

**THE USE OF GEOGRAPHIC NAMES INFORMATION
SYSTEM AMONG GOVERNMENT OFFICERS; A CASE
STUDY IN TRIPOLI, LIBYA**

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BY

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**KEINGINAN MENGGUNAKAN GNIS DALAM KALANGAN PEGAWATI
KERAJAAN; SATU KAJIAN KES DI TRIPOLI, LIBYA**

ABSTRAK

Teknologi merupakan kunci utama bagi negara-negara membangun untuk menggalakkan pertumbuhan ekonomi, kekayaan, martabat dan daya saing. Teknologi diiktiraf sebagai faktor utama yang meningkatkan keberkesanan dan kecekapan prestasi kerajaan. Di Libya, Sistem Maklumat Geografi (GIS) dan Sistem Maklumat Nama Geografi (GNIS) telah diiktiraf sebagai alat yang berkesan untuk menyelesaikan cabaran yang dihadapi oleh kerajaan. Namun, kesukaran mengadaptasi teknologi dan kekurangan sumber tenaga mahir dari segi teknikal yang boleh mengadaptasi teknologi GNIS menghadkan penggunaannya. Tesis ini bertujuan untuk menyiasat keinginan pegawai-pegawai kerajaan di Libya terhadap penggunaan GNIS. Manakala tujuan utama tesis ini adalah untuk mengkaji tahap keinginan penggunaan Sistem Maklumat Nama Geografi (GNIS) dalam kalangan kakitangan kerajaan jabatan kaji selidik di bandar Tripoli, Libya dan menganalisis hubungan antara faktor-faktor organisasi dan keinginan untuk menggunakan GNIS dalam kalangan pegawai kerajaan di Libya. Kedua; menganalisis hubungan antara faktor-faktor teknologi dan keinginan menggunakan GNIS dalam kalangan pegawai kerajaan di Libya. Ketiga; menganalisis hubungan antara faktor-faktor individu dan keinginan untuk menggunakan GNIS dalam kalangan pegawai kerajaan di Libya. Terakhir; bagi menentukan faktor-faktor signifikan yang mempengaruhi penggunaan Sistem Maklumat Geografi. Kajian kuantitatif yang digunakan adalah kaedah soal selidik, yang diedarkan dalam kalangan pegawai-pegawai kerajaan (GNIS) di Libya.

Analisis statistik deskriptif dan analisis regresi telah digunakan dalam kajian ini. ANOVA digunakan untuk memastikan kesahihan dan kebolehpercayaan soal selidik kajian dan itemnya. Analisis korelasi menilai hubungan antara pembolehubah tak bersandar dan pembolehubah bersandar. Hasil kajian menunjukkan, tiga pembolehubah; Latihan, Persepsi mudah digunakan dan Kesedaran adalah berkorelasi negatif dengan keinginan untuk menggunakan GNIS dalam kalangan pegawai-pegawai kerajaan di Libya. Kepercayaan ($t = 6.348$, korelasi $R = 0.448$) dikenal pasti sebagai faktor yang paling berhubungkait, diikuti dengan sikap yang positif terhadap GNIS ($t = 4.162$, korelasi $R = 0.236$). Hasil dapatan geografi mengesahkan bahawa sistem maklumat adalah penting dalam meningkatkan mutu kerja Jabatan Ukur di Libya, Jabatan Kajian. Kakitangan kerajaan percaya bahawa dengan penggunaa nteknologi GNIS dapat membantu mereka dalam penambahbaikan terhadap persekitaran perkerjaan. Lantaran itu, organisasi yang terlibat harus sedar akan kepentingan faktor ini. Pembuat keputusan sepatutnya harus tahu keberkesanan sistem ini sebelum mengaplikasikan secara menyeluruh, dan mereka juga perlu mengambil perhatian dan peka terhadap pendapat dan kehendak pengguna untuk mempertahankan sebarang tentangan terhadap teknologi GNIS ini.

