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The Driving Factors and Barriers impacting Client's Selection of Vendors based on Competitiveness in Information Technology Outsourcing in Gaza

عوامل النجاح والمعوقات المؤثرة على إختيار الزبون بناء على تنافسية
الشركات في قطاع تعهيد تكنولوجيا المعلومات في قطاع غزة

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إقرار

أنا الموقع أدناه مقدم الرسالة التي تحمل العنوان:

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The Driving Factors and Barriers Impacting Client's Selection of Vendors Based on Competitiveness in Information Technology Outsourcing in Gaza

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نائب الرئيس لشئون البحث العلمي والدراسات العليا

أ.د. عبدالرؤوف علي المناعمة

Abstract

This research is aimed at exploring the driving factors and barriers (appropriate infrastructure, cost-saving, skilled human resource, quality of services and products, language and culture, project management, political and legal instability, and communication) that impact the competitiveness of Information Technology Outsourcing (ITO) vendors in attracting clients in the Gaza Strip. The research targets all companies working in ITO in Gaza.

The researcher applied the descriptive analytical approach. A purposive sample was adopted for the research population; which consisted of all managers, team leaders, system analysts, software developers, and marketing and public relations officers working in ITO companies (200 in number). A total of 148 questionnaires were distributed and 124 were collected, with response rate 82.5 %. The SPSS was used for analysis.

The research revealed that most ITO companies agreed to the level of some driving factors (appropriate infrastructure, cost-saving, quality of services and products, language and culture, project management, and communication). However, they disagreed to the following factors (skilled human resource and political and legal instability). Moreover, only three factors (Level of Communication, Level of political and legal instability and Level of quality of services and products) together do significantly impact competitiveness of vendor organizations and the rest of factors are insignificant to competitiveness. Furthermore, there is insignificant difference among the respondents toward these fields due to the personal characteristics due to Gender, age, job title, Years of Experience in IT field, Educational level, and years of Experience for company.

The study recommends ITO firms to evaluate human resources skills and conduct needs assessment in order to build the capacities of employees. Also, it recommends government to facilitate the establishment of this type of business and exert more effort locally and internationally to develop this sector. The universities also must take its role as it graduates thousands of students each year and promote the outsourcing culture as a gate for enhancing Palestinian economy.

المخلص

يهدف هذا البحث إلى التعرف على العوامل المؤثرة والعوائق (البنية التحتية ، تخفيض التكلفة ، الموارد البشرية المحترفة، جودة الخدمة والمنتج ،اللغة والثقافة ، إدارة المشاريع ، عدم الاستقرار السياسي والقانوني ، والاتصالات) التي تؤثر في تنافسية مزودي خدمات تعهيد تكنولوجيا المعلومات المحليين في جذب الزبائن خارج قطاع غزة. يستهدف البحث معظم شركات التعهيد في خدمات تكنولوجيا المعلومات في غزة.

قام الباحث بتطبيق المنهج الوصفي التحليلي من خلال استخدام عينة عشوائية طبقية من مجتمع الدراسة. وقد اعتمدت العينة الغرضية لمجتمع الدراسة والتي تشمل كل المدراء ومسؤولي الفرق ومحلي الأنظمة ومطوري البرمجيات ومسؤولي العلاقات العامة والتسويق العاملين في شركات التعهيد في خدمات تكنولوجيا المعلومات (عدد 200) . ولقد تم توزيع مجموع 148 استبيان و وتم جمع 124 استبيان بنسبة 82.5%. ثم تحليلها باستخدام برنامج التحليل الإحصائي SPSS.

أظهرت نتائج التحليل الإحصائي أن معظم شركات التعهيد التكنولوجي موافقة على وجود بعض العوامل المؤثرة مثل(البنية التحتية ، تخفيض التكلفة ، جودة الخدمة والمنتج ، اللغة والثقافة، ادارة المشروع ، والاتصالات). غير أن الغالبية من الشركات غير موافقة على وجود العوامل التالية (الموارد البشرية المحترفة وحالة الاستقرار السياسي والقانوني). أظهر البحث أيضا أنه يوجد علاقة ذات دلالة احصائية بين العوامل المؤثر المذكورة ومستوى التنافسية لمزودي الخدمات في جذب الزبائن. إضافة إلى ذلك فقد كشفت الدراسة إلى وجود تأثير لثلاثة عوامل مجتمعة على تنافسية مزودي الخدمة وهي(الاتصالات، حالة الاستقرار السياسي والقانوني، جودة الخدمة والمنتج) والتي تؤثر مجتمعة على تنافسية مزودي الخدمة أما باقي العوامل فليس لها تأثير على التنافسية. زيادة على ذلك ، فقد كشفت الدراسة عن عدم وجود اختلافات ذات دلالة احصائية في استجابة المبحوثون اتجاه هذه المجالات بالنسبة للجنس ، العمر، المسمى الوظيفي، سنوات الخبرة في مجال تكنولوجيا المعلومات، المستوى التعليمي، سنوات الخبرة للشركة. ولقد كشفت الدراسة عن وجود اختلافات ذات دلالة احصائية في استجابة المبحوثون بالنسبة لحجم الشركة.

