra 1996).

Rotter (1967) characterizes trust as "an anticipation held by an individual or a group of people that the promise to another individual or group of people, whether it was articulated or written is trustworthy. In virtual communities, trust in different individuals could be comprehended as a general trust toward different participants of the virtual community (Ridings, Gefen, and Arinze, 2002). Trust has been broadly examined in physical communities as in virtual communities, and it is considered as a key factor influencing knowledge sharing behaviour (Gefen, Karahanna, and Straub, 2003; Chang, Cheung, and Lai, 2004; Komiak and Benbasat, 2006; Teo, Srivastava, and Jiang, 2009).

With regards to virtual communities, it is additionally accepted that trust is an essential element for a virtual community to succeed if the members' interest and participation are the

criteria. Mishra (1996) argue that trust has different features, which are trust in members' skills, trust in members' openness and genuineness, trust in members' intentions and concerns, and trust in members' reliability.

At the point when a member trusts a virtual community, he will engage more in participation in the virtual community and will be more willing to collaborate with different members. Additionally, he will probably believe that the knowledge and information shared by the other participants from the virtual community are helpful and reliable. Lu et al. (2010) found in that trusting other members would encourage individuals to participate and get information from the virtual community.

3.4.3 Reciprocity

Reciprocity is discussed within Social Exchange Theory from which we can understand that if a person contributes with resources, he anticipates that others will do the same for him (Blau, 1964). In virtual communities, when people feel that what is given will be paid back, they will be all the more eager to share their knowledge (Wasko and Faraj 2005). Knowledge sharing is encouraged when there is a standard of reciprocity in virtual communities (Constant et al. 1996). Previous researches show that people who believe in reciprocity are more likely to share knowledge (Chiu et al., 2006; Lin, 2007). Also, It has been noticed that the members of virtual communities get valuable knowledge and help they asked very fast if they used to help other people before (Rheingold 2000).

3.4.4 Commitment

Commitment to virtual communities according to Wasko and Faraj (2005, 2000) is a strong sense of responsibility toward others in the network on the basis of shared membership. Commitment means a solid faith in and acceptance of a group's objectives, a desire to allocate considerable effort to assist the objectives, and a strong willingness to keep up participation in the group (Mowday et al. 1979). In organizations virtual communities, committed individuals who get worried about how they can be valuable to the firm, normally help seekers with organization related issues (Constant et al. 1996). Hars and Ou (2002) argue that people who have a solid feeling of group participation are all the more ready to contribute knowledge for the members of the community. It has likewise been said that committed members of a virtual community contribute knowledge since they think that this behaviour is beneficial for the community (Kollock 1999).

3.4.5 Knowledge Quality

Knowledge quality is about the good shape and the positive value of a shared information or knowledge i.e. knowledge shared should be readable, accurate, complete, and reliable. Wasko and Faraj (2000) said that valuable and updated knowledge/information is the most critical tangible motivation for contributing and sharing knowledge in virtual communities of practice. As in (McKinney et al. 2002), regarding the significance of information quality in raising customer satisfaction with e-shopping, knowledge quality supposed to be an important motivator for people's engagement in knowledge sharing in open virtual communities.

3.4.6 Ideology

The term “ideology” is often used in politics, social sciences and in the media. Many articles and books studied this concept since the French philosopher Destutt de Tracy used this term at the end of the 18th century.

Van Dijk (2000) reported that de Tracy defines ideology as science of ideas and says that ideology is the study of how we think, speak and argue.

In Destutt de Tracy's works, ideologies are associated with systems of ideas, and particularly with the social, religious or political ideas that social group or movement share.

During his life, Karl Marx did not have only one statement to describe his concept of ideology, but he used many statements differently; however, the most clear one is mentioned his book “The German Ideology” in which he describes it as the production of ideas, of conceptions, of consciousness (Marx, K., & Engels, F. 1970).

Jurgen Habermas distinguished between types of ideologies in the narrow sense. On the one hand he considered the type of ideologies that give answers to the big questions such as religious ideologies which are a set of beliefs, and the concepts of economic transactions as economic ideologies. On the other hand, Habermas considered the functional properties in which he referred to how the elements of an ideology can influence action (Geuss, R. 1981).

Lau and Sears (1986) define ideologies as systems that are at the basis of the socio-political cognitions of groups. Therefore, ideologies according to Eagly and Chaiken (1993) control social group attitudes toward social issues, such as abortion and nuclear.

Van Dijk (2000) gives a more general and multidisciplinary definition of ideology which this thesis adopts. He defines ideologies as the fundamental beliefs of a group and its members. But we should consider that those beliefs influence people's behaviours.

Campbell (1981) argues that the beliefs that we hold about ourselves, the people we interact with, society and economic and political systems can affect our actions.

In their research about ideology and social work practice, Robbin, Chatterjee, & Canda (1999) suggest that ideology exists in the helping situation itself. Also it takes place during the interaction between the people involved and not only the context of helping (Robbin, Chatterjee, & Canda, 1999).

Van Dijk (2000) consider ideologies as systems of ideas of social groups leading to the social practices of group members. For example, racist ideologies may lead to discrimination and pacifist ideologies push to protest against nuclear weapons.

Robbin, Chatterjee, & Canda, (1999) argue that ideology directly influences the helping situation which consists with this research's hypothesis where ideology is associated with knowledge sharing behaviour considering knowledge sharing as an act of helping.

Stewart & Gosain (2006) think that ideology should motivate behaviours and responses would be fruitful for the team. Becker (1975) explaining the reason why ideology is a motivator, he says that it gives existential security.

Markus & Agres (2000) while answering their question "What makes a virtual organization work" argued that contributors are motivated also by ideology beside other factors.

CHAPTER FOUR

SOCIAL SOFTWARE

In this chapter, we will have a look on one of the most important concepts related to virtual communities. In order to explore a revolutionary service of the internet that led to facilitate individuals contribution process to the internet, we talk about the concept of social software that is considered the technical incubator of the virtual communities on the internet and we will see two examples of this service.

4.1 Introduction to the concept

The web is currently evolving. The way we use it is swiftly changing. Many services have come up the last few years share something which is aim is bound to a community, caring less about what services are provided. New services come up perpetually offering pleasing online usage and others that are as offline application. This trend is called “web 2.0”, this term evokes discussion. It seems the term web 2.0 is only a made up term to re-resurrect the web expansion in the nineties’ late years.

Web 2.0 tends to be considered in the terminology of internet, whereas social software is attractive to the academic communities, most likely because social software goes beyond the boundary of the concept of the web. For example, a lot of research has been going on to discover whether, social software can be applied in education and management.

The web has just recently been capable to provide different services than the old mass media. It has not attracted individuals who eventually hardly ever had a chance to be part of it (Kolbitsch and Maurer, 2006). The emersion of this wave is driving a change and making the internet an independent platform supported by tools and services that can dispense with desktop applications. There is now a shift from a content generated by few publishers who decide what to be published on a website, to a content generated by users who create the great part of the published information on a website.

There is also a shift to online bookmarks which allows individuals to store and share collectively bookmarks after it was limited to self-use offline bookmarks. There are also a behavioural shift from consuming information to creating information and higher involvement by users.

Social software satisfies better the inner feeling and the standards of individuals comparing to what they had before (Alexander, 2006). Individuals like to be creative part of the web, they want to express themselves. Importantly, an essential change of thinking that is encouraged or developed by social software, is clear that it supports new individuals to participate in enhancing and creating content (Kolbitsch and Maurer, 2006).

Due to its newness and even though it has attracted attention in recent times, the term is not yet well defined. Existing definitions are careful not to limit the concept in tight corners, therefore it is made broad in order to be able to respond and to cope with the fast pace of perpetual change we are witnessing. Researchers pay attention that they do not exclude important facets of the concept, considering that a great deal of this topic is still subject to research and exploration. Gorissen (2006) gives a broad definition of social software that we adopt for this research. He says: "Social software is software that is aimed at simplifying the achievement and enduring of networks among people".

The core of the definition is networking among individuals. It justifies the difference with how the web used to be. Creating networks with and by members is the aim of social software. Therefore, it depends on the contribution of users.

Gorissen (2006) after analysing, added other features, such as forums, real-time messaging, podcasts, cooperative real-time editing, and virtual worlds. Nowadays people are using every platform to reach their aims even social media websites such as Facebook which offer the opportunity to create groups and pages for users to contribute.

This analysis shows that social software is broad in scope but our research does not include all these features.

Two key services of social software will be evoked in the next section. Unnecessary to explain that social software are not limited exclusively to these two services.

Explained examples of key services

Although the internet offers many other services that can be considered as social software, this section will briefly explain two major services of social network which are Weblogs (or Blogs) and Wikis

4.2.1 Weblogs

Social software such as blogger was founded in 1999, made it possible for users to publish their thought and information. It also made it easy for users to comment. This made it popular and widely used. The act of posting and commenting is a known feature of weblogging (Blood, 2004).

Weblogging publishers or users have their aims and they differ from one another but there is some consensus on the fundamental function of a weblog. A characteristic of a weblog is that their posts are arranged in a chronological manner, i.e. from the latest post which will appear first to the previous and old ones. The really interesting feature is the ability of people to comment and create lively discussions. Blogs therefore serves a function of being a platform hosting conversations. Poortman and Sloep (2005) say that network of different blogs is called “blogosphere” .

Kelleher and Miller (2006) argue that there are many types of blogs, such as , organisational blogs, personal blogs, knowledge blogs, news blogs etc. Each of them have their own uniqueness, but the type of blogs that comes close learning is knowledge blogs. They are like professional references in which bloggers codify accumulative knowledge related to their fields (Kelleher and Miller, 2006).

Group and Individual blogs are other differences in blogs. Individual blogs are run by a one individual who reflect his own thoughts and opinions. Discussion about this type of blogs is not very interesting. However, a group blog has multiple participants. Discussions about this type of blogs are more focalized on the members’ interaction. This type of blogs can reflect the ideology of the participant in a group.

Interactions i.e. posting and maintaining, allowing bloggers to open discussions with their co-members gives rise to a way of interaction that was not available in Web.01. This space of interaction brings people who share similar interests together to make a vibrant blogosphere. To blog is a tool that helps organizing ideas, interact with others and reflect on intriguing things. Therefore, that is why leading people are talking advantage of blogs to communicate. Blogs are now widely utilised in enterprise, example is knowledge workers spreading their knowledge internally and externally (Kelleher and Miller, 2006).

Poortman and Sloep (2005) think that blogs have some set-backs, on the one hand, communication is not immediate, which means response to message may appear at a later time which causes a slow interaction. On the other hand, communication depends on texts.

This means that the information lacks some vital qualities, which makes communication less effective. Furthermore, the blog can set untidy, because reactions can set disharmonious.

If individuals post on a blog, normally they pay more attention to what write and say. In a blog, a discussion can be used anytime needed, by anyone. It serves as a shared resource. Blogs are now being adopted not only by individuals, but also by educational and organisational institutions. Relevant researches are still scarce on this topic.

4.2.2 Wikis

There has been recent development that enables writing collaboratively on the web. Wikis are an example of services that support this type of writing. We explain a wiki as an extensible bunch of web pages that are linked by a hypertext system to codify and update knowledge.

It is also accessible for a user with capable web-browser client can easily edit any page (Leuf and Cunningham, 2001). Ward Cunningham started wikiwikiweb, the first wiki engine (Lamb, 2004). As more flexible type of blogs with aims like, team collaboration knowledge management, Wikis are used as platform (Mattison, 2003).

Every reader can become a writer because they are allowed to edit and add pages to a wiki. It aims to involve readers in the process of information and knowledge creation. Wikis normally are utilized to organise and spread knowledge. Another important aspect of wiki is every user has similar possibilities and rights as every user else (Leuf Cunningham, 2001). This enables groups of people to come together on one platform and collaborate to create a content on a topic of common interest. Wikipedia is a profound and a famous example of an active wiki.