**THE USE OF GNIS AMONG GOVERNMENT OFFICERS; A CASE STUDY
IN TRIPOLI, LIBYA**

ABSTRACT

Technology has been regarded as a main key of countries developing in economic growth, wealth, prestige and competitiveness. Technology has also recognized to be a decisive tool for advancing the effectiveness and efficiency of government performance. The Geographic Information Systems (GIS) and Geographic Name Information System (GNIS) have been recognized as effective tools to solve the challenges that faced by the government. The main challenges are; to cope with new technology and the lack of technical human resources who can easily cope and adopt with the GNIS technology. This thesis designed to investigate the intention towards the use of the GNIS among government officers in Libya. The main objective of this thesis is to investigate the level of intention to use (GNIS) among government employees of the survey department at Tripoli city Libya, To analyze the relationship between the organizational factors and intention to use GNIS among government officers in Libya, To analyze the relationship between technological factors and intention to use GNIS among government officers in Libya, To analyze the relationship between the individual factors and intention to use GNIS among government officers in Libya and To determine the significant factors that affects the use of (GNIS) in Libya. This quantitative method research uses survey questionnaire that was distributed among the Libya government officers. The statistic descriptive analysis and the regression analysis have been used in this research. The ANOVA has been used to ensure the validity and reliability of the research questionnaire and

its items. The correlation analysis measures the relationship between the independent variables and the dependent variables. The correlation analysis measures the relationship between the independent variables and the dependent variables. The result shows, three variables; Training, Perceived ease of use and Awareness are negatively correlated with the intention to use GNIS among the government officers in Libya. Trust ($t= 6.348$, correlation $R= 0.448$) is identified as the most correlating factor, followed by attitude towards GNIS ($t=4.162$, correlation $R= 0.236$).The findings confirmed that geographic names information system as important in upgrading the workers in Libyan Survey Department. Thus, Government employees in the Survey Department believe that the use of GNIS technologies can provide a sufficient improvement in performance in their work environment. Therefore, organizations should be aware of the importance of these factors. Policy makers should assess the usefulness of the system before implementing it fully, and should pay attention to the users' opinions and demands to prevent any resistance to the GNIS technologies.

CHAPTER 1

INTRODUCTION

1.1 Introduction

The phenomenon of geographic names' features has received attention among behavioural researchers over the years. Generally, the geographic names landscape of any country is a window that reflects the historical cultural political and most social variables of society (Muehrecke, 1992). Thus, names given to places indicate the essence and existence of a place, as well as the people living there. Similarly, names usually have very strong historical ties to an area, and it is self-inclusive in terms of the history of place. In other words, a name is itself a form of living history carrying with it a multitude of facts and emotions. Whether places are urban or rural, the unique features of these places can distinguish from neighbouring places. It is largely for this reason, that it is difficult to change an already existing name for a place.

Names of various places that were derived as a result of historical events, help make the area become synonymous with the event in the minds of the general populace and the inhabitant in particular (Powicke et al., 1954). Some of the places named or synonymous with religious or political events, gain even more fame than the religion and the political system that are embraced by a large number of people. Few of such cities include (e.g. Makah and Medina in Saudi Arabia, and the Vatican in Rome), these places are the holy places for Muslims and Christians. The name of the place is synonymous to Islam and Christianity, due to the religious and historical background

of the area. The Mediterranean Sea, the Arabic Gulf, Tripoli, Benghazi, Kuala Lumpur, New York, Cameron Highlands, and Langkawi Island, are all names of places that automatically bring to mind their exact geographical location, due to their functions and activities. Some names gain deeper significance particularly, when the information on the history of the location of reference are explicitly conveyed in their meaning. For instance the name 'Tripoli' means, 'three cities' and this simply tells a lot about the history of that place.

Names of many places have experienced various controversies such as authenticity of the name and changing of the name for political reasons. Consequently, people who are more attached to the names of the place religiously or politically have more reasons to the situation which may be termed usurpation. Thus when local people's spatial definition of a place differs from administrative definitions of the area with the same name, the researcher would have to take this into account when researching the locale, be it a district, field place, cover, opinion, area, neighbourhood or zone among others (Feld et al., 1996; Hirsch, 1995).

Traditionally, place names are passed orally from one generation to the other. However, written communication has been intimidating these rich spoken civilizations and it has been observed that much will be lost except systematic programmers are introduced to record and preserve oral traditions (Canadian Permanent Committee on Geographical Names, C.P.C.G.N., 1992). As a part of locking local languages and traditional heritage, both native populations and non-native forms are taking steps to ensure that place names are collected and preserved.