وقد أوصت الدراسة شركات التعهيد في مجال تكنولوجيا المعلومات بأن تقوم بإعادة تقييم مهارات الموارد البشرية لديها وتحديد الاحتياجات من أجل بناء قدرات الموظفين. أيضا أوصت الدراسة بأن تقوم الحكومة بتسهيل تأسيس هذا النوع من الشركات وبذل مزيدا من الجهود محليا ودوليا لتطوير هذا القطاع. كما يجب على الجامعات والكليات التقنية بأن تأخذ دورها في تطوير هذا القطاع بما انها تقوم بتخريج آلاف الطلبة كل عام وتقوم بتعزيز ثقافة التعهيد كمدخل لتحسين الاقتصاد الفلسطيني في قطاع غزة.

Dedication

To my mother Amany Elfarra whose limitless love and encouragement helped me throughout my life, she motivated me to continue my education.

To the soul of my father Iyad El-khateeb

My appreciation must go to my lovely husband Khaled Aboshammala whose prayers helped and supported me to carry out this work.

To my beloved sisters & brothers.

To my dear uncle Mohammed Elfarra

To my dear friends and colleagues who encouraged me to accomplish this research.

*Researcher
Asma Elkhateeb*

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All praise to Allah, the one to whom all dignity, honor, and glory are due, the unique with perfect attributes, who begets not, nor is he begotten. He has no equal but he is the Almighty Omnipotent. Peace and blessing of Allah be upon all the prophets and messengers, especially Mohammed, the last prophet and on all who follow him in righteousness until the Day of Judgment.

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List of Abbreviations

CAGR	Compound Annual Growth Rate
CMMI	Capability Maturity Model Integration
EDS	Electronic Data System
ERP	Enterprise Resource Planning
HR	Human Resources
IS	Information Systems
IT	Information Technology
ITO	Information Technology Outsourcing
ICT	Information and Communication Technology
OSDO	Offshore Software Development Outsourcing
PITA	Palestinian Information Technology Association of Companies
RFI	Request for Information
RFP	Request for Proposal
SDO	Software Development Outsourcing
SD	Software Development
SME	Small and Medium Enterprises
MENA	Middle East and North Africa

Chapter 1

Introduction

Chapter One: Introduction

1.1 Preface

In today's business, technology is an essential tool to cope with the rapid growth surrounding. It is the basic foundation to build work processes, and enhance productivity, plus other business functions. One of the new business functions which is recognized globally is called Information Technology Outsourcing (ITO). ITO is the use of service providers for delivering IT-reliant business processes, application services, and infrastructure solutions (The Statistics Portal, 2013). ITO services are helping organizations to manage their IT function through their IT expert team and innovative technologies.

The services contracted may encompass a single activity, a set of activities, or an entire end-to-end business process (International Association of Outsourcing, 2010). Outsourcing can be done for many kinds of services like data entry, consultancy, translation but the most popular form is Software Development. Equally important, Gaza is considered as one of the afflicted areas of this world due to the occupation, continuing blockade, political restrictions on movement, and deteriorating economy. One of the main problems is the high percentage of unemployment among youth although they have been well educated. However, Gaza has the attempt and the abilities to be more developed. It needs the design that will introduce it to the outside world.

Technically, Gaza has advanced Information Technology (IT) capabilities due to the high level education and technical institutes. Knowledge and resources (human and tools) that Gaza has, may qualify Gaza to be a good environment for information technology outsourcing where Gaza may be the vendor in outsourcing relationship.

Information Technology Outsourcing (ITO) vendor organizations in Gaza are struggling hard to compete internationally in attracting outsourced software development projects. If they score good success in this field, it will create good opportunities for youth to have work and sustain their lives and this will decrease unemployment rates.