Noel and Robert (2003) defines collaborative writing as the act that two or more individuals with common interests collaborate to produce one text.

For Colen and Petelin (2004), collaborative writing is naturally a social act allowing individuals to socially interact.

Benefits of collaborative writing are that it addresses a topic from several perspectives and backgrounds enabling more ideas and viewpoint to be expressed. Additionally many sections are works of experts, which in fact raised users' willingness to collaborate and participate and also developed less experienced writers' skills (Colen and Petelin, 2004).

Noel and Robert (2004) talk about the negative side of collaborative writing. They argued that in the case whereby writers use different writing styles, the task is more difficult in reconciling the styles to produce a final text. Also, managing a writing team can be challenging; dealing with emotions, conflicts and interests.

Important features of wikis are that they are open systems. Any user is able not only to read and copy but also to edit the text, so in every page we can find the button “edit this”. It permits anyone to modify the text.

Pages are made with WYSIWYG editors (what you see is what you get editors) and easy tools are used to link pages with each other and within the page itself. Any change or update occurs on a wiki page is saved as a new input, so the previous page can be reactivated if the content of the newer page is destroyed (Lamb, 2004). This helps to control improper use, as the community is self-regulated.

Wikis are not free from disadvantages that can be reflected on the quality and the effectiveness. A good example is vandalism. In some cases, people sometimes premeditatedly destroy the content, but this can easily be solved since the previous pages of a wiki can easily be restored. The reliability and quality can be difficult to be ascertained. For instance, a Wikipedia article in terms of accuracy can be difficult to guarantee. This is more difficult than dealing with vandalism. Even if they had errors, wikis’ fundamental idea stand on allowing users to correct and edit content errors which enhances the document quality and reliability (Kolbitsch and Maurer, 2006).

Kolbitsch and Maurer (2006) also noted that people think that the anonymity of a wiki evokes the feeling of unreliability which can affect the quality of the work. To solve this, users should be required to register before they start creating and editing content. It is the same solution for spam messages that are functioning automatically editing pages and putting advertisements.

However, registration and strict control are against the fundamentals of a wiki like easy writing web content, free and easy access and unlimited collaboration. The advantage of a wiki is that it has relatively less obstacles and relatively low costs to start one. Wikis are worldwide implemented which makes it an interesting topic to be studied more closely.

CHAPTER FIVE

METHODOLOGY

The research model proposed in Chapter one, will be examined by using an online survey. Although surveys can raise some validity issues, validation methodology is used to reinforce the results of this survey.

5.1 Research design

A survey is a convenient way to measure motives, attitudes and behaviours of large populations. Therefore, the research model in Fig. 3 will be tested by one. Survey research is a standout amongst the most essential area of measurement applied in social sciences researches.

As a method of survey for this research, we will use a web-based questionnaire using Google.doc since it is the most suitable. In this way, the questionnaire can be shared via link and the answers will be automatically collected and recorded into a personal Google drive database.

Straub (1989) considers 3 types of validation to strengthen the empirical research, instrument validation, internal validity and statistical conclusion validity.

We leave Statistical conclusion validity to Chapter 6 and the threats of internal validity have been reduced by reviewing the literature in order to identify some alternative explanations for knowledge sharing behaviour and by asking an open question to the survey population. However, choosing the survey to test the research model will not prevent the risk of other explanations. Instrument validity consists of 3 fundamental sections according to Straub (1989), which are Content Validity, Construct Validity and Reliability.

To improve instrument validity, we will be passing by two steps, so before the survey is being distributed, a pre-test will take a place to assess the reliability.

5.2 Operationalization the constructs

The survey content is specified in Appendix A and B, all of which are adapted to the context of research. In order to measure the relationship between the motives and the behaviour of knowledge sharing in virtual communities, we will examine every item by three dimensions at least for each.

All items are measured on a five-point Likert scale varying from “strongly disagree” to “strongly agree”.

Knowledge Sharing behaviour (KSB) is examined using Four items that are adapted from Shu, and Yu-Hao Chuang (2011). These items ask about members participation, attitude and intention toward knowledge sharing in virtual communities.

Commitment (Com) is examined using three items that are adapted from Mowday et al (1979). These items ask about the readiness of members to participate with their knowledge, their proud feeling toward being part of their virtual communities and how much they care about the fate of the virtual community.

Reciprocity (Rec)) is examined using three items that are adapted from Davenport & Prusak (1998). These items ask about the expected mutuality that motivates members and make them feel obliged to share knowledge, the member’s certitude to be helped back generally and the personal help that a member will get when he asks for it. .

Knowledge Quality (KnQ)) is examined using three dimensions that are adapted from Doll & Torkzadeh (1988) and Goodhue & Thompson (1995) for the first dimension, Davenport & Prusak (1998) for the second dimension and a self-developed measure for the third dimension. These items ask about the members’ judgement on the shared knowledge in terms of trustworthiness, accuracy, being updated and time to respond, the second dimension includes itmes asks about members satisfaction on shared knowledge in terms of how good it is, how valuable it is and how the shared knowledge is presented. The third dimension asks about the members’ judgment on their knowledge quality threshold in terms of how valuable knowledge si, how well presented and relevance to be involved in the knowledge sharing behaviour.

Self-efficacy (SE)) is examined using three items that are adapted from Constant et al., (1996) and Kalman (1999). These items ask about the members’ self-confidence, experience & expertise to share knowledge and confidence & daring to comment and reply to messages and article shared by other members.

Trust (TR) is examined using three items that are adapted from Lee & Choi, (2003) and Mishra (1996). These items ask about the reciprocal faith-based and trustworthy members share, Sincerity and lack of opportunism among members and promise keeping.

Ideology (Ideo)) is examined using two dimensions. Items for ideology are self-developed . The first dimension examines ideology as an encouraging factor for knowledge sharing using 6 items. The second dimension examines participants’ willingness to transfer, introduce their ideology within knowledge sharing using 3 items.

Table 5.1 displays the abbreviations used to facilitate constructs readability and table 5.2 shows questions asked to represent each hypothesis.

Table 5.1: List of abbreviations.

Construct Name	Abbreviation
Knowledge Sharing Behaviour	KSB
Commitment	Com
Reciprocity	Rec
Knowledge Quality	KnQ
Self-efficacy	SE
Trust	Tr
Ideology	Ideo

Table 5.2: Items representing the hypotheses

Hypothesis	Questionnaire part
H1	Part 2
H2	Part 3
H3	Part 4
H4	Part 5
H5	Part 6
H6	Part 7
H7	Part 8
H8	Part 8 and part 6
H9	Part 8 and part 3

Selection of items was guided by the literature review. Three professors with field knowledge and a great experience of the Internet, including my supervisor, evaluated the preliminary version of the questionnaire. Five doctoral candidates helped for further evaluation of the questionnaire.

All judges reported back that the questionnaire can be a fair measure and that all dimensions adapted were essential to the evaluation of knowledge sharing in virtual communities. Therefore, face and content validity both were achieved.

5.3 Pre-test

A pre-test was used as a draft instrument to qualitatively test of all validities. It is a phase that was used to generally revise the content of our questionnaire. We will use the pre-test to test the reliability of the draft version of the questionnaire and identify the wrong-worded questions. Ten individuals with the same characteristics as the targeted population will help answer the questionnaire and report back their impression and evaluation. The survey was modified after 5 participants gave their feedback about the items that wasn't clear or well-worded. Therefore, the survey was modified according to their feedback and the same process was applied after the other five participants have reported back their evaluation. The time necessary to complete the survey is estimated at 10 to 15 minutes.

5.4 Sampling and implementation

Three Algerian groups "Virtual Communities" on Facebook were selected as the survey population. Each group has over 1000 member. The surveys link was posted regularly 3 times a day for a month (between 11/09/2016 and 11/10/2016) There are 184 members who completed the survey in which questions were obligatory and a participant cannot move to a second section before he completes the first one and so on except the last one which was an optional open question. Participants were not very willing to complete the survey therefore the number 184 was acceptable.

5.5 Statistical evaluation of the questionnaire

Statistical analyses for accepting and validating the questionnaire were made using SmartPLS version 3.2.4 and SPSS version 20.0. SmartPLS is used in the main study. Table 5.3 shows the list of tools.

Table 5.3 List of tools

	Tool
For reliability	SPSS 20.0
For the main Study	SmartPLS 3.2.4
For the online survey	Google.doc
To collect results	Google drive

To assess the questionnaire's scales reliability, Cronbach's α was used. If α value is greater than 0.7 then according to Guilford (1965), reliability is adequate. In the case where α value of a scale is less than 0.7, the process is to exclude one item or more items from that scale to improve the reliability.

Partial least squares (PLS) technique which is similar to regression, is used to analyse the research model. PLS models, on the one hand, the theoretical relationships between latent variables (Structural model) and on the other hand, the relationships between latent variables and their indicators (measurement model). The PLS algorithm does not assume that all indicators of a scale have equal weights, instead, it distinguishes each indicators' weight according to how much it contributes to the latent variable's composite score which makes PLS preferable to other techniques such as regression (Wold, 1989)

In the recent years, The Partial least squares procedure are used in information systems studies (Compeau & Higgins, 1995; Chin and Gopal 1995) . The PLS technique allows to run them both, confirmatory exploratory studies (Gefen et al. 2000) and exploratory studies. Also it does not need normally distributed data.

For this thesis, PLS technique is used to demonstrate statistical conclusion validity. As it is mentioned earlier, the software that is used to perform the analysis is SmartPLS version.3.2.4. To check significance, the bootstrapping resampling procedure was used.

In the next chapter, we will present descriptive statistics of the responses, analyse the reliability, the validity and finish with hypotheses testing.

CHAPTER SIX

DATA ANALYSIS AND RESULTS

In this chapter, the survey's results are provided and analysed. For demographics and descriptive statistics we use SPSS to analyse. Reliability, validity assessment and the hypotheses testing results are delivered. The software which has been used for this thesis is SmartPLS.

6.1 Data descriptions

In this section we will provide data descriptions and descriptive statistics of the questionnaire results. In the survey's first part, we tend to get information about respondent's profile. The second part is dedicated to measure our research model constructs by the items included in the survey which was developed by empirical evidence of factors influence on the knowledge sharing behaviour. For each construct, results and mean values are given in tables.

6.1.1 Demographics

Table 6.1 provides data about the participant ages which was divided to 5 categories. It is remarkable that people aged over 50 did not participate in the survey.

Table 6.1: Age

	Number	Percentage	Accumulative percentage
< 20	8	4.3	4.3
20-30	93	50.5	54.9
31-40	52	28.3	83.2
41-50	31	16.8	100.0
Total	184	100.0	

50.5% of the participants aged between 20 and 30 years old while 28.3% aged between 31 and 40. These two age categories represent the major population involved in content creation in Facebook virtual communities of practice.

Table 6.2: Gender

	Number	Percentage	Accumulative percentage
Male	89	48.4	48.4
Female	95	51.6	100.0
Total	184	100.0	

The participation of both genders was balanced with 51.6 for female and 48.4% for males.

Table 6.3: Participants' educational level

	Number	Percentage	Accumulative percentage
Secondary	6	3.3	3.3
Professional Diploma	9	4.9	8.2
Bachelor	64	34.8	42.9
Master	80	43.5	86.4
Ph.D.	25	13.6	100.0
Total	184	100.0	

Most of the participants have a university degree. 43.5% are master's graduates.

Table 6.4: Professional experience

	Number	Percentage	Accumulative percentage
<2	53	28.8	28.8
2-5	73	39.7	68.5
6-10	36	19.6	88.0
11-15	16	8.7	96.7
16-20	6	3.3	100.0
Total	184	100.0	

Participants with experience over 20 years do not participate whereas 68.5 % of participants experience is less than 6 years.

6.1.2 The result of the questionnaire items

All variables are measured using five point Likert scale and the respondents will rate the items from strongly disagree to strongly agree.