Among the major reasons for this initiative is that local names often carry with it the importance of the place to the people geographically, historically, socially, politically and so on (C.P.C.G.N., 1992).

1.2 Background of the Study

1.2.1 Location and Population of Libya

Libya, located at 19° - 34° N and 10° - 25° E, is one of the famous countries in North Africa. It is bounded by Egypt in the east (1150 km), Algeria (982 km) and Tunisia in the west (459 km), the Mediterranean Sea in the north (1700 km), and by Sudan (382 km), Chad (1054 km) and Niger (355 km) in the south (Libyan Department of Urban Planning, 2005). Sharing borders with many countries, positions Libya at a strategic geographical location at the midpoint of northern frame of African continents. Similarly, this strategic location has granted Libya significant historical, cultural and political record. The total area of Libya is approximately 1,750,000 (square kilometres), thus ranks third largest among African countries and ranks fifteenth in the world, by land mass (Bait-EI-Mall, 1973).

More than 95% of Libya is made up of the Sahara desert which is readily acknowledged as one of the driest and barren places on Earth. Living conditions in the Sahara are indeed severe. The dryness of central eastern Sahara because its command by central tropical air all around the year, which continually descends from the upper levels of the atmosphere where, in these spaces, there are enduring high pressure conditions. The land mass as shown in Figure 1.1 susceptible to cultivation

is a meagre 2% of total land mass, while irrigation areas account for approximately 500,000 ha (Ben-Mahmud et al., 2003).



Figure 1. 1 Political Boundaries and Major Cities of Libya
 Source: Libyan General Agency of Information and Documentation, 2006

The productive lands of Jafara Plain in the northwest, Al Jabal al Akhdar in the northeast and the eastern coastal plain of Sirt receive enough rainfall to support agriculture.

As a result, more than 90% of the Libyan population reside there (Emgaili, 1995). Between the productive sea-level agriculture regions, lies the Gulf of Sirt that stretches 500 km along the coast from which deserts spread northward to the sea. Libya's total population was 5.3 million in 2006 with more than 500,000 non-nationals. (Libyan General Agency of Information and Documentation, 2006).

According to Libyan General Agency of Information and Documentation in (2006), approximately 94 % of the people lives in the north, and the rest in extensively dispersed oases in mid- and southern Libya. As a result of the large spatial area consumed by the desolate Sahara, every human inhabitation is understandably associated with water resources. Being as such, many of the names marking significant geographical locations can be traced back to signify some importance of the water resource. An example of this is the large number of geographical names of the wells in Libya.

1.2.2 Geographic Names in the Libyan Context

Geographic names are an essential element of human relationship with its physical and cultural environments, because naming of places represents both the geographical and cultural use of a space (Al Zoqurti, 1997). However many controversies have trailed this phenomenon universally, and such cases have been reported in Libya as a result of inaccurate information gathering done by the United States Army in 1962. In addition, an attempt to convert a place's information such as the maps into digital forms became noticeable that different scales were used for

different areas of the country (Libyan Survey Department, 1975). For example, 1:25,000 was used for some coastal areas, instead of the general 1:50,000. Such attempts particularly by the United States Army are few of the cultural insensitivity and imposition of their sentiment to the geographical and cultural sensitivities of Libya and its peoples. As a result of such imposition and inconsistencies, there is a demand for accurate and uniform geographic data both in their digital and non-digital forms that preserves the cultural history and diversity of Libya.

Traditionally, names of places are approved and transmitted orally from one generation to another, however, in recent times the trend has not only involved the oral route and writing, but this has been extended to cartographic, audio and information technology routes (Hamilton, 1978). The local societies and non-native organizations are now attractive stages to ensure that place names are collected as a part of locking native tongues and cultural traditions (Kraft et al., 1997). Names of places in terms of its spatial dimension is a result of considerations the locale, be it a district, field place, cover, opinion, area, neighbourhood or zone among others (Dalton, 1978).