1.2 Research Problem:

Today, ITO is an increasingly important business strategy by which companies achieve high revenues. In 2015, global revenue of 63.5 billion U.S. dollars was generated through IT outsourcing (The Statistics Portal, 2013). The annual global revenue from information technology outsourcing is estimated to amount between 60 and 70 billion U.S. dollars (The Statistics Portal, 2013). According to analysts, they forecast the global IT outsourcing market to grow at a CAGR(Compound Annual Growth Rate) of 5.84% over the period 2014-2019 (Infiniti Research Limited , 2015).

On the other side, the Palestinian Information and Communication Technology (ICT) sector has registered impressive growth over the last few years. In recent years there has been an increase in the number of companies, as well as inward investment from international names such as Cisco and Intel (Palestine Economic Policy Research Institute, 2012). Information and Communications Technology (ICT) is among Gaza's few industries able to grow despite the blockade. Approximately 1000 Gazans graduate annually with ICT degrees (UNRWA, 2013)

Furthermore, there is strong regional growth and demand for ICT, with many multinational firms expanding throughout the Middle East and North Africa (MENA). This is accompanied by weak local demand for technology in Palestine as a response to Gaza's isolation and other factors. The real problem is the chronic high unemployment, particularly for youth: In 2012, 32% of the labor force in Gaza was unemployed. In the first quarter of 2012, 58% of youth aged 20 to 24 were unemployed (Palestinian Community Assistance Program, 2013).

Building on these facts, IT outsourcing has become a key activity to partially find solutions for high rates of unemployment in Gaza, where very well educated individuals with high tech skills facing fewer jobs opportunities and low local demand of ICT jobs.

Consequently, many IT companies and individuals start using the model of outsourcing to create business. The fast demographic growth of around 3% a year, and the relative openness of the Palestinian people, in comparison with other Arab nations, is of crucial importance in building business relations with foreign

customers and partners (Palestine Economic Policy Research Institute, 2012). Besides, the relatively cheap labor force within the sector, and relatively owing to the geographical and cultural proximity to Europe, and the Arab world may be factors to introduce a relatively stable business to Gaza that is not affected by economical or/and political conditions .

Many IT companies in Gaza are the outsourcee, the one who provides the service; they provide services to outside countries especially Gulf countries. In this case they are called service providers (vendors) in this relationship. These companies compete on local level and regional level to deliver good businesses.

This research tries to explore the IT outsourcing experience as an emerging trend of business by exploring some of the common driving factors that influence the competitiveness of ITO firms which leads to foreign client's selection of local vendor (Gazan IT companies). Additionally, this research explores the barriers that decrease the competitiveness and repels a client from selecting possible vendor. Theses driving factors and barriers are stemmed from two studies of (Khan et al, 2011) that use systematic literature review approach in determining the most important driving factors and barriers globally.

This will be clarified through the following statement:

“What are the driving factors and barriers that impact the competitiveness of vendor leading to clients' selection? “

1.3 Research variables:

Figure (1.1) at page no. 6 shows the research variable model and in the following are the research variables:

1. **Dependent variable** : competitiveness of vendor organization in attracting clients.

2. **Independent variables** ::

Driving factors which have positive impact on competitiveness of vendors are:

1. Appropriate Infrastructure
2. Cost-saving
3. Skilled human resource

4. Quality of product and services
5. Language and cultural
6. project management
7. Country stability
8. Communication



Figure (1.1): Research Variable Model

1.4 Research Objectives

This research is aimed to find out the driving factors and barriers that impact the selection process of ITO vendor in addition to the following points:

1. To enhance the competitiveness of ITO vendors in the Gaza Strip.
2. To know what positively influence the clients selection decision in selecting vendors.
3. To examine the impact of infrastructure, cost saving, skilled HR, and quality on competitiveness of vendors.
4. To examine the impact of language and culture, project management, country stability and communication on competitiveness of vendors.
5. To provide IT companies with clear picture of competitiveness and its driving factors and barriers.

1.5 Scope of the Study:

This research has two important boundaries:

1. First is the absence of a specific driving factor means it is a barrier. This is the methodology that researcher used in classifying which factor is a driving factor in Gaza and which is a barrier. All factors are applied in the same way and the one that has negative impact on competitiveness considered a barrier.
2. This research will explore driving factors and barriers that impact the competitiveness of ITO vendors inside the Gaza Strip to be selected by a foreign client. Enhancing the competitiveness of vendors will attract clients and though affecting the selection decision of client.