Knowledge sharing behaviour

Table 6.4 shows the respondents attitude, and intention toward knowledge sharing. Four items about members participation, attitude and intention toward knowledge sharing in virtual communities are asked

The items are indicated in Appendix A

Table 6.4 The response on measurement items of knowledge sharing behaviour

	SD	D	N	A	SA	Sum	%	Mean	Std
KSB1		1	36	129	18	184	100	3.89	.552
KSB2		2	48	106	28	184	100	3.87	.665
KSB3		3	55	104	22	184	100	3.79	.664
KSB3		3	77	100	4	184	100	3.57	.568

We clearly can see that most of the respondents share and keep the intention to share knowledge in the virtual communities.

Commitment

Table 6.5 shows commitment as a motive for participants to share knowledge. Three items ask about the readiness of members to participate with their knowledge, their proud feeling toward being part of their virtual communities and how much they care about the fate of the virtual community.

The items are indicated in Appendix A

Table 6.5 The response on measurement items of Commitment

Most of the respondents feel committed to share knowledge with other members.

	SD	D	N	A	SA	Sum	%	Mean	Std
Com1		5	32	96	51	184	100	4.05	.749
Com2	2	5	41	114	22	184	100	3.81	.718
Com3		1	31	123	29	184	100	3.97	.591

Reciprocity

Table 6.6 shows reciprocity as a motive for knowledge sharing. Three items ask about the expected mutuality that motivates members make them feel obliged to share knowledge, the member's certitude to be helped back generally and the personal help that a member will get when he ask for it.

The items are indicated in Appendix A

Table 6.6 The response on measurement items of Reciprocity

	SD	D	N	A	SA	Sum	%	Mean	Std
Rec1		18	23	110	33	184	100	3.86	.824
Rec2		21	30	108	25	184	100	3.74	.833
Rec3	1	20	40	106	17	184	100	3.64	.818

Most of the respondents consider reciprocity during their participation in the virtual community.

Knowledge Quality

Table 6.7 shows Knowledge Quality as a motive for knowledge sharing. Three dimensions that are represented by 10 questions that ask about members' judgement on the shared knowledge in terms of trustworthiness, accuracy, update and time to respond, about

members' satisfaction on shared knowledge in terms of how good it is, how valuable it is and how the shared knowledge is presented. And about the members' judgment on their knowledge quality threshold in terms of value, how well presented and relevance to be involved in the knowledge sharing behaviour.

The items are indicated in Appendix A

Table 6.7 the response on measurement items of Knowledge Quality

	SD	D	N	A	SA	Sum	%	Mean	Std
KnQ1	1	49	64	65	5	184	100	3.13	.858
KnQ2	11	64	68	36	5	184	100	2.78	.921
KnQ3		30	38	102	14	184	100	3.54	.855
KnQ4		38	45	90	11	184	100	3.40	.882
KnQ5	1	19	48	102	14	184	100	3.59	.798
KnQ6		8	31	122	23	184	100	3.87	.673
KnQ7	1	29	42	101	11	184	100	3.50	.849
KnQ8		4	16	110	54	184	100	4.16	.666
KnQ9	1	12	14	125	32	184	100	3.95	.749
KnQ10		15	41	113	15	184	100	3.70	.735

Although most of responses agreed that shared knowledge in the virtual communities is not always trustworthy, accurate, but it is updated and timely (KnQ1 to KnQ4). They showed their satisfaction in terms of how good it is, how valuable it is and how the shared knowledge is presented (KnQ5 to KnQ7). And most of the participants showed that they agree with a high threshold to be involved in a knowledge sharing behaviour.

Self-efficacy

Table 6.8 shows Self-efficacy as a motive for knowledge sharing. Three items ask about the members' self-confidence, experience & expertise to share knowledge and confidence & daring to commenting and replying to messages and article shared by other members.

The items are indicated in Appendix A

Table 6.8 the response on measurement items of Self-efficacy

	SD	D	N	A	SA	Sum	%	Mean	Std
SE1	1	6	32	114	31	184	100	3.91	.719
SE2		15	41	104	24	184	100	3.74	.786
SE3		9	37	120	18	184	100	3.80	.676

Most of the respondents answered that they think that they have enough self-efficacy to share knowledge in the virtual community.

Trust

Table 6.9 shows trust as an environmental motive for knowledge sharing. Three items ask about the reciprocal faith-based and trustworthy that members share, sincerity and lack of opportunism among members and promise keeping.

The items are indicated in Appendix A

Table 6.9 The response on measurement items of Trust

	SD	D	N	A	SA	Sum	%	Mean	Std
Tr1	3	19	75	81	6	184	100	3.37	.778
Tr2	11	23	74	70	9	184	100	3.23	.944
Tr3	3	34	93	53	1	184	100	3.08	.746

The responses show opposition of visions between participants. Trust does not seem to be well shared between the members. In average, 17% disagree with the items, 44% are neutral and 40% at least agree.

Ideology

Table 6.10 shows ideology as a motive for knowledge sharing. To examine ideology as a motivating factor for knowledge sharing we used 6 items. And to examine participants' willingness to transfer/ introduce their ideology within knowledge sharing process using 3 items.

The items are indicated in Appendix A

Table 6.9 The response on measurement items of ideology

	SD	D	N	A	SA	Sum	%	Mean	Std
Ideo1	8	26	32	112	6	184	100	3.45	.928
Ideo2	6	29	36	102	11	184	100	3.45	.940
Ideo3	2	2	12	107	61	184	100	4.21	.704
Ideo4		2	19	100	63	184	100	4.21	.710
Ideo5		4	48	87	45	184	100	3.94	.769
Ideo6	23	29	24	45	63	184	100	3.52	1.418
Ideo-trans1	13	18	40	98	15	184	100	3.46	1.018
Ideo-trans2	8	22	49	81	24	184	100	3.49	1.008
Ideo-tans3	2	26	37	87	32	184	100	3.66	.962

In average, 73% of participants consider their ideologies during sharing knowledge.61% do not mind to transfer or introduce their ideologies within their shared knowledge.

6.2. Measurement reliability

In this study we use SPSS to examine the reliability of the items, and the factors. The reliability will tell us, whether the collected data are significant or not, and if there are some data that have some problems, thus, this study may omit the items that are not reliable. Following results from some scientists (Chin, 1998), Cronbach's Alpha is the threshold to analyse and compare for this study. If the Cronbach's Alpha is greater than 0.7, the item is reliable. If not then the item is not reliable. Table 6.10 shows the reliabilities of the items.

Table 6.10: Reliabilities of the items

	Items	Mean	Std. Dev.	Range	Cronbachs Alpha
KSB	4	3.78	.39	1-5	.709
Com	3	3.94	.52	1-5	.733
Rec	3	3.75	.69	1-5	.792
KnQ	10	3.56	.47	1-5	.795
SE	3	3.81	.59	1-5	.741
Tr	3	3.23	.69	1-5	.777
Ideo	6	3.79	.60	1-5	.706
Ideo-tans	3	3.53	.79	1-5	.708

It is important to know if the factors developed in the research model are significant and reliable. We used SPSS for this purpose. The aim in this part is define the items in the model that are causing unreliability for the collected data. According to the results, the data collected are considered reliable.

6.3 Factor analysis

In this part we use the visual PLS (partial least square) to analyse. PLS is a tool to test the proposed this research hypotheses. In order to validate the measurement model, content, convergent, and discriminant validities were assessed. Content validity was confirmed by ensuring fittings between the measurements and the literature. Hair et al. (1998) suggest examining average variance extracted (AVE) and internal composite reliability (ICR) from

the measures convergent validity. Chin (1998) recommends a threshold of 0.7 for construct reliability although many studies using PLS have accepted 0.5. Fornell and Larcker (1981) consider that the score of 0.5 for average variance extracted by a measure indicates acceptability. Results show that the composite reliability values are between 0.808 and 0.890 and the average variances extracted are between 0.607 and 0.795, which means the measures meet the reliability threshold and acceptability value. For each item, loadings and weights are given in table 6.11. All measures are found to be significant on their path loadings at the level 0.01.

As it is highlighted earlier, this research uses PLS to analyse the factors' validity. To assess the third type of validity which is the discriminant validity, this research adopts Fornell and Larcker (1981) recommendation to verify discriminant validity by checking if the square root of the average variance extracted is greater than the level of correlation for each construct.

6.3.1 Convergent validity

Average variance extracted (AVE) for a construct is computed by taking the average of the squared loading of each of its items. AVE is used to assess how well a latent variable explains the variance of some items that are meant to measure the construct. According to Yao (2004), average variance extracted measures the value of variance for the instructs' indicators versus their values of variance that is caused by the measure error. The score of AVE has to be higher than 0.5 for each measure. To say that convergent validity for all items is significant, composite reliability score must be equal to or higher than 0.7 whereas AVE must be higher than 0.5 for all measures. Table 6.11 provides results where significant and non-significant items are shown

Table 6.11 Significant and non-significant items

Factor	Item	Weight	Loading	Remark
KSB	KSB1	0.367	0.710	S
	KSB2	0.362	0.770	S
	KSB3	0.467	0.734	S
	KSB4	0.363	0.727	S
Com	Com1	0.191	0.764	S
	Com2	0.555	0.851	S
	Com3	0.522	0.805	S
Rec	Rec1	0.293	0.788	S

	Rec2	0.425	0.906	S
	Rec3	0.451	0.917	S
KnQ	KnQ1	0.183	0.732	S
	KnQ2	0.137	0.688	S
	KnQ3	0.251	0.730	S
	KnQ4	0.217	0.716	S
	KnQ5	0.189	0.753	S
	KnQ6	0.131	0.770	S
	KnQ7	0.177	0.741	S
	KnQ8	0.050	0.109	NS
	KnQ9	0.055	0.182	NS
	KnQ10	0.150	0.528	NS
SE	SE1	0.426	0.834	S
	SE2	0.506	0.891	S
	SE3	0.280	0.690	S
Tr	Tr1	0.210	0.693	S
	Tr2	0.475	0.891	S
	Tr3	0.488	0.884	S
Ideo	Ideo1	0.211	0.662	S
	Ideo2	0.302	0.689	S
	Ideo3	0.363	0.718	S
	Ideo4	0.260	0.763	S
	Ideo5	0.253	0.671	S
	Ideo6	0.238	0.743	S
Ideo-trans	Ideo-trans1	0.224	0.696	S
	Ideo-trans2	0.486	0.809	S
	Ideo-trans3	0.527	0.865	S

Items with loading values near 0.7 were accepted as significant. Three items will be eliminated which are KnQ8, KnQ9 and KnQ10. Here is the result after having three items omitted.

Table 6.12 Significant items

Factor	Item	Weight	Loading	Remark
KSB	KSB1	0.367	0.710	S
	KSB2	0.362	0.770	S
	KSB3	0.467	0.734	S
	KSB4	0.363	0.727	S
Com	Com1	0.191	0.764	S
	Com2	0.555	0.857	S
	Com3	0.522	0.806	S
Rec	Rec1	0.293	0.788	S
	Rec2	0.425	0.906	S
	Rec3	0.451	0.917	S
KnQ	KnQ1	0.183	0.741	S
	KnQ2	0.137	0.788	S
	KnQ3	0.251	0.719	S
	KnQ4	0.217	0.739	S
	KnQ5	0.189	0.758	S
	KnQ6	0.131	0.767	S
	KnQ7	0.177	0.783	S
SE	SE1	0.426	0.818	S
	SE2	0.506	0.887	S
	SE3	0.280	0.719	S
Tr	Tr1	0.210	0.691	S
	Tr2	0.475	0.891	S
	Tr3	0.488	0.885	S
Ideo	Ideo1	0.211	0.696	S
	Ideo2	0.302	0.696	S
	Ideo3	0.363	0.711	S
	Ideo4	0.260	0.763	S
	Ideo5	0.253	0.771	S
	Ideo6	0.238	0.743	S
Ideo-trans	Ideo-trans1	0.224	0.696	S
	Ideo-trans2	0.486	0.809	S

	Ideo-trans3	0.527	0.864	S
--	-------------	-------	-------	---

After having eliminated some items which were not significant, in the next table we can see that all constructs now are significant scoring composite reliability equal to or higher than 0.7 and average variance extracted AVE higher than 0.5 for all measures, which demonstrate convergent validity.