There were few arrangements to coordinate the mapping, surveying and naming of places in Libya, particularly during the nineteenth and early twentieth century. While the researcher was working with Libyan Survey Department from 1990 to 2008, it was found that there were some challenging issues related to the use and organization of place names. And such names include lack of databases and the illogicality of place names due to the proliferation of related private and public agencies. Various

authorities approved to determine the names of places within their areas of jurisdiction, were responsible to choose names based on local usage in due consideration to its cultural heritage, history and religious significance (Cleere, 1995).

The majority of geographic place names are presented from local settlement patterns and reflects their needs, patterns of society, and events, in the local community life which is inclusive in their norms and culture (Libyan Survey Department, LSD, 1975). In view of this, present processes for naming places and features, in most instances, make local communities the decisive factor for the determination of new names or alterations to place names. For this reason the determination of place names has mostly, but not exclusively, been devolved to the LSD in Libya.

The development of geographical place names in Libya is ongoing and it important things role in the nation's governance ranging from elections, to basic public services, numerical data compilation, financial aid, security, defence and public safety, as well as others accountabilities of the government (Libyan Survey Department , 2007). Standardizing the application form of geographical names and their submission is becoming more and more necessary in order to develop highly accurate maps and charts of large-scale advanced transportation, communications, emergency services and dispatch based on date and geographic mapping data names (Helen, 2003).

The United Nation, (2002) has identified geographical names in both written and spoken forms as important rudiments of culture due the fact that they are formidable part of the cultural heritage of countries and are part of the verbal and written communication in daily activities of the people (Eyuze, 2007). It is observed that place names are possibly the most normally and broadly used form place names information. Clear, definite, unmistakable designations for inhabited places and physical landscapes are important for supply of goods, growth and planning in every country. They provide an important reference system for communication and transportation. Every name appears easy, but with rising demands and improvement in technology, the accuracy of information regarding place names is important and sometimes serious (Helleland, 2002).

1.3 Problem Statement

Global competition requires expansion of their borders like never before, which requires efficiency and innovation in all aspects of their business. These challenges have driven the organizations, worldwide, to turn to Geographic Names Information Systems (GNIS). This is in accordance to the fact that the significance and importance of geographical names in human lives cannot be disregarded any longer (Rodgers et al., 1959). Not only are such names significant in Geography to recognize places but are also significant in many other fields of sciences such as history, social sciences and politics among others. Moreover, there remains, to date, limited studies which have strongly in analysed and justified importance of names, its collection, documentation and standardization in Libya. Actually, there exist no

complete database of geographical names and no standardized frameworks for the collection, arrangement, change and documentation of geographical names in Libya. One of the fundamental challenges related to the use and management of geographical names in Libya is the lack of databases. In some cases there are contradictions of place names due many establishments that were set up to deal with these names (LSD, 1973). Therefore, this challenge serves as motivation for this research which primarily focuses on Libya. Other challenges such as lack of application of new technology, such as the GIS and the GNIS, in managing geographical names as well as shortage of studies and frameworks that investigate the effect of the using of these technologies, are core concern for this study. Factors affecting the Intention to use of GNIS need to be investigating in order to solve the problems of using new technology such as GNIS among government officer in Libya.

1.4 Aim and Scope

The innovative use of technology is not an end in itself, but simply a means to enable better decision making and facilitate sustainable development processes. GNIS provides that process in all of the case studies identified.

The main aim of this research is to study the use of Geographical Names Information System (GNIS) among government officers in Tripoli, Libya.

In order to achieve the aim of the research the scope of the study covers the use of geographic names information system in Tripoli focusing on government employees of the Survey Department in Tripoli, Libya as case study.

The major aspects of study lead to the success of GNIS implementation that depends on a suitable information technology. A new implementation model must be able to identify and measure the impact of information technology deficiencies. This will cover and focusing in factors such as organizational factor, technological factor and individual factors. This study is hoped to encourage more government officers to use GNIS in their technology in future time.