1.6 Research Significance

The significance of the study can be classified into the following:

Theoretical Significance:

This study is one of the first studies that evaluate outsourcing experience in the Gaza Strip. In addition, the variables which this study focuses on are not mentioned as a set in any one of the studies in Palestine.

Practical Significance:

- 1- contributes in developing the Palestinian economy through the exploring of factors affecting clients' selection decision which will
- 2- Promotes this new trend of business in Palestine.
- 3- Identifies the driving factors that increase the competitiveness of ITO vendors in the Gaza Strip.
- 4- Identifies the barriers that decrease the competitiveness of ITO vendors in the Gaza Strip.
- 5- Contributes in shaping the picture of ITO by dissemination of the ITO culture among graduates and firms.
- 6- This research will contribute towards enriching the researcher's knowledge regarding the concepts of outsourcing through reviewing previous studies, articles and books related to the research subject which will also increasing researcher's researching skills.

1.7 Research Hypothesis

The following are the research hypothesis:

- a) **Hypothesis 1:** There is a significant relationship at $\alpha \leq 0.05$ between driving factors and competitiveness of vendor organization in attracting clients.
- b) **Hypothesis 2:** There is a significant effect at $\alpha \leq 0.05$ of driving factors on competitiveness of vendor organization in attracting clients.
- c) **Hypothesis 3:** There are significant differences among respondents at level $\alpha = 0.05$ toward the driving factors and barriers that impact competitiveness of ITO vendors in attracting clients in Gaza due to gender, age, job title, years of experience in IT field, educational level, years of Experience for company and company size.

This hypothesis can be divided into the following sub-hypotheses:

- a) There are significant differences among respondents at level $\alpha = 0.05$ toward the driving factors and barriers that impact competitiveness of ITO vendors in attracting clients in Gaza due to gender.
- b) There are significant differences among respondents at level $\alpha = 0.05$ toward the driving factors and barriers that impact competitiveness of ITO vendors in attracting clients in Gaza due to age.
- c) There are significant differences among respondents at level $\alpha = 0.05$ toward the Driving factors and Barriers that impact competitiveness of ITO vendors in attracting clients in Gaza due to job title.
- d) There are significant differences among respondents at level $\alpha = 0.05$ toward the Driving factors and Barriers that impact competitiveness of ITO vendors in attracting clients in Gaza due to years of experience in IT field.
- e) There are significant differences among respondents at level $\alpha = 0.05$ toward the Driving factors and Barriers that impact competitiveness of ITO vendors in attracting clients in Gaza due to educational level.

1.8 Operational Definitions:

IT Outsourcing:

Information Technology Outsourcing is a phrase used to describe the practice of seeking resources -- or subcontracting -- outside of an organizational structure for all or part of an IT (Information Technology) function. An organization would use IT outsourcing for functions ranging from infrastructure to software development, maintenance and support (Beal, 2016)

Competitiveness:

Competitiveness is defined as the ability of a nation, national industry, or firm to produce goods and services that customers choose over competing alternatives. Several indicators are commonly used to assess competitiveness. Indicators such as global market share, profitability, trade balances, and shipments may reflect the degree of success that firms have found in world markets. Relatively high wage and employment levels may also reflect this success. Other indicators are, such as productivity and the rate of product (U.S. International Trade Commission, 1995).

Appropriate Infrastructure:

Appropriate Infrastructure refers to all structures, systems, process, and facilities serving the IT firm to create appropriate technical platform able to function. It includes adopting an IT governance model, an IT/Business alignment, and IT infrastructure/network infrastructure/telecommunication infrastructure. Also it indicates the sufficient IT resources from hardware and software.

Cost Saving:

Cost saving factor is when clients in high economical countries package their high cost business and transfer them to software corporations in low –economical countries (Haiwei & Xiquan, 2009).

Skilled HR:

A skilled human resource is the one who do his/ her work efficiently. It is the one that has more control over the time and the work schedule of the project (Jennifer,

2009). High quality skilled staff has excellent technical and managerial skills with professional degrees in computer sciences and engineering.

Language and culture:

Language and culture in this study refers to the cultural and language differences that affect the relation and contract between vendor and an external client. This factor affects daily communications, joint meetings, exchange of contracts, requirements, products , time zones, religious holidays, traditions, etc. (Kobitzsch, Rombach, &Feldmann,2001).