Table 6.13 Cronbach's Alpha, Composite Reliability and AVE

	Cronbach's Alpha	Composite Reliability	Average Variance Extracted (AVE)
Knowledge sharing behaviour	0.712	0.831	0.607
Commitment	0.736	0.890	0.763
Reciprocity	0.792	0.879	0.711
Knowledge Quality	0.787	0.840	0.777
Self-efficacy	0.740	0.849	0.795
Trust	0.781	0.866	0.785
Ideology	0.723	0.808	0.715
Ideo-trans	0.709	0.829	0.620

6.3.2 Discriminant validity

According to Chin (1998) the discriminant validity can be tested by comparing the square root of the AVE for a particular construct to its correlations with the other constructs. Nunnally (1978) recommends the benchmark of 0.8 for composite reliability scores of all constructs. In this research, all square root of the AVE for all constructs are higher than the suggested values, verifying internal consistency.

Table 6.14 shows that the square roots of the AVE are higher than its correlation, which eventually demonstrates convergent validity.

Table 6.14 : Correlation and Square root of the AVE

	KSB	Com	Rec	KnQ	SE	Tr	Ideo	Ideo-trans	Square root of the AVE
KSB	1.000								
Com	.782**	1.000							0.874
Rec	.759**	.146*	1.000						0.843
KnQ	.837**	.167*	.415**	1.000					0.881
SE	.873**	.261**	.347**	.292**	1.000				0.892
Tr	.363**	.095	.455**	.506**	.182*	1.000			0.886
Ideo	.810**	.141	.148*	.356**	.255**	.138	1.000		0.846
Ideo-tans	.264**	.060	.276**	.159*	.303**	-0.94	.345**	1.000	0.787

** Significant at $p < .01$, * Significant at $p < .05$

6.4 Analysis of constructs and hypotheses tests

Convergent validity and discriminant validity were confirmed in the previous section. Figure.4 summarizes the structural model results showing the proposed hypotheses, R square, the path coefficients, and loadings whereas Figure.5 shows the observed t-values.

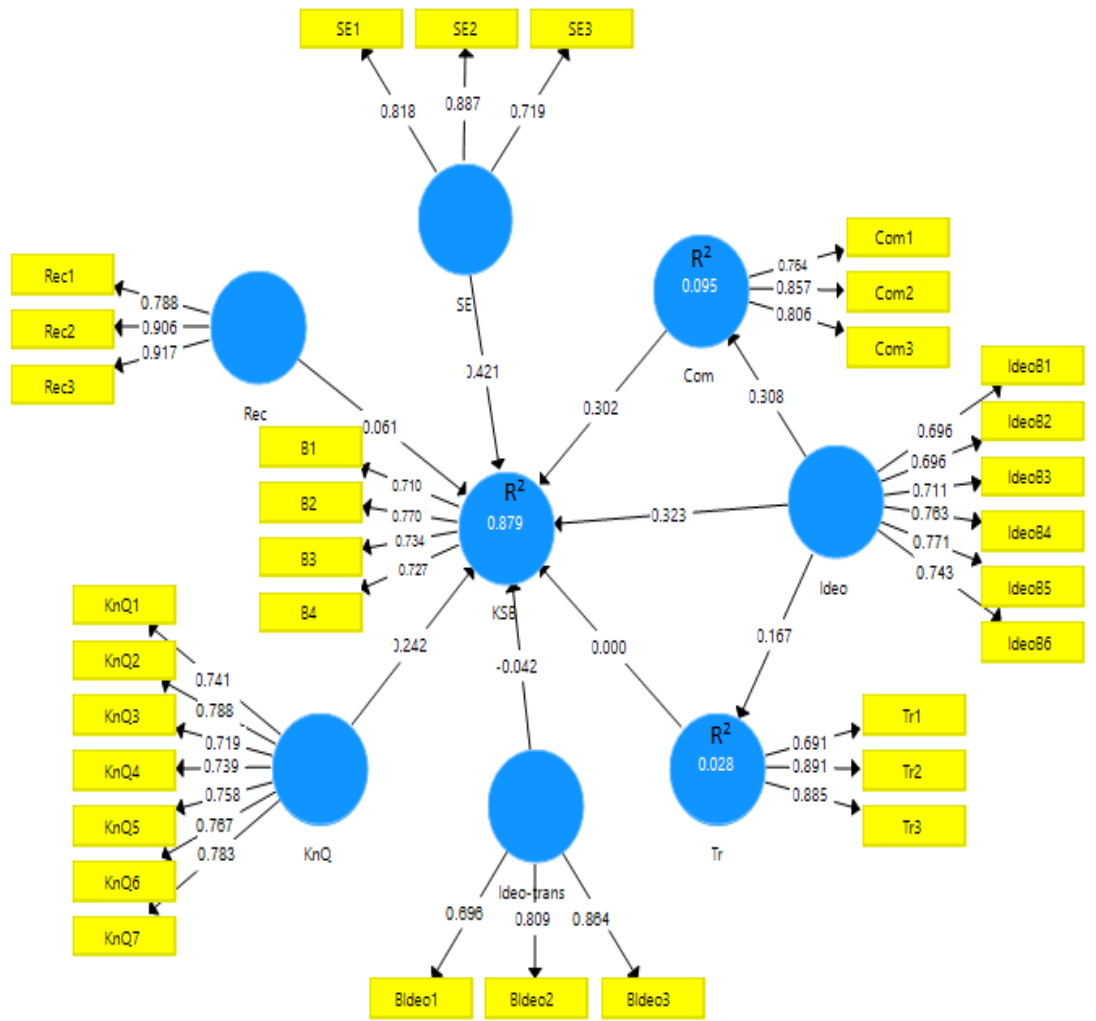


Figure.4 R square, path coefficients and the loadings

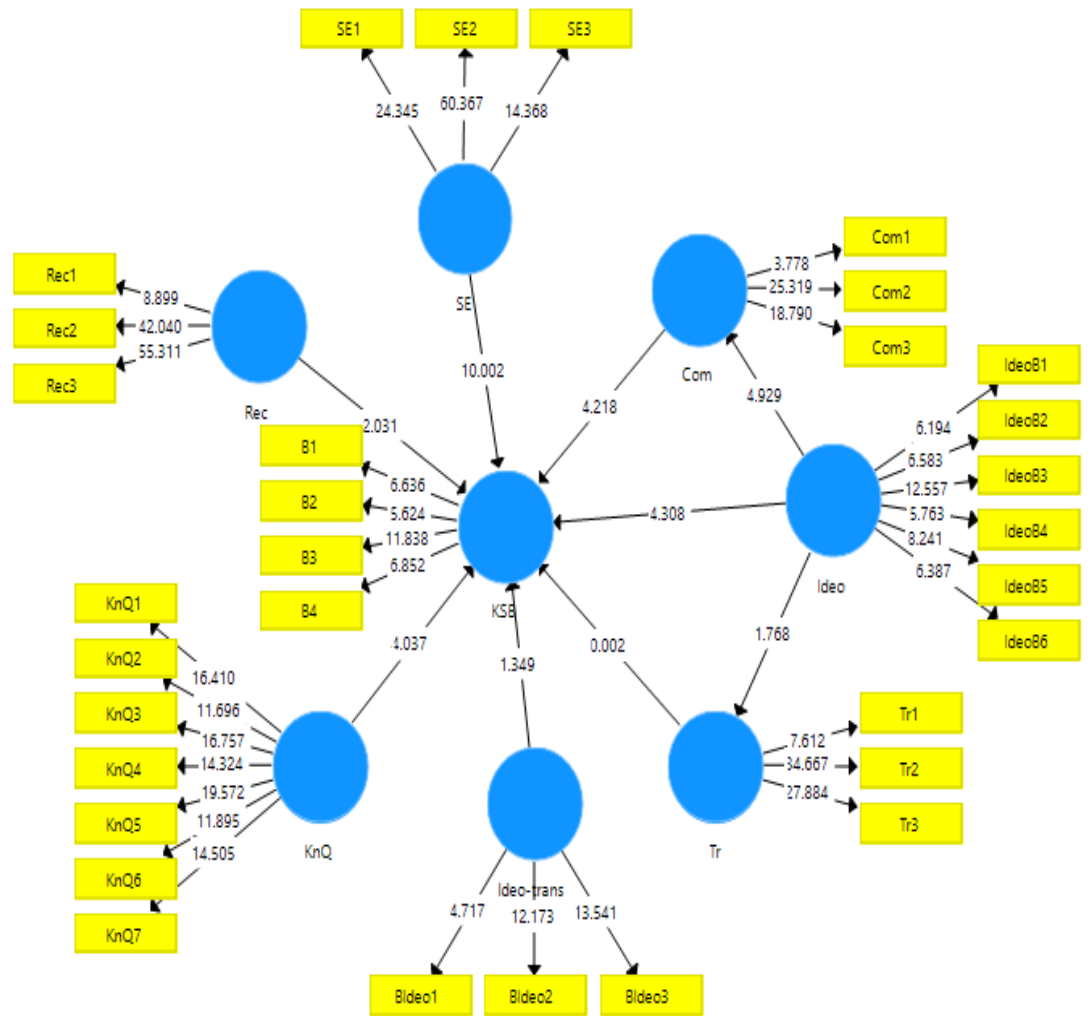


Figure.5 T-Values

In this research, we test hypotheses using Smart PLS. This software determines the R square (the squared multiple correlation) for the endogenous construct. R square tells us how a change in a dependant variable can be explained by the change in the independent variables that a model contains and this is operated by measuring the percentage of construct variation. This research model shows the R square for Knowledge sharing behaviour is 0.879, Self-efficacy is 0.095 and trust is 0.028. Therefore 87.9 % of the variation in in knowledge sharing behaviour is explained.

Table 6.15: R square and R square adjusted

	R Square	R Square Adjusted
Knowledge sharing behaviour	0.879	0.875
Self-efficacy	0.095	0.090
Trust	0.028	0.022

The hypotheses must be evaluated based on a significant level of the T-value and the estimated structural path. We will be using PLS to test the proposed hypotheses and further discussions will be provided in the following chapter. To assess the support, T-statistics has to be greater than 1.645 and $\beta > 0$.

The following results are summarized in table 6.16. H1 (t-statistic: 4.218 and $\beta = 0.302$), so H1 is supported. H2 (t-statistic: 2.031 and $\beta = 0.061$), therefore, H2 is supported. H3 (t-statistic: 4.037 and $\beta = 0.242$), therefore, H3 is supported. H4 (t-statistic: 10.002 and $\beta = 0.421$), therefore, H4 is supported. H5 (t-statistic: 0.002 and $\beta = 0$), t-statistic and β both are not significant, therefore, H5 is **not** supported, H6 (t-statistic: 4.308 and $\beta = 0.323$), therefore, H6 is supported. H7 (t-statistic: 1.349 and $\beta = -0.042$), t-statistic is not significant therefore, H7 is **not** supported, H8 (t-statistic: 1.768 and $\beta = 0.167$), therefore, H8 is supported, H9 (t-statistic: 4.929 and $\beta = 0.308$), therefore, H9 is supported.

As results, H1, H2, H3, H4, H6, H8 and H9 are supported whereas H5 and H7 are not supported. Knowledge sharing self-efficacy positively effects knowledge sharing behaviour the most, Ideology positively effects knowledge sharing behaviour the second, commitment the third, knowledge quality the fourth and reciprocity the fifth. Table 6.16 demonstrates research hypotheses, the path coefficient, the t-statistics and significance level and table 6.17 hypotheses testing results.