1.5 Research Questions

Research questions were drafted to carry out the research in proper manner. The research questions that were drawn in this study are, as following:

1. What is the level of usage of Geographical Names Information System (GNIS) among government employees of the Survey Department in Tripoli, Libya?
2. Does the organizational factor affect the use of GNIS among the government officers in Libya?
3. Does the technological factor affect the use of GNIS among the government officers in Libya?
4. Does the individual factor affect the use of GNIS among government officers in Libya?
5. What are the factors that affect the use of Geographical Names Information System (GNIS) in Libya?

1.6 Research Objectives

The objectives of this study are:

1. To investigate the level of usage of Geographical Names Information System (GNIS) among government employees of the Survey Department in Tripoli, Libya.
2. To analyse the relationship between the organizational factors and the use of GNIS among government officers in Libya.
3. To analyse the relationship between technological factors and the use of GNIS among government officers in Libya.
4. To analyse the relationship between the individual factors and the use of GNIS among government officers in Libya.
5. To determine the significant factors that affects the use of Geographic Names Information System (GNIS) in Libya.

1.7 Research Hypotheses

Based on the literature review, the following research hypotheses relating to various factors which affect the intention to use the GNIS are investigated in this study. The first two hypotheses test the influence of organizational factors, as top management support and training, on the intention to use the GNIS. The other two hypotheses test the impact of technological factors, such as perceived ease of use and perceived usefulness, on intention to use the GNIS. Lastly, the next four hypotheses test the impact of individual factors such as social influence, technology awareness and acceptance, user's trust and attitude towards GNIS technology and the intention to

use. The co-alignment between these factors is very vital in understanding the intention to use because it highlights the influences of the four effects on this intention. The hypotheses formulated for the research are as follows.

H1: Top management support has a positive effect on the use of GNIS among government officers in Libya.

H2: Training has a positive effect on the use of GNIS among government officers in Libya.

H3: Perceived usefulness has a positive effect on the use of GNIS among government officers in Libya.

H4: Perceived ease of use has a positive effect on the use of GNIS among government officers in Libya.

H5: Social influence has a positive effect on the use of GNIS among government officers in Libya.

H6: Users' awareness and acceptance has a positive effect on the use of GNIS among government officers in Libya.

H7: Trust has a positive effect on the use of GNIS among government officers in Libya.

H8: User attitude has a positive effect on the use of GNIS among government officers in Libya.

1.7.1 Organizational Factors

Two organizational factors that were found dominant with the intention to use new technology are top management support and training.

1.7.1.1 Top Management Support

Top management support is defined as “the senior executives’ favorable attitude towards an explicit support for information systems” (Yap, 1989). A large size of studies that have been conducted by many researches from different disciplines confirmed the importance of top management support as a key organizational factor within organizations that adopt technology (Al-Gahtani and King, 1999). The main support of the top management is to ensure the strategic value of the technologies, the participation in the adoption of activities and the motivation for the employees to use this technology. Therefore, this current study suggests the following hypotheses:

H1: Top management support has a positive effect on the use of GNIS among government officers in Libya.

1.7.1.2 Training

Nelson and Cheney (1987) define training as a “formal effort to transfer required information systems knowledge such as information systems concepts, technical and organizational skills and knowledge about specific information systems products”. Furthermore, McCrae and Costa’s (1987) opinion is that when the trainee comes into

a specific assign training program, a critical success factor would be how this individual absorbs this training and how he applies them in his/her job. However, many organizations consider training as a critical component in their organizational strategy. Therefore, this current study suggests the following hypotheses:

H2: Training has a positive effect on the use of GNIS among government officers in Libya.

1.7.2 Technological Factors

Perceived usefulness and perceived ease of use are the two factors that were identified as the technological factors that affect the use of GNIS among the Libyan government officers.

1.7.2.1 Perceived Usefulness

Perceived usefulness is defined as “the degree to which a person believes that using a particular system would enhance his or her job performance” (Davis, 1989). Therefore, users of the GNIS will approve the system, only if they believe that the system is of advantage such as plummeting time spent and improving efficiency (Rao et al., 2003). Similarly, Davis et al. (1989) study perceived usefulness as a direct predictor of the customer’s intention to use the new technology. Hu et al. (2005) found that perceived ease of use describes system usefulness in terms of improved production and performance as well as decrease in the amount of effort, time and money. It is expected that the application of the GNIS will effectively

manage geographic feature names. Therefore, this current study suggests the following hypotheses:

H3: Perceived usefulness has a positive effect on the use of GNIS among government officers in Libya.