Project Management:

In outsourcing case, project management is the process of managing software development project which is divided into 3 major stages: the planning phase, implementation, testing, and documentation phase, and delivery and maintenance stage. (Govindaraju & Lukman, 2012)

Country Stability:

Country stability factor refers to situation of a country that encourages investments and trade to start up. The Political instability, corruption, peace problems, terrorism threats and uncertainty relating to trade and investment are all faces of country instability. Also, strikes, power cuts, a likelihood of changes in labor market regulations, and environmental laws are considered as country instability faces (Kobitzsch et al., 2001).

Communication:

Communication factor is the interaction pattern between client and vendor. Several methods exist to convey information to the opposite side. Face-to- face interaction, telephone, fax, emails, and tele-conferencing are methods of communications.

Chapter 2

Literature Review

Chapter Two: Literature Review

2.1 Introduction

This chapter introduces main concepts in the literature of outsourcing in the IT field. It takes a closer look at outsourcing concept in general, types of sourcing relations, outsourcing domains, and outsourcing life cycle, outsourcing history and benefits and risks of outsourcing. Then it takes a closer look at selection of vendor in outsourcing, their competitiveness, driving factors of competitiveness and barriers to competitiveness. Also, it focuses on successful outsourcing models globally and regionally. Finally, the reality of outsourcing in the Gaza Strip takes part of this chapter

2.2 Outsourcing: a wider look

In this section, the outsourcing term will be clarified in general: definition of outsourcing, types of outsourcing, outsourcing historical development, and the difference between outsourcing and its alternatives.

2.2.1 Outsourcing Definition and Concept

With more than 20 years' development, information technology outsourcing (ITO) has experienced tremendous growth and has aroused great enthusiasm among academic researchers (Liang, Wang, Xue, & Cui, 2016).

Outsourcing is a long-term, results-oriented business relationship with a specialized services provider. The services contracted for (including manufacturing services) may encompass a single activity, a set of activities, or an entire end-to-end business process. The term 'long-term' means that it is the customer's intention to essentially 'divest' itself of the capacity to perform the work itself, choosing instead (some might say choosing strategically) to acquire the services in the future from the marketplace of available providers. The term 'results-oriented' suggests that the vendor is responsible for delivering the results for which the customer has contracted. Responsibility for the results, not just for the resources, is what

differentiates outsourcing from more narrow and more traditional supplier, supplemental staffing, and task-level contracting (International Association of Outsourcing, 2010).

Outsourcing, then, is nothing more and nothing less than a management tool, where a client is able to make more focused investments in the area that provides its unique competitive advantage. Along the way, outsourcing creates new business opportunities for companies to become providers of outsourcing services.

• *Types of Sourcing Relations*

Outsourcing occupies a unique position along the continuum of outside relationships. These relationships range from the traditional procurement of specific resources to highly collaborative relationships, such as strategic alliances and joint ventures. Most outsourcing relationships sit in the middle of this continuum. The provider owns most of the people, processes, and technologies needed to do the work and takes on many of the risks associated with achieving the customer's operational outcomes (International Association of Outsourcing, 2010).

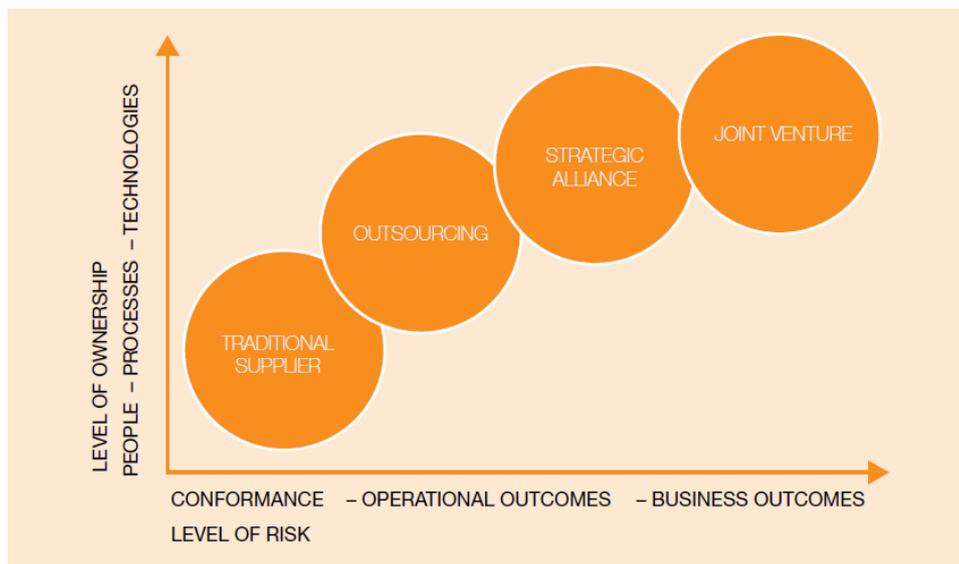


Figure (2.1): Types of Business Relations(International Association of Outsourcing, 2010)