Table 6.16 Structural model results

Hypotheses	Effect	Path Coefficient(β)	T-Statistics	Remarks
H1	Com \rightarrow KSB	0.302	4.218 ^{***}	S
H2	Rec \rightarrow KSB	0.061	2.061 ^{**}	S
H3	KnQ \rightarrow KSB	0.242	4.037 ^{***}	S
H4	SE \rightarrow KSB	0.421	10.002 ^{***}	S
H5	Tr \rightarrow KSB	0.000	0.002	NS
H6	Ideo \rightarrow KSB	0.323	4.308 ^{***}	S
H7	Ideo-tans \rightarrow KSB	-0.042	1.349	NS

H8	Ideo → Tr	0.167	1.768*	S
H9	Ideo → Com	0.308	4.929***	S

*p<0.1; **p<0.05; ***p<0.001.
S: Support; NS: Non-Support.

Table 6.17 Hypothesis testing results

Hypotheses	Results
H1: Commitment positively effects individual's knowledge sharing behaviour in Virtual Communities.	Supported
H2: Reciprocity positively effects individual's knowledge sharing behaviour in Virtual Communities.	Supported
H3: Knowledge quality positively effects individual's knowledge sharing behaviour in Virtual Communities.	Supported
H4: knowledge sharing self-efficacy of Virtual Communities' members positively affects their knowledge sharing behaviour.	Supported
H5: Trust in virtual communities has a positive impact on an individual's knowledge sharing behaviour in Virtual Communities.	Not Supported
H6: Ideology has a positive relationship with knowledge sharing behaviour in virtual communities.	Supported
H7: Participants share knowledge to transfer their ideologies.	Not Supported
H8 - Ideology has a positive effect on the virtual community's trust.	Supported
H9- Ideology has a positive effect on Virtual community remembers' commitment.	Supported

Five out of the 6 motives this research model contained are supported and one motive which is trust is (unlike many previous studies) not supported. Although it is found that ideology weakly affects trust within virtual communities, H8 will be dropped from the model since trust is not supported as a motive for knowledge sharing behaviour for this research, therefore the following figure shows another model that is suitable for applying in Algerian virtual communities of practice.

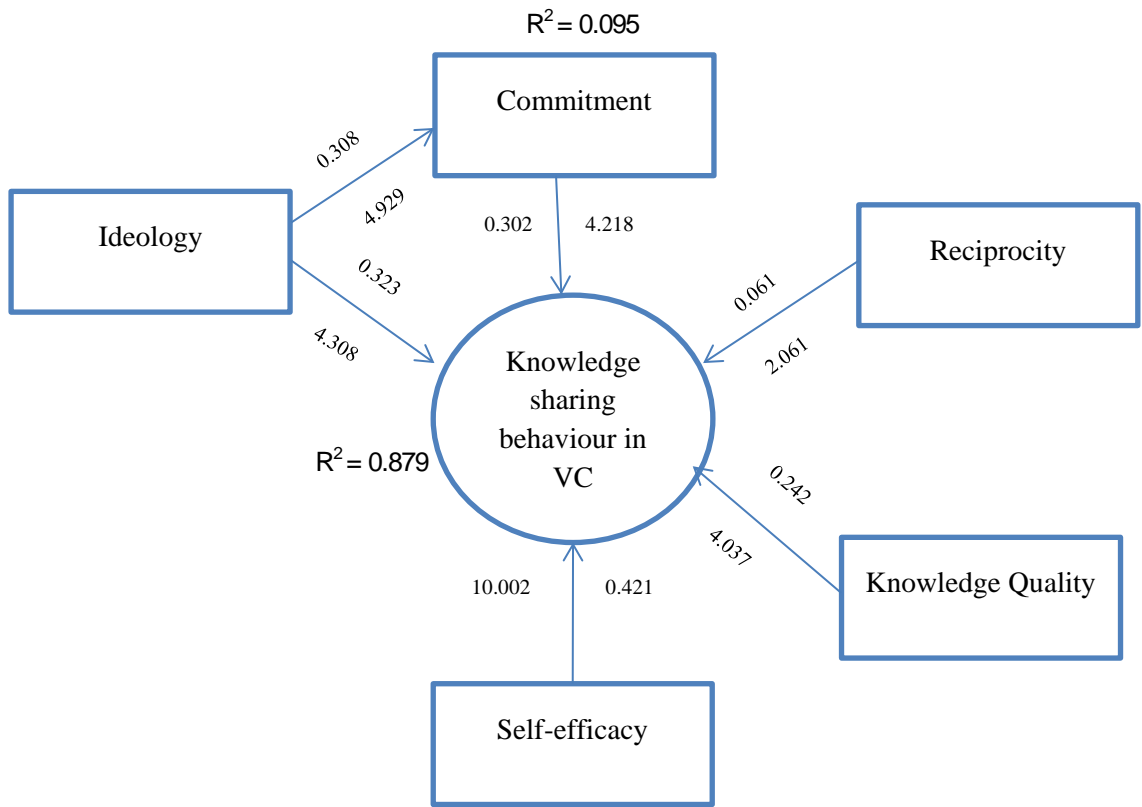


Figure.6 Proposed Model

CHAPTER SEVEN

DISCUSSIONS AND CONCLUSIONS

This chapter concludes the study and provides summary of the research analytical findings. The contribution to the practice and to the theory, limitations and future research are discussed.

7.1 Conclusions

This research basically aims to investigate personal and social motivators that affect knowledge sharing behaviour in Algerian virtual communities away from lucrative motives. So, the research model based on theory of reasoned action, social exchange theory and social cognitive theory, contained commitment and self-efficacy as personal motives, trust and reciprocity as environmental motives, ideology that can be both and knowledge quality as a technical knowledge-based factor.

The findings show that trust is not a motivator for knowledge sharing behaviour in Algerian virtual communities. On the contrary to several studies where trust was an important factor (Sharratt & Usoro, 2003; Tedjamulia, et al., 2005; Ye, Chen, & Jin, 2006; Usoro, et al., 2007; Lin, Hung, & Chen, 2009; Shu & Chuang, 2011; Zhao, et al., 2012; Gang, & Ravichandran, 2015), the results indicate that the members do not need reciprocal trust to share knowledge. Considering the nature of this kind of virtual communities where knowledge shared in many cases is not a personal knowledge of the member who shared it, instead, it can be someone else's knowledge that was shared elsewhere, the members or the knowledge seeker can check and review as one of the participants answered to the open question. It is probably replaced in this context by respect as it was highlighted in some responses.

Another interesting finding is that ideology is an important factor that significantly affects knowledge sharing behaviour in Algerian virtual communities. Members tend to believe they somehow will be rewarded for their contribution and the help they provide to other members. Unlike Sarma, & Lam, (2013) where members develop the same hackers' ideology, in this study, participants showed personal ideologies (it can be shared by more than one member) which are not related to the virtual community as it is discussed in Sarma, & Lam, (2013) which eventually affects their willingness to share knowledge. Transferring ideology within shared knowledge and promoting ideologies seem to be not a motivator for knowledge

sharing as it was hypothesized. It is also found that ideology weakly affects the members' commitment and trust.

The findings show that there is a significant relationship between commitment and knowledge sharing behaviour in Algerian virtual communities. This consists with the findings of (Tedjamulia, et al., 2005; Ye, Chen, & Jin, 2006) . The members expressed their readiness to share their knowledge, their feeling toward being part of this of their virtual communities and how much they care about the fate of the virtual community. Commitment as mentioned earlier, is also positively affected by the members' ideologies.

Reciprocity is found to be a motivating factor for knowledge sharing behaviour in Algerian virtual communities. This result consists with the literature (Ye, Chen, & Jin, 2006; Lin, Hung, & Chen, 2009; Liao, To, & Hsu, 2013; Gang, & Ravichandran, 2015) . Although the majority of respondents showed inclination to consider the norms of reciprocity while sharing knowledge, the results show that reciprocity comparing to the other four factors, weakly affects knowledge sharing behaviour in Algerian virtual communities.

It is found that Knowledge quality has a significant relationship with knowledge sharing behaviour in virtual communities which consists with the literature (Ye, Chen, & Jin, 2006; Chen, 2007 ; Chiu, et al., 2011; Gang, & Ravichandran, 2015). Although the threshold for knowledge sharing was dropped because of none significance of the loading values, the other two dimensions show that the members' behaviour is influenced by the members judgment on the knowledge shared and their post-using satisfaction.

The results show that our findings about knowledge sharing Self-efficacy consists with the previous studies (Liao, To, & Hsu, 2013; Ye, Chen, & Jin, 2006; Tedjamulia, et al., 2005; Chiu, et al., 2011; Lin, Hung, & Chen, 2009). Knowledge sharing self-efficacy is found to be significantly affecting knowledge sharing behaviour in Algerian virtual communities. The members are more willing to share their knowledge when their knowledge sharing self-efficacy is high.

Although the results of this study show the significance of the research modal proposed to explain knowledge sharing behaviour in Algerian virtual communities, there are still other factors that can affect knowledge sharing behaviour.

The members who answered to the open question have indicated some of them. Responders highlighted that mutual respect between the members while discussing the shared knowledge is necessary to maintain participating in virtual communities.

It is also spotted that enjoying helping is another reason for sharing knowledge. This consists with the finding of (Liao, To, & Hsu, 2013; Ye, Chen, & Jin, 2006).

Another factor that was cited by the responders is expected relationships, *“I consider my participation in this virtual community as a kind of building and strengthening relationships with other member...”* one of the responders said. This factor consists with the findings of (Liao, To, & Hsu, 2013; Chiu, et al., 2011).

The other answers were in general about ideology. It is noticed that the religious beliefs are expressed within the answers, *“A man should gather the good deeds and help the others so he finds them in the hereafter, sharing my knowledge with others is in this context”* One of the responders answered. Another respondent contrarily said *“my participation in this virtual community is pragmatic and is not subject to any orientations”*. Other answers contained similar opinions but we can conclude that ideologies according to the answers can be a motivator factor for knowledge sharing behaviour and in the same time, it is agreed that ideology is not a barrier to share knowledge for those who have different ideologies or those who do not consider the ideological orientations when participating in the virtual communities.

7.2 Contribution

In the recent years, many academic researches addressed knowledge sharing topic. The motivating factors that influence knowledge sharing behaviour differ from a country to another due to the differences in cultures which explains the difference in models and the difference in results . Developing countries live different situations comparing to developed countries in terms of culture and awareness. In fact, the world is opening on virtual organizations, and understanding what motivates people to share their knowledge in virtual communities can be useful for this kind of organizations where workers are long-distance employees. Also the findings of this thesis can be considered in stricter virtual communities and in organizations as well. So, understanding the factors influencing knowledge sharing behaviour in more opened communities seems to be more useful to develop more effective strategies because the participants behave the way they want and not the way they are supposed to behave in less opened virtual communities and in physical communities of practice.

This research contributes directly to the literature of knowledge sharing by enriching the topic with new results that can be added cumulatively to the findings from the previous

studies. Empirically studying ideology and providing relevant literature in knowledge sharing context for the first time will be useful for future studies.

7.3 Limitations and future research

Scientific research methodology requires setting limits to the subject of study, therefore, this research is limited to a study of the motivational factors that were included in the research model. Although the shared knowledge can contain tacit knowledge presented in videos, the type of knowledge mainly shared in virtual communities is explicit type of knowledge. It is one of the limits of this research that it did not distinguish between tacit and explicit types of knowledge due to the difficulty to separate them since both of them are shared on a daily basis.

Also, this research is limited to Algeria at the period of time when the opportunities of making money from virtual communities and internet in general is still limited due to many reasons. The outputs of this research can be generalized to the near communities in North Africa and the Middle East where many cultural features are similar.

At the end of this study, some areas for future research arise. Based on the findings of this study, it is a promising opportunity to deepen research about ideologies and what types of ideologies can be considered in knowledge sharing context. Also it is interesting to study if the type of knowledge affects knowledge sharing behaviour. Another topic that is interesting is investigating mutual respect as a new perspective for knowledge sharing behaviour in virtual communities.