1.7.2.2 Perceived Ease of Use

Similar to perceived usefulness, ‘perceived ease of use’ is copied from the Technology Accept Model (TAM). Although customers may believe that the given application is useful, yet they believe the system is difficult to use (Davis, 1989). Therefore, this current study suggests the following hypotheses:

H4: Perceived ease of use has a positive effect on the use of GNIS among government officers in Libya.

1.7.3 Individual Factors

There are four individual factors that affect the intention to use GNIS among the government officers. Social influence, users’ awareness and acceptance, trust and user attitude are the individual factors engaged in this present study.

1.7.3.1 Social Influence

Social influence is defined as “the degree to which an individual perceives that important others believe he or she should use the new system” (Venkatesh et al., 2003). In the literature, social influence has surfaced as a direct determinant of behavioural intention in various forms such as subjective norm and social factors (Davis et al., 1989; Thompson et al., 2000). Considering the complexity in the management of geographic names feature, social influence could be a powerful determinant of intention to use among official government employees. Therefore, this current study suggests the following hypotheses:

H5: Social influence has a positive effect on the use of GNIS among government officers in Libya.

1.7.3.2 Users' Awareness and Acceptance

Many researchers have shown that the participation and acceptance of end users for information technology has direct impact on the level of adoption within an organization (Doll and Torkzadej, 1988; Yang et al., 2004). Therefore, this current study suggests:

H6: Users' awareness and acceptance has a positive effect on the use of GNIS among government officers in Libya.

1.7.3.3 Trust

Trust is an important element which affects consumer behaviour and this determines the success of technology adoption (Yanga et al., 2004). Amin (2007) confirms that trust is the core of system application, while Chong et al., (2010) observed that technology trust determines is whether the system is secured or not. Therefore, this current study suggests the following hypotheses:

H7: Trust has a positive effect on the use of GNIS among government officers in Libya.

1.7.3.4 User Attitude

Attitude explains the users' beliefs about the usage of the technology or system (Davis, 1989). Wide range of reports, in the literature, on attitude change has continuously lent support for the critical impact of attitude on behaviour, information processing, and system usage (Krosnick and Petty, 1995). It is expected that user attitude will be affected if users will use or intend to use the GNIS. Therefore, this current study suggests the following hypotheses:

H8: User attitude has a positive effect on the use of GNIS among government officers in Libya.

Table 1. 1: Summary of Research Hypotheses

Context	Variable	Expected relationship	Direction
Organizational	Top management Support	Top management support will positively affect the use of GNIS	positive
	technology training	Trainings will positively affect the use of GNIS	positive
Technological	Perceived usefulness	Perceived usefulness will positively affect the use of GNIS.	positive
	Perceived ease of use	Perceived ease of use will positively affect the use of GNIS.	positive
Individual	Social influence	Social influence will positively affect the use of GNIS.	positive
	Technology awareness and acceptance	Technology awareness and acceptance will positively affect the use of GNIS.	positive
	User trust in GNIS technology	User trust in GNIS technology will positively affect the use of GNIS.	positive
	Attitude towards GNIS	Attitude towards the GNIS will positively affect the use of GNIS.	positive

1.8 Research Framework

The research framework used in this study emerged from a comprehensive review of literature. The research framework consists of four main constructs that would affect the intention to use the GNIS (dependent variable) as shown in figure (1.2). These variables are; organizational, technological, and individual. Figure 1.2 depicts the proposed research model with all the hypothesized linkages to be tested in the

present research. Sekaran (2003) discussed that the theoretical framework is a conceptual model of how several models or concepts make logical sense of the relationship among several variables that have been recognized as important to the problems.

Over the years, the phenomenon of geographic names features has received some attention among the behavioural researchers, the majority of the researches focused on exploring rather than investigating. A theoretical framework is proposed, in this study, in order to examine the effects of organizational, technological, and individual variables on the intention to use the GNIS and consequently, this will facilitate better understanding of these effects on the intention to use the GNIS among government officers in Libya.