❖ *Strategic Alliance:*

Strategic alliances have been described as a desired arrangement, often because they are seen as the most appropriate mechanism to bring together partners who

entertain various, sometimes asymmetric and possibly conflicting objectives (Kakabadse & Kakabadse, 2002).

❖ *Joint Venture:*

To form a joint venture, the client and its vendor(s) proportionally share some of their resources, capabilities and profits (Moon , Yao , & Jiang , 2011).

❖ *Outsourcing:*

In an outsourcing contract, a client externalizes its previous in-house operational or technological activities to a vendor and then purchases the outsourcing service from this vendor (Moon , Yao , & Jiang , 2011).

❖ *Telecommuting:*

Is allowing an employee to complete the assigned task or tasks at his or her home versus commuting to a traditional office (Hunter , 2012).

❖ *Teleworking:*

Teleworking (or telecommuting), which means working at a distance using information and communication technologies. Telework is flexible because employers and telecommuters can determine when teleworking happens, what work will be done during teleworking, and where it happens. Telecommuters work away from their usual work base and carry out various activities such as data input, checking of documents, and analysis of reports, customer service, sales, planning and word processing (Kanellopoulos, 2011).

Outsourcing is one of the telework forms that can be either home-based, mobile or outsourcing (Kanellopoulos, 2011). Outsourcing is the subcontracting of some services to an offshore vendor. However, teleworking is a single contract with employee (Sánchez, Pérez , Carnicer, & Jimé´nez, 2007).

From the above definitions, it is clear the different approaches of sourcing (telework, outsourcing and alliances) have different transactional and relational compositions. In the following a **brief description of the difference among different approaches:**

Alliances:

High Transactional: The alliance contains partners with shared resources and values to create greater economic value. This mandates a high transactional

environment maintained through contracts and arrangements that have specific time frames.

High Relational: At the same time, alliances rely on trust between their members, reducing the threat of cheating among members. (Khosrowpour, 2001).

Outsourcing:

High Transactional: the primary motivation for outsourcing has also been to reduce costs. The outsourced relationship is clearly transactional with explicit contracts and deliverables.

Low Relational: outsourcing is largely a transactional exchange. Both organizations function in an opportunistic fashion (Khosrowpour, 2001).

Telework:

Low Transactional: telework programs were originally developed for cost reduction and productivity increases. Today, the prime objectives have turned to other, more intangible benefits, including an improved work/life balance, increased flexibility, reduced stress, improved recruiting, and greater employee retention.

High Relational:

A teleworking exchange is high in relational content because of the types of exchange possible from a home office (Khosrowpour, 2001).

- ***Outsourcing Domains***

A company can outsource a production of goods or a performance of a service (Varadarajan, 2009). Moreover organizations can outsource system development, system operations, help desk, systems, databases and application management, desktop and network support in the domain of IT (Vorontsova & Rusub, 2014).

However, all outsourcing works can be classified into four categories: physical, specialist, transactional, and high-touch high sensitivity areas of business. The most mature outsourcing markets are in the physical parts of a business's operations. It includes activities such as facility services and maintenance, cafeterias and mailrooms, manufacturing, warehousing, shipping, and information technology (IT) infrastructure. The second category is specialist areas of the business. There are highly specialized professionals from across a wide range of disciplines – from

advertising to travel to information technology. The third common category is in the transactional parts of the business –activities such as telemarketing, customer order processing and inquiries, employee benefits administration, receivables and payables. The final category is the high-touch, high-sensitivity areas of the business- activities that play a more direct role in the organization Service delivery, field sales, and research and development are all examples of high-touch, high- sensitivity areas. (International Association of Outsourcing, 2010)

Particular emphasis has been given to IT outsourcing in the academic and more popular business press literature because global competition, downsizing, the move to flatter organization, the search for greater flexibility, rapid changes in technology and the emphasis on concentrating on core competencies, are cited as the major drivers for the upsurge in IT outsourcing (Kakabadse & Kakabadse, 2002).