REFERENCES

- Ajzen, I., & Fishbein, M. (1975). *Belief, attitude, intention and behavior: An introduction to theory and research*.
- Alavi, M., & Leidner, D. E. (2001). Review: Knowledge management and knowledge management systems: Conceptual foundations and research issues. *MIS quarterly*, 107-136.
- Alexander, L. V., Zhang, X., Peterson, T. C., Caesar, J., Gleason, B., Klein Tank, A. M. G., ... & Tagipour, A. (2006). Global observed changes in daily climate extremes of temperature and precipitation. *Journal of Geophysical Research: Atmospheres*, 111(D5).
- Allen, T. J. (1977). *Managing the flow of technology: technology transfer and the dissemination of technological information within the R and D organization*.
- Appleyard, M. M. (1996). How does knowledge flow? Interfirm patterns in the semiconductor industry. *Strategic management journal*, 17(S2), 137-154.
- Ardichvili, A. (2008). Learning and knowledge sharing in virtual communities of practice: Motivators, barriers, and enablers. *Advances in developing human resources*.
- Badaracco, J. (1991). *The knowledge link: How firms compete through strategic alliances*. Harvard Business Press.
- Bagozzi, R. P., & Dholakia, U. M. (2002). Intentional social action in virtual communities. *Journal of interactive marketing*, 16(2), 2-21.
- Bandura, A. (1989). Human agency in social cognitive theory. *American psychologist*, 44(9), 1175.
- Becker, E. (1975). *Escape from evil*. Free Press.
- Blau, P. M. (1964). *Exchange and power in social life*. Transaction Publishers.
- Blood, R. (2004). How blogging software reshapes the online community. *Communications of the ACM*, 47(12), 53-55.
- Bock, G. W., & Kim, Y. G. (2001). Breaking the myths of rewards: An exploratory study of attitudes about knowledge sharing. *Pacis 2001 proceedings*, 78.
- Bock, G. W., Zmud, R. W., Kim, Y. G., & Lee, J. N. (2005). Behavioral intention formation in knowledge sharing: Examining the roles of extrinsic motivators, social-psychological forces, and organizational climate. *MIS quarterly*, 87-111.
- Cabrera, A., & Cabrera, E. F. (2002). Knowledge-sharing dilemmas. *Organization studies*, 23(5), 687-710.
- Campbell, T. (1981). *Seven theories of human society*. New York: Oxford University Press.
- Chang, M. K., Cheung, W., & Lai, V. S. (2005). Literature derived reference models for the adoption of online shopping. *Information & Management*, 42(4), 543-559.

- Chen, I. Y. (2007). The factors influencing members' continuance intentions in professional virtual communities-a longitudinal study. *Journal of Information science*.
- Cheung, CM, Lee, MK, & Lee, ZW (2013). Comprendre la continuation intention du partage des connaissances dans les communautés de pratique en ligne à travers les processus d'évaluation post-partage des connaissances. *Journal of the American Society for Information Science et technologie* , 64 (7), 1357-1374.
- Chin, W. W., & Gopal, A. (1995). Adoption intention in GSS: relative importance of beliefs. *ACM SigMIS Database*, 26(2-3), 42-64.
- Chin, W. W. (1998). The partial least squares approach to structural equation modeling. *Modern methods for business research*, 295(2), 295-336.
- Chiu, C. M., Hsu, M. H., & Wang, E. T. (2006). Understanding knowledge sharing in virtual communities: An integration of social capital and social cognitive theories. *Decision support systems*, 42(3), 1872-1888.
- Chiu, C. M., Wang, E. T., Shih, F. J., & Fan, Y. W. (2011). Understanding knowledge sharing in virtual communities: an integration of expectancy disconfirmation and justice theories. *Online Information Review*, 35(1), 134-153.
- Chua, A. (2003, August). Knowledge sharing: a game people play. In *Aslib Proceedings* (Vol. 55, No. 3, pp. 117-129). MCB UP Ltd.
- Chua, K. J., & Chou, S. K. (2003). Low-cost drying methods for developing countries. *Trends in Food Science & Technology*, 14(12), 519-528.
- Clark, J. A., & Soliman, F. (1999). A graphical method for assessing knowledge-based systems investments. *Logistics Information Management*, 12(1/2), 63-77.
- Clark, K. B., & Fujimoto, T. (1991). *Product development performance: Strategy, organization, and management in the world auto industry*. Harvard Business Press.
- Colen, K., & Petelin, R. (2004). Challenges in collaborative writing in the contemporary corporation. *Corporate Communications: An International Journal*, 9(2), 136-145.
- Compeau, D. R., & Higgins, C. A. (1995). Computer self-efficacy: Development of a measure and initial test. *MIS quarterly*, 189-211.
- Constant, D., Kiesler, S., & Sproull, L. (1994). What's mine is ours, or is it? A study of attitudes about information sharing. *Information systems research*, 5(4), 400-421.
- Constant, D., Sproull, L., & Kiesler, S. (1996). The kindness of strangers: The usefulness of electronic weak ties for technical advice. *Organization science*, 7(2), 119-135.
- Coon, D. A. (1998). *An investigation of# friends internet relay chat as a community*.
- Correia, A. M. R., Paulos, A., & Mesquita, A. (2009). Virtual communities of practice: Investigating motivations and constraints in the processes of knowledge creation and transfer. *Electronic Journal of Knowledge Management*, 8, 11-20.

- Davenport, T. H., & Prusak, L. (1998). *Working knowledge: How organizations manage what they know*. Harvard Business Press.
- David, W., & Fahey, L. (2000). Diagnosing cultural barriers to knowledge management. *The Academy of management executive*, 14(4), 113-127.
- Doll, W. J., & Torkzadeh, G. (1988). The measurement of end-user computing satisfaction. *MIS quarterly*, 259-274.
- Dyer, J. H., & Nobeoka, K. (2000). Creating and managing a high-performance knowledge-sharing network: the Toyota case. *Strategic management journal*, 21(3), 345-367.
- Eagly, A. H., & Chaiken, S. (1993). *The psychology of attitudes*. Harcourt Brace Jovanovich College Publishers.
- Easterby-Smith, M., Lyles, M. A., & Tsang, E. W. (2008). Inter-organizational knowledge transfer: Current themes and future prospects. *Journal of management studies*, 45(4), 677-690.
- Etzioni, A. E. O. (1999). Face-to-face and computer-mediated communities, a comparative analysis. *The information society*, 15(4), 241-248.
- Fernie, S., Green, S. D., Weller, S. J., & Newcombe, R. (2003). Knowledge sharing: context, confusion and controversy. *International Journal of Project Management*, 21(3), 177-187.
- Fishbein, M., & Ajzen, I. (1975). *Belief, Attitude, Intention and Behavior: An Introduction to Theory and Research*. Reading, MA: Addison-Wesley, 6.
- Fornell, C., & Larcker, D. F. (1981). Evaluating structural equation models with unobservable variables and measurement error. *Journal of marketing research*, 39-50.
- Gang, K., & Ravichandran, T. (2015). Exploring the determinants of knowledge exchange in virtual communities. *IEEE Transactions on Engineering Management*, 62(1), 89-99.
- Gang, K., & Ravichandran, T. (2015). Exploring the determinants of knowledge exchange in virtual communities. *IEEE Transactions on Engineering Management*, 62(1), 89-99.
- Gefen, D., Karahanna, E., & Straub, D. W. (2003). Trust and TAM in online shopping: an integrated model. *MIS quarterly*, 27(1), 51-90.
- Gefen, D., Straub, D., & Boudreau, M. C. (2000). Structural equation modeling and regression: Guidelines for research practice. *Communications of the association for information systems*, 4(1), 7.
- Geuss, R. (1981). *The idea of a critical theory: Habermas and the Frankfurt School*. Cambridge University Press.
- Gibbert, M., & Krause, H. (2002). Practice exchange in a best practice marketplace. *Knowledge management case book: Siemens best practices*, 89-105.
- Goodhue, D. L., & Thompson, R. L. (1995). Task-technology fit and individual performance. *MIS quarterly*, 213-236.

- Gorissen, M. H., Flik, G., & Huising, M. O. (2006). Peptides and proteins regulating food intake: a comparative view. *Animal biology*, 56(4), 447-473.
- Grant, R. M. (1996). Toward a knowledge-based theory of the firm. *Strategic management journal*, 17(S2), 109-122.
- Guilford, J. P. (1965). *Fundamental statistics in psychology and education* 4th Ed.
- Gupta, A. K., & Govindarajan, V. (2000). Knowledge flows within multinational corporations. *Strategic management journal*, 21(4), 473-496.
- Hagel, J., & Armstrong, A. (1997). *Net gain: Expanding markets through virtual communities*. Harvard Business Press.
- Hair, J. F., Anderson, R. E., Tatham, R. L., & Black, W. C. (1998). *Multivariate data analysis*, 5th. NY: Prentice Hall International.
- Hansen, B. E. (1999). Threshold effects in non-dynamic panels: Estimation, testing, and inference. *Journal of econometrics*, 93(2), 345-368.
- Hansen, M. T. (1999). The search-transfer problem: The role of weak ties in sharing knowledge across organization subunits. *Administrative science quarterly*, 44(1), 82-111.
- Hansen, M. T., Nohria, N., & Tierney, T. (1999). What's your strategy for managing knowledge?. *The knowledge management yearbook 2000-2001*, 55-69.
- Hars, A., & Ou, S. (2001, January). Working for free? Motivations of participating in open source projects. In *System Sciences, 2001. Proceedings of the 34th Annual Hawaii International Conference on* (pp. 9-pp). IEEE.
- Hsu, M. H., & Chiu, C. M. (2004). Internet self-efficacy and electronic service acceptance. *Decision support systems*, 38(3), 369-381.
- Hsu, M. H., Ju, T. L., Yen, C. H., & Chang, C. M. (2007). Knowledge sharing behavior in virtual communities: The relationship between trust, self-efficacy, and outcome expectations. *International journal of human-computer studies*, 65(2), 153-169.
- Ipe, M. (2003). Knowledge sharing in organizations: A conceptual framework. *Human Resource Development Review*, 2(4), 337-359.
- Jang, S., Hong, K., Woo Bock, G., & Kim, I. (2002). Knowledge management and process innovation: the knowledge transformation path in Samsung SDI. *Journal of knowledge management*, 6(5), 479-485.
- Jashapara, A., & Tai, W. C. (2006). Understanding the complexity of human characteristics on e-learning systems: an integrated study of dynamic individual differences on user perceptions of ease of use. *Knowledge Management Research & Practice*, 4(3), 227-239.
- Kalman, M. E. (1999). *The effects of organizational commitment and expected outcomes on the motivation to share discretionary information in a collaborative database: Communication dilemmas and other serious games*. University of Southern California.