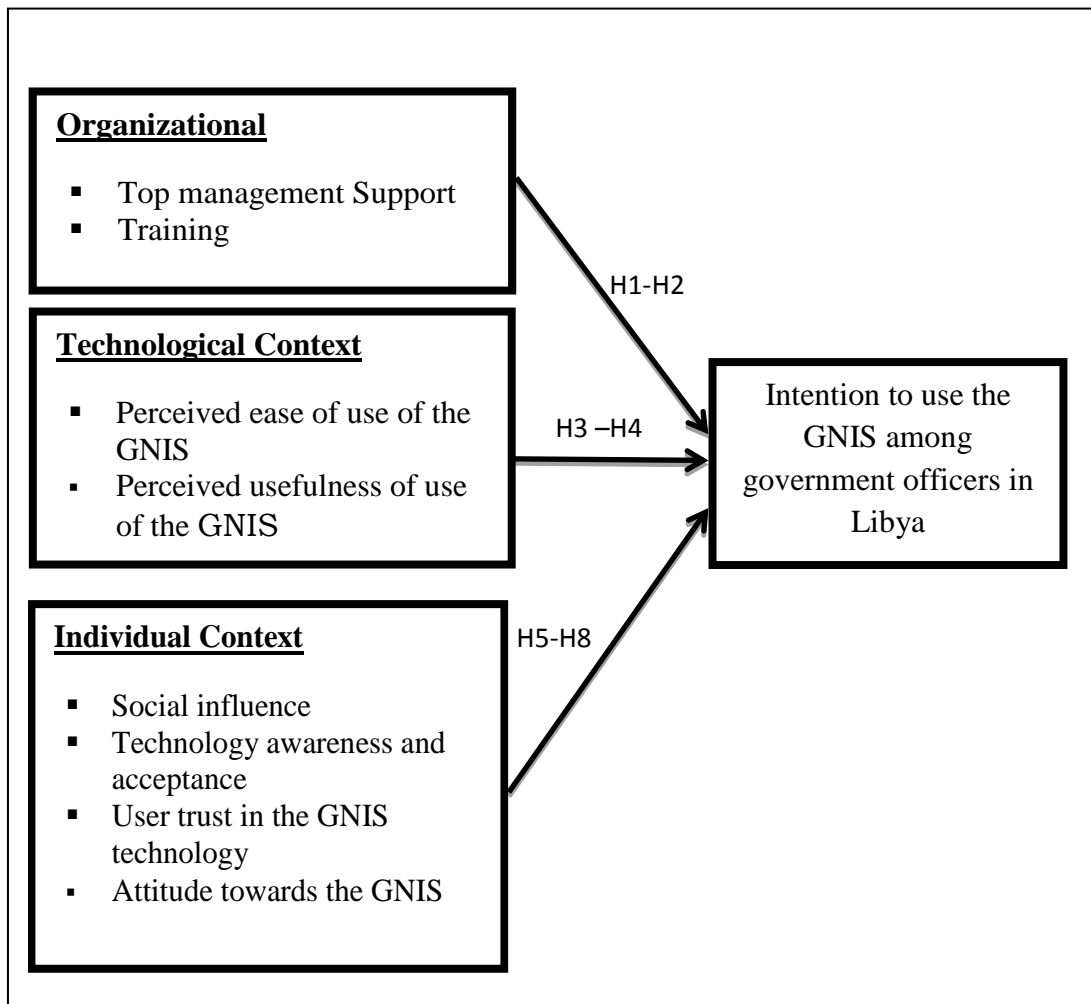


Figure1. 2: Research Frameworks
Source: Fieldwork, 2014

There are various factors that affect the intention to use the GNIS. In some cases, some employees do have different orientation about geographic name features and this may be absolutely different from the intention at a specific workplace. Their attitudes and behaviours' play vital roles in their performances, thus, intention to use does not exist in isolation. Identifying these variables in the proposed model will improve the management of geographic name features within the public sector context in most developing countries where there is significant gap in the studies on information systems, particularly the GNIS. Hence, the present study was initiated to

investigate the factors which affect the intention to usage the GNIS among government officers in Tripoli city, as an attempt to fill such research gap.