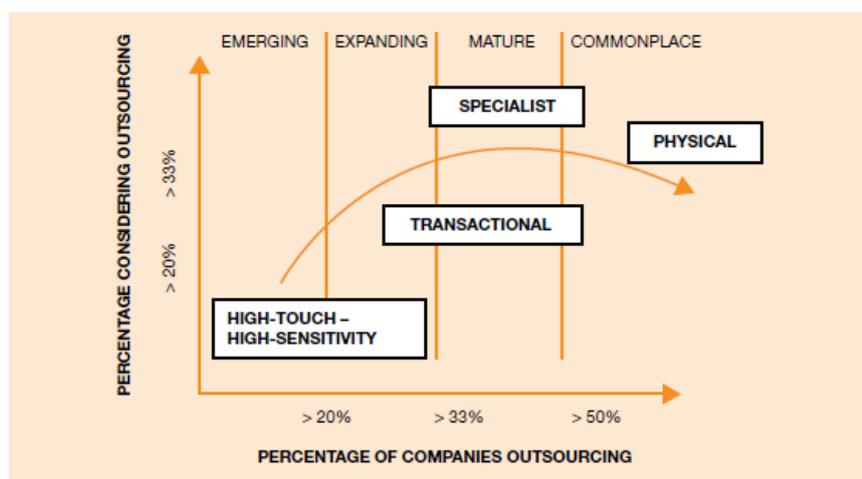


Figure (1.2): Outsourcing Domains (International Association of Outsourcing, 2010)

- *IT Outsourcing Vs. SD Outsourcing*

Information Technology Outsourcing is a phrase used to describe the practice of seeking resources -- or subcontracting -- outside of an organizational structure for all or part of an IT (Information Technology) function. An organization would use IT outsourcing for functions ranging from infrastructure to software development, maintenance and support (Beal, 2016).IT outsourcing includes managing data center activities, networks as well as business applications management. Many times, business applications management is further divided into applications development

or applications maintenance and enhancement (International Association of Outsourcing, 2010).

In this research, the focus is on IT outsourcing which is a contract-based relationship between client and vendor organizations in which a client(s) contracts out all or part of its software development activities to a vendor(s), who provides agreed services in return for remuneration (Khan et al. , 2011).

The software development process is a general term describing the overarching process of developing a software product. Sometimes referred to as the software lifecycle, this process may be used for the implementation of a single application or a far-reaching ERP system. (Techopedia, 2016)

While there is no standard definition, most development processes include the following activities: requirement gathering, design, implementation, testing, and maintenance. (Techopedia, 2016)

2.2.2 Outsourcing Life Cycle (Work Strategy)

When an organization decides to outsource full or part of its IT systems, it should conduct an assessment to identify the needs of the organization and perform high level strategic review of its operations.

The senior management is required to put a clear business plan with specific objectives- either financial, business, or technical, as well as defining the scope of the outsourcing evaluation. It is also required to perform risk assessment analysis for the outsourcing process to identify what risks we should assume and how to manage it (Al-Ahmad & Al-Oqaili, 2013). It's their responsibility to manage the outsourcing contract and objectively measure and track the benefits (David , 2009).

The IT management of an organization is required for the critical role of searching for vendors, creating the detailed request for proposal(RFP)and request for information (RFI), evaluating the legitimacy of vendor economies of scale, estimating the effects of price/performance improvements, and providing insights on emerging technologies that might affect the business (Al-Ahmad & Al-Oqaili, 2013).

The IT management is also responsible for counting the costs of things such as selecting the vendor, dealing with cultural differences, and the management, infrastructure, and communications costs (David , 2009).

The process of selecting vendors start by identifying all the vendors equipped to meet your technical and functional requirements. As the filtering process begins through this initial list of candidates, an RFI stating your objectives and goals should have been send out for establishing an offshore strategy and let the vendors take the initiative in proposing a solution to meet the organization needs (David , 2009).

After the contract is signed, the outsourcing process is shared and managed by two parties: the vendor and the client. Different plans are put into actions depending on the phase of processing (i.e. analysis, design, and implementation phase). Monitoring plan and transition plan are managed by client and vendor through variety of tools. The following figure summarizes the outsourcing Life Cycle:



Figure (2.2): Outsourcing Process (Integrators, 2013)

2.2.3 Information Technology Outsourcing History

Outsourcing began decades ago in the manufacturing parts of businesses and then has evolved into more sophisticated global market and most companies have outsourced one or more layers of their IT functions (International Association of Outsourcing, 2010).