- Kankanhalli, A., Tan, B. C., & Wei, K. K. (2005). Contributing knowledge to electronic knowledge repositories: an empirical investigation. *MIS quarterly*, 113-143.
- Kelleher, T., & Miller, B. M. (2006). Organizational blogs and the human voice: Relational strategies and relational outcomes. *Journal of Computer-Mediated Communication*, 11(2), 395-414.
- Kogut, B., & Zander, U. (1992). Knowledge of the firm, combinative capabilities, and the replication of technology. *Organization science*, 3(3), 383-397.
- Kolbitsch, J., & Maurer, H. A. (2006). The Transformation of the Web: How Emerging Communities Shape the Information we Consume. *J. UCS*, 12(2), 187-213.
- Kollock, P. (1999). The economies of online cooperation. *Communities in cyberspace*, 220.
- Komiak, S. Y., & Benbasat, I. (2006). The effects of personalization and familiarity on trust and adoption of recommendation agents. *MIS quarterly*, 941-960.
- Lamb, B. (2004). Wide open spaces: Wikis, ready or not. *EDUCAUSE review*, 39, 36-49.
- Lamb, M. E. (Ed.). (2004). *The role of the father in child development*. John Wiley & Sons.
- Lau, R. R., & Sears, D. O. (1986). Social cognition and political cognition: The past, the present, and the future. *Political cognition*, 347-366.
- Lee, H., & Choi, B. (2003). Knowledge management enablers, processes, and organizational performance: An integrative view and empirical examination. *Journal of management information systems*, 20(1), 179-228.
- Leuf, B., & Cunningham, W. (2001). *The Wiki way: quick collaboration on the Web*.
- Li, H. (2004). Virtual community studies: A literature review, synthesis and research agenda. *AMCIS 2004 Proceedings*, 324.
- Liao, C., To, P. L., & Hsu, F. C. (2013). Exploring knowledge sharing in virtual communities. *Online Information Review*, 37(6), 891-909.
- Liao, C., To, P. L., & Hsu, F. C. (2013). Exploring knowledge sharing in virtual communities. *Online Information Review*, 37(6), 891-909.
- Lin, H. F. (2007). Effects of extrinsic and intrinsic motivation on employee knowledge sharing intentions. *Journal of information science*.
- Lin, M. J. J., Hung, S. W., & Chen, C. J. (2009). Fostering the determinants of knowledge sharing in professional virtual communities. *Computers in Human Behavior*, 25(4), 929-939.
- Lu, Y., Zhao, L., & Wang, B. (2010). From virtual community members to C2C e-commerce buyers: Trust in virtual communities and its effect on consumers' purchase intention. *Electronic Commerce Research and Applications*, 9(4), 346-360.
- Luarn, P., & Lin, H. H. (2005). Toward an understanding of the behavioral intention to use mobile banking. *Computers in human behavior*, 21(6), 873-891.

- Markus, M. L., & Agres, B. M. C. E. (2000). What makes a virtual organization work?. MIT Sloan Management Review, 42(1), 13.
- Marx, K., & Engels, F. (1970). The german ideology (Vol. 1). International Publishers Co.
- Mattison, J. A., Lane, M. A., Roth, G. S., & Ingram, D. K. (2003). Calorie restriction in rhesus monkeys. Experimental gerontology, 38(1), 35-46.
- McKinney, V., Yoon, K., & Zahedi, F. M. (2002). The measurement of web-customer satisfaction: An expectation and disconfirmation approach. Information systems research, 13(3), 296-315.
- Mishra, A. K. (1996). Organizational responses to crisis. Trust in Organizations. Frontiers of theory and research, 261-287.
- Mowday, R. T., Steers, R. M., & Porter, L. W. (1979). The measurement of organizational commitment. Journal of vocational behavior, 14(2), 224-247.
- Nelson, K. M., & Coopriider, J. G. (1996). The contribution of shared knowledge to IS group performance. MIS quarterly, 409-432.
- Noël, S., & Robert, J. M. (2003). How the Web is used to support collaborative writing. Behaviour & Information Technology, 22(4), 245-262.
- Nonaka, I. (1991). Models of knowledge management in the West and Japan.
- Nonaka, I., & Takeuchi, H. (1995). The knowledge-creating company: How Japanese companies create the dynamics of innovation. Oxford university press.
- Nunnally, J. (1978). C.(1978). Psychometric theory.
- Osterloh, M., & Frey, B. S. (2000). Motivation, knowledge transfer, and organizational forms. Organization science, 11(5), 538-550.
- Poortman, S., & Sloep, P. (2005). Weblogs in het onderwijs.
- Rheingold, H. (2000). The virtual community: Homesteading on the electronic frontier. MIT press.
- Ridings, C. M., Gefen, D., & Arinze, B. (2002). Some antecedents and effects of trust in virtual communities. The Journal of Strategic Information Systems, 11(3), 271-295.
- Robbins, S. P., Chatterjee, P. and Canda, E. R. (1998) Contemporary human behavior theory : A critical perspective for social work. Boston: Allyn & Bacon.
- Rothaermel, F. T., & Sugiyama, S. (2001). Virtual internet communities and commercial success: individual and community-level theory grounded in the atypical case of TimeZone.com. Journal of management, 27(3), 297-312.
- Rotter, J. B. (1967). A new scale for the measurement of interpersonal trust¹. Journal of personality, 35(4), 651-665.

- Sarma, M., & Lam, A. (2013). Knowledge creation and innovation in the virtual community? Exploring structure, values and identity in hacker groups. In 35th DRUID Celebration Conference 2013 (pp. 1-24).
- Sharratt, M., & Usoro, A. (2003). Understanding knowledge-sharing in online communities of practice. *Electronic Journal on Knowledge Management*, 1(2), 187-196.
- Shu, W., & Chuang, Y. H. (2011). Why people share knowledge in virtual communities. *Social Behavior and Personality: an international journal*, 39(5), 671-690.
- Shu, W., & Chuang, Y. H. (2011). Why people share knowledge in virtual communities. *Social Behavior and Personality: an international journal*, 39(5), 671-690.
- Stewart, K. J., & Gosain, S. (2006). The impact of ideology on effectiveness in open source software development teams. *Mis Quarterly*, 291-314.
- Straub, D. W. (1989). Validating instruments in MIS research. *MIS quarterly*, 147-169.
- Szulanski, G. (1996). Exploring internal stickiness: Impediments to the transfer of best practice within the firm. *Strategic management journal*, 17(S2), 27-43.
- Tedjamulia, S. J., Dean, D. L., Olsen, D. R., & Albrecht, C. C. (2005, January). Motivating content contributions to online communities: Toward a more comprehensive theory. In *Proceedings of the 38th annual Hawaii international conference on system sciences* (pp. 193b-193b). IEEE.
- Teo, T. S., Srivastava, S. C., & Jiang, L. (2008). Trust and electronic government success: An empirical study. *Journal of management information systems*, 25(3), 99-132.
- Tönnies, F. (1924). XIX. Korrelation der Parteien in Statistik der Kieler Reichstagswahlen. *Jahrbücher für Nationalökonomie und Statistik*, 122(1), 663-672.
- Tsai, W. (2001). Knowledge transfer in intraorganizational networks: Effects of network position and absorptive capacity on business unit innovation and performance. *Academy of management journal*, 44(5), 996-1004.
- Usoro, A., Sharratt, M. W., Tsui, E., & Shekhar, S. (2007). Trust as an antecedent to knowledge sharing in virtual communities of practice. *Knowledge Management Research & Practice*, 5(3), 199-212.
- Usoro, A., Sharratt, M. W., Tsui, E., & Shekhar, S. (2007). Trust as an antecedent to knowledge sharing in virtual communities of practice. *Knowledge Management Research & Practice*, 5(3), 199-212.
- Van Dijk, T. A. (2000). *Ideology and discourse: A multidisciplinary introduction*. Pompeu Fabra University, Barcelona.
- Wasko, M. M., & Faraj, S. (2000). "It is what one does": why people participate and help others in electronic communities of practice. *The Journal of Strategic Information Systems*, 9(2), 155-173.
- Wasko, M. M., & Faraj, S. (2005). Why should I share? Examining social capital and knowledge contribution in electronic networks of practice. *MIS quarterly*, 35-57.

Weir, D., & Hutchings, K. (2005). Cultural embeddedness and contextual constraints: knowledge sharing in Chinese and Arab cultures. *Knowledge and Process management*, 12(2), 89-98.

Wold, S., Kettaneh-Wold, N., & Skagerberg, B. (1989). Nonlinear PLS modeling. *Chemometrics and intelligent laboratory systems*, 7(1-2), 53-65.

Yao, Y. (2004). An integrative model of clients' decision to adopt an application service provider (Doctoral dissertation, Louisiana State University).

Ye, S., Chen, H., & Jin, X. (2006). Exploring the moderating effects of commitment and perceived value of knowledge in explaining knowledge contribution in virtual communities. *PACIS 2006 Proceedings*, 25.

Ye, S., Chen, H., & Jin, X. (2006, August). An empirical study of what drives users to share knowledge in virtual communities. In *International Conference on Knowledge Science, Engineering and Management* (pp. 563-575). Springer Berlin Heidelberg.

Zhao, L., Lu, Y., Wang, B., Chau, P. Y., & Zhang, L. (2012). Cultivating the sense of belonging and motivating user participation in virtual communities: A social capital perspective. *International Journal of Information Management*, 32(6), 574-588.

Appendix A : Questionnaire in English

Demographics

Age				
< 20	21-30	31-40	41-50	>50

Gender	
Male	Female

Level of Education				
secondary	Professional diploma	Bachelor	Master	.Ph.D

professional experience					
< 2	2-5	5-10	10-15	15-20	>20

For each statement, show how extent you agree or disagree with five scales as follows:

Strongly disagree	Disagree	Neutral	Agree	Strongly agree
1	2	3	4	5

	Part 1	1	2	3	4	5
1	I think that knowledge sharing is good					
2	I participate frequently in this virtual community (group)					
3	I am enthusiastic to share my knowledge on this virtual community(group)					
4	I intend to keep sharing knowledge and be active in this virtual community (group)					
	Part 2	1	2	3	4	5
5	I would like to participate with my knowledge that the VC members will ask .					
6	I am proud to tell others that I am part of this virtual community.					
7	I really care about the fate of this community.					

	Part 3	1	2	3	4	5
8	I know that other members will help me, so it's obligatory and fair to help other members in this virtual community.					
9	When I share knowledge with other members, I believe that the members in this virtual community would help me if I need it.					
10	When I share knowledge with other members, I believe that my queries for knowledge will be answered in the future in this virtual community.					
	Part 4	1	2	3	4	5
11	knowledge shared in this virtual community is trustworthy					
12	knowledge shared in this virtual community is accurate					
13	knowledge shared in this virtual community is up-to-date					
14	knowledge shared in this virtual community is timely					
15	My knowledge acquisition from other VC members is good.					
16	My knowledge acquisition from other VC members is valuable to me.					
17	My knowledge acquisition from other VC members is well written/presented.					
18	I don't share knowledge with other members unless it is valuable.					
19	I don't share knowledge with other members unless it is well written/presented.					
20	knowledge shared in this virtual community is relevant					
	Part 5	1	2	3	4	5
21	I have confidence in my ability to provide knowledge that other members in this virtual community consider valuable.					
22	I have the expertise, experiences, and insights needed to provide knowledge that is valuable for other members in this virtual community.					
23	I have confidence in responding or adding comments to messages or articles posted by other members in this virtual community.					
	Part 6	1	2	3	4	5
24	Members in this virtual community have reciprocal faith-					

	based and trustworthy relationships.					
25	Members in this virtual community will not take advantage of others even when a profitable opportunity arises.					
26	Members in this virtual community always keep promises that they make to one another.					
	Part 7	1	2	3	4	5
27	They share their knowledge with me because I have the same belief/goals/thoughts as theirs.					
28	I am willing to share my knowledge more frequently because the members have the same belief/goals/thoughts					
29	My religion/belief/universal ethics encourage me to share my knowledge on this VC as a charity.					
30	I believe that God/karma will reward me for my positive and honest contribution to this VC.					
31	I share knowledge in this VC to empower the members so they become better placed to defend our faith and goals in the future.					
32	I will be less motivated to share knowledge with someone who has opposite beliefs or doesn't respect my ideological directives.					
	Part 8	1	2	3	4	5
33	I don't mind to transfer my (political/religious/economical) beliefs and convictions in parallel with my professional knowledge and explain them if necessary.					
34	I ask members to pray for me instead of thanking me					
35	I talk about my religious/political belief within my shared knowledge					

	Open Question
36	If you have something to add about what you motivates you to share your knowledge with other members, you are invited to write it below

Appendix B: Questionnaire in Arabic and French

معلومات عامة Informations générales

L'âge العمر				
< 20	21-30	31-40	41-50	>50

Le sexe الجنس	
Male ذكر	Female أنثى

Le niveau scolaire المستوى الدراسي				
ثانوي Secondaire	دبلوم مهني Diplôme professionnel	ليسانس Licence	ماستر Master	دكتوراه doctorat