Table 1. 2 Summary of research question, objective and hypothesis

Research Questions	Research Objectives	Research Hypotheses
What is the level of intention to usage of Geographical Names Information System (GNIS) among government employees of the Survey Department in Tripoli, Libya?	To investigate the level of intention to usage Geographical Names Information System (GNIS) among government employees of the Survey Department in Tripoli, Libya.	_____
Does the organizational factor affect the using of GNIS among the government officers in Libya?	To analyse the relationship between the organizational factors and the use of GNIS among government officers in Libya.	H1: Top management support has a positive effect on the use the GNIS among government officers in Libya. H2: Training has a positive effect on the use of GNIS among government officers in Libya.
Does the technological factor affect the using of GNIS among the government officers in Libya?	To analyse the relationship between technological factors and the use of GNIS among government officers in Libya.	H3: Perceived usefulness has a positive effect on the use of GNIS among government officers in Libya. H4: Perceived ease of use has a positive effect on the use of GNIS among government officers in Libya.
		H5: Social influence has a

<p>Does the individual factor affect the using of GNIS among the government officers in Libya?</p>	<p>To analyse the relationship between the individual factors and use of GNIS among government officers in Libya.</p>	<p>positive effect on the use of GNIS among government officers in Libya.</p> <p>H6: Users' awareness and acceptance has a positive effect on the use of GNIS among government officers in Libya.</p> <p>H7: Trust has a positive effect on the use of GNIS among government officers in Libya.</p> <p>H8: User attitude has a positive effect on the use of GNIS among government officers in Libya.</p>
<p>What are the factors that affect the intention to use of Geographic Names Information System (GNIS) in Libya?</p>	<p>To determine the significant factors that affects the use of Geographic Names Information System (GNIS) in Libya.</p>	<p>_____</p>

1.9 Significance of the Study

Geographic Names Information System (GNIS) and Geographic Information System (GIS) have been deeply studied and used in developed countries but there is lack of such usage and studies for the same phenomena in developing countries such as Libya. Besides that, there is a remarkable lack in the number of researches focusing on geographical names in such areas of study.

The current study reveals the factors that affect the intention to use GNIS, a systematic and sophisticated geographic database which will capture, store and

present all types of geographical data of Libya. This allows easy management, access and distribution of geographical information relevant to a wide area of varied interests, thus contributing immensely to the body of knowledge which is stored in a single source. The study also investigates the factors affecting intention to use of GNIS among Libyan Survey Department. This encourages the usage of information technology in geographical data management. Furthermore, the study of Libya's geography encourages a more systematic review of developments in the region and the impact of development on emerging areas and the disappearance of others. The richness of Libya's geographical data which has been studied, collected and stored in GNIS would be of immense significance to practitioners and policy makers due to its ease of accessibility and management.

1.10 Organization of the Thesis

The thesis is basically organized into five chapters, where Chapter One is the introductory chapter which includes the problem statement, research objectives, research questions, hypotheses, research framework, and significance of the research and organization of the research. Chapter Two, which is the literature review, addresses the concept and the importance of maps and the relationship between the maps and geographical names, a brief background about Libyan geographic names, how geographical names are collected, approved and managed, and utilization of technology in geographical names management. The independent variables and the dependent variables used in the present research discussed briefly in this chapter. Chapter Three the methodology, while Chapter Four presents data analysis and

findings. Finally, Chapter Five discusses the findings, contribution, recommendations and limitation of the study.

1.11 Operational Definitions

Geographic Names Information System (GNIS): is defined as a “database that contains names and locative information, physical and human features located throughout a country and its territories” (United State Geological Survey, 1995).

Geographic names: The United Nation defines a geographical name in their documents as “a name applied to a feature on the Earth” (UN, 2006).

Technology: is “the making, modification, usage, and knowledge of tools, machines, techniques, crafts, systems, methods of organization, in order to solve a problem, improve a pre-existing solution to a problem, achieve a goal or perform a specific function” (Stiegler, 1998)

Technology Acceptance: can be defined as “how people perceive, accepts, and adopt some technology to use” (Louho et al., 2006).

Intension to Use ‘Behavioural: is defined as “the individual’s interest in using the system for future work” (Wu et al., 2008).