According to some resources, the first experience in IT outsourcing is marked to the foundation of Ross Perot's Electronic Data Systems (EDS) in the 1960s, probably the first company that can truly be called a professional IT outsourcing

provider. It started by handling various data processing services (Meyer & Weinert, 2005).

The next IT outsourcing experience is the Kodak's experience when it outsourced the majority of its IT operations to IBM in 1989. For many, Kodak is considered the true starting point of IT outsourcing (International Association of Outsourcing, 2010).

Since that time outsourcing as a business practice has grown considerably. It did not take long, after Kodak's decision, for other organizations (Meyer & Weinert, 2005), both private and public, to enter IT outsourcing relationships with external vendors. Among these have been, for instance, British Aerospace, British Petroleum, Canadian Post Office, Manhattan Bank, and Continental Airlines (Meyer & Weinert, 2005).

2.2.4 Why outsourcing? (Benefits)

Many organizations decide to use outsourcing as business strategy mainly to reduce costs. Outsourcing saves on overheads through short-term cost savings (Kakabadse & Kakabadse, 2002) . Cost reduction is the basic reason cited in most organizations (International Association of Outsourcing, 2010). Usually, outsourcing clients selects their providers from low economical countries for mostly two reasons: low cost and medium quality.

The second most important reason is the ability to focus on core competencies of the business. This gives the organization opportunity to intensify its resources – its people, its physical and intellectual resources, and its capital –on the core parts of operations (International Association of Outsourcing, 2010).

The third reason is to have a more on-demand business model. That is not to invest in internal operations but, instead to outsource the services with less expenses. This is called the flexibility needed to keep pace with changing demand.

The fourth reason is to have access to specialist skills and expertise not available to the organization (International Association of Outsourcing, 2010)Actually, in

fields such as IT the attracting, developing and retaining of skilled staff is a real challenge (Deloitte, 2013). Therefore, outsourcing makes it much easier to have these skills without getting into the details of management of IT staff.

The fifth reason is current assets may be sold to the provider freeing more capital of the organization (International Association of Outsourcing, 2010).

The sixth reason companies find is that bringing in outside specialists spurs much needed innovation in their operations.

The seventh reason companies prefer outsourcing is speed of development, because specialized vendor will bring services and products much more quickly and cheaply than developing an in-house capability (Deloitte, 2013).

The eighth reason is the ability through outsourcing to free an executive's time to focus outwardly on strategy and customers as opposed to inwardly on current operational issues (International Association of Outsourcing, 2010)

2.2.5 Outsourcing Disadvantages

Everything has two sides, the good and the bad one; outsourcing also has advantages and disadvantages to business partners. The disadvantages are (Bucki, 2016):

First is the loss of managerial control on a task due to the poor communication between two different offshoring companies.

Second is the difference between the two companies' standards and cultural values. This puts more loads on vendor to bridge the gap with innovative ways.

Third one is the hidden costs that arise during implementation such as additional charges not covered in the contract or cost overrun.

Fourth one is threat to security and confidentiality especially if the vendor is in instable country.

Fifth one is the quality problems that need realistic evaluation system. Also, stretched delivery time frames, and inappropriate categorization of responsibilities.

2.3 Selection of Vendor and Competitiveness

Offshore outsourcing is nothing but 'international trade' and nations benefit considerably from international trade (Niazia, Khana, & Ahmad, 2011). Firms in high-economical countries are increasingly adopting outsourcing strategy. They select their vendors from developing countries, from which each vendor is trying to gain a Competitive differentiation¹ to attract outsourcing partners (Niazia et al., 2011).

Potential vendor tries to have the outsourcer perceive its offering as being superior when compared to other similar offerings, which mean the competition is getting sharper between potential vendors (Rouse, 2013).

So far, it is agreeable that vendors search for increasing their **competitiveness**. Competitiveness is defined as the ability of a nation, national industry, or firm to produce goods and services that customers choose over competing alternatives.

Several indicators are commonly used to assess competitiveness. Indicators such as global market share, profitability, trade balances, and shipments may reflect the degree of success that firms have found in world markets. Relatively high wage and employment levels may also reflect this success. Other indicators are, such as productivity and the rate of product (U.S. International Trade