سنوات الخبرة المهنية Professionnelle Annees d'experience					
< 2	2-5	5-10	10-15	15-20	>20

من اجل كل عبارة ، عبر عن مدى موافقتك او عدم موافقتك من خمس درجات كما هو مبين فيما يلي:
Pour chaque expression, montrez si vous êtes en accord ou bien en désaccord de 1 à 5

اختلف بشدة Fortement en désaccord	اختلف En désaccord	محايد Neutre	اتفق En accord	اتفق بشدة Tout à fait d'accord
1	2	3	4	5

Part 1	1	2	3	4	5
اعتقد ان مشاركة المعرفة أمر جيد Je crois que le partage des connaissances est bon.					
انا اشارك باستمرار في هذه المجموعة Je participe souvent à cette communauté virtuelle (groupe)					
انا متحمس لمشاركة معارفي في هذه المجموعة Je suis enthousiaste pour partager mes connaissances sur cette communauté virtuelle (groupe)					
لدي النية لمواصلة مشاركة معارفي والبقاء نشطا في هذه المجموعة					

J'ai l'intention de continuer à partager ma connaissance et rester actif dans ce groupe.					
Part 2	1	2	3	4	5
لدي الاستعداد و الرغبة لمشاركة معارف مع اعضاء هذه المجموعة اذا سألوني Je voudrais participer avec ma connaissance que les membres de ce groupe demanderont					
انا فخور بانتمائي لهذه المجموعة ، و احدث الاخرين عنها Je suis fier de dire aux autres que je fais partie de ce groupe					
انا اهتم بمصير هذه المجموعة و ارجو استمرارها Je me soucie vraiment du sort de cette communauté					
Part 3	1	2	3	4	5
انا اعلم يقينا ان اعضاء المجموعة سيساعدونني ، لذلك من الواجب ومن العدل ان اساعدهم . Je sais que d'autres membres vont me aider, c'est obligatoire et équitable pour aider les autres membres de cette communauté virtuelle.					
عندما اشارك معرفتي مع اعضاء المجموعة ، فأنا اعتقد انهم سيساعدونني اذا انا طلبت مساعدتهم. Quand je partage des connaissances avec les autres membres, je crois que les membres de groupe vont m'aider quand je besoin de leur aide					
عندما اشارك معرفتي مع اعضاء المجموعة ، انا أو من أن استفساراتي سيتم الرد عليها في المستقبل . Quand je partage des connaissances avec les autres membres, je crois que mes questions seront répondues à l'avenir dans					
Part 4	1	2	3	4	5
المعرفة التي يشاركها الاعضاء هي معرفة موثوقة Les connaissances partagées dans ce groupe sont dignes de confiances					
المعرفة التي يشاركها الاعضاء هي معرفة دقيقة les connaissances partagées dans ce groupe sont exactes					
المعرفة التي يشاركها الاعضاء هي معرفة محدثة و مسايرة للتطورات . Le partage des connaissances dans ce groupe est mis à jour					
المعرفة التي يشاركها الاعضاء هي سريعة الاستجابة لاسئلة الاعضاء و الرد يكون في وقت مناسب . le partage des connaissances dans cette communauté virtuelle est en temps opportun					
تحصيلي للمعرفة من هذه المجموعة جيد. Mon acquisition de connaissances par les autres membres de ce groupe est bon					
تحصيلي للمعرفة من هذه المجموعة مفيد لي . Mon acquisition de connaissances par les autres membres de ce groupe est utile pour moi					
المعرفة التي ينشرها اعضاء هذه المجموعة مكتوبة و مقدمة بطريقة جيدة. Les connaissances partagées par les autres membres de groupe sont bien écrit / présenté					
لا اشارك معارف مع الاخرين في هذه المجموعة الا اذا كانت ذات قيمة و مفيدة. Je ne partage pas mes connaissances avec les autres membres, sauf si					

elles sont utiles					
لا اشارك معارف مع الاخرين الا اذا كانت مكتوبة ومقدمة بطريقة جيدة. Je ne partage pas mes connaissances avec les autres membres, sauf si elle est bien écrit / présenté					
المعرفة التي يشاركها الاعضاء في هذه المجموعة هي ذات علاقة مباشرة باهتمامات المجموعة . Le partage des connaissances dans cette communauté virtuelle est pertinente					
Part 5	1	2	3	4	5
أنا لدي الثقة في قدرتي على المساهمة بمعرفة يعتبرها اعضاء المجموعة معرفة قيمة وذات فائدة. Je fais confiance à ma capacité à fournir des connaissances que d'autres membres de cette communauté virtuelle considèrent précieuse					
لدي من الخبرة والتجربة والاطلاع الكافي الذي يخولني لتقديم ومشاركة معرفة ذات قيمة وفائدة مع اعضاء هذه المجموعة. J'ai l'expertise, les expériences et les connaissances nécessaires pour fournir des connaissances qui est précieux pour les autres membres de cette communauté virtuelle					
لدي الثقة للاجابة على أسئلة الاعضاء واطراف تعليقات على المواضيع والمقالات المنشورة من طرف الاعضاء الاخرين في هذه المجموعة . Je fais confiance à répondre ou d'ajouter des commentaires à des messages ou des articles publiés par d'autres membres de cette communauté virtuelle					
Part 6	1	2	3	4	5
الاعضاء في هذه المجموعة لديهم علاقة مبنية على الثقة المتبادلة . Les membres de cette communauté virtuelle ont des relations basées sur la foi et de confiance réciproques					
الاعضاء في هذه المجموعة لا ينتهزون الفرص ولا يستغلون الاعضاء الاخرين حتى وان ظهرت فرص ربحية. Les membres de cette communauté virtuelle ne seront pas tirer profit des autres, même quand une opportunité rentable se pose					
الاعضاء في هذه المجموعة دائما يفون بوعودهم التي يقطعونها لبعضهم البعض . Les membres de cette communauté virtuelle gardent toujours des promesses qu'ils font à l'autre					
Part 7	1	2	3	4	5
اعضاء هذه المجموعة يشاركون معي معارفهم لأنني املك نفس التفكير/الاعتقاد/الاهداف كالتالي يملكونها (مثلا مسلم ، احب بلادي..الخ) . Les membres de ce groupe partagent leurs connaissances avec moi parce que j'ai les mêmes croyances/ buts / pensées comme leur					
انا على استعداد لأشارك معارف اكثر لأن الاعضاء في هذه المجموعة يشاركونني نفس الاهداف/الاعتقاد/الافكار . Je suis prêt à partager mes connaissances plus souvent parce que les membres ont les mêmes croyances/ buts / pensées					
ديني/ معتقداتي/ اخلاقي تشجعني على مشاركة معرفتي في هذه المجموعة من باب عمل الخير . Ma religion / croyances/ éthique universelle me encouragent à partager mes connaissances sur ce groupe comme un fait de charité					
أؤمن ان الله عز وجل سيكافئني من اجل مشاركتي الايجابية والصادقة في هذه المجموعة.					

Je crois que Dieu va me récompenser pour ma contribution positive et honnête à ce groupe.					
لدي فكرة اني اشرك معارف في هذه المجموعة بهدف تقوية اعضائها حتى يكونوا على استعداد اكثر للدفاع عن معتقداتنا واهدافنا في المستقبل. J'ai l'idée que je partage mes connaissances dans ce groupe d'habiliter les membres afin qu'ils deviennent mieux placés pour défendre notre foi et objectifs dans le futur					
سأكون اقل تحفزا لمشاركة معرفتي مع شخص لدية توجهات واعتقادات تتنافى مع معتقداتي وتوجهاتي او لا يحترم توجهاتي الايديولوجية (مثلا شخص يدعم الصهيونية او يعادي القضية الفلسطينية) . Je vais être moins motivés à partager mes connaissances avec quelqu'un qui a croyances opposées ou ne respecte pas ma direction idéologique					
Part 8	1	2	3	4	5
احيانا اذكر ما يشير الى معتقداتي الدينية / السياسية ضمن المعرفة/المعلومة التي اشاركها. Je parle de ma croyance religieuse / politique au sein de ma connaissance partagée					
احيانا ، انا اطلب من الاعضاء الدعاء لي بدل ان يشكروني . Je demande membres de prier pour moi au lieu de me remercier					
لا مانع لدي من تمرير اعتقاداتي وقناعاتي الدينية/السياسية/الاقتصادية بالتوازي مع مشاركة معرفتي المهنية ، وشرحها اذا تطلب الامر ذلك. Je ne me dérange pas de transférer mes croyances et convictions religieuses / politiques /économiques en parallèle avec mes connaissances professionnelles et de les expliquer si nécessaire					

سؤال مفتوح Question ouverte
اذا كان لديك اي اضافة في خصوص الدوافع التي تحثك على مشاركة معرفتك مع اعضاء هذه المجموعة واستمرارك فيها ، يرجى كتابتها في الحقل ادناه. Si vous avez quelque chose pour ajouter concernant ce que vous motivez à partager votre connaissances avec les autres membres, vous êtes invité à l'écriture au-dessous

Turnitin Originality report

KSB in VCs by SAMI ESSELIMANI

Submitted by Assoc.Prof.Dr TUNC D. MEDENI

FILE	KSB_IN_VCS_THESIS_FOR_TURNITIN.DOCX (273.27K)		
TIME SUBMITTED	25-NOV-2016 01:55PM	WORD COUNT	15449
SUBMISSION ID	742509115	CHARACTER COUNT	85095
final submission			
ORIGINALITY REPORT			
<div style="display: flex; justify-content: space-between;"> <div style="text-align: center;"> <p>11</p> <p>% SIMILARITY INDEX</p> </div> <div style="text-align: center;"> <p>6</p> <p>% INTERNET SOURCES</p> </div> <div style="text-align: center;"> <p>8</p> <p>% PUBLICATIONS</p> </div> <div style="text-align: center;"> <p>2</p> <p>% STUDENT PAPERS</p> </div> </div>			
PRIMARY SOURCES			
1	essay.utwente.nl <small>Internet Source</small>	%2	
2	de.experience-online.ch <small>Internet Source</small>	%1	
3	content.ebscohost.com <small>Internet Source</small>	%1	
4	Lu, Hong, Yanmei Chu, Tong Li, and Qian Wang. "Analysing the factors influencing learners' knowledge sharing behaviour in the virtual learning community of a faculty training programme", International Journal of Continuing Engineering Education and Life-Long Learning, 2013. <small>Publication</small>	%1	
5	Lin, M.J.J.. "Fostering the determinants of knowledge sharing in professional virtual communities", Computers in Human Behavior, 200907 <small>Publication</small>	%1	
6	Hung, Shiu-Wan, and Min-Jhih Cheng. "Are you ready for knowledge sharing? An empirical study of virtual communities", <small>Publication</small>	<%1	
	Computers & Education, 2013. <small>Publication</small>		
7	Chiu, C.M.. "Understanding knowledge sharing in virtual communities: An integration of social capital and social cognitive theories", Decision Support Systems, 200612 <small>Publication</small>	<%1	
8	Zhao, Ling, Yaobin Lu, Bin Wang, Patrick Y.K. Chau, and Long Zhang. "Cultivating the sense of belonging and motivating user participation in virtual communities: A social capital perspective", International Journal of Information Management, 2012. <small>Publication</small>	<%1	
9	www.scribd.com <small>Internet Source</small>	<%1	
10	Online Information Review, Volume 37, Issue 6 (2013-11-09) <small>Publication</small>	<%1	
11	Zeng, Guojun, Huizhen Guan, and Fanghong Chen. "Knowledge Sharing in a Virtual Community of a Hotel Association: From Free Riders to Active Knowledge Sharers", Journal of China Tourism Research, 2014. <small>Publication</small>	<%1	
12	Ashok Jashapara. "Understanding the complexity of human characteristics on e-learning systems: an integrated study of dynamic individual differences on user <small>Publication</small>	<%1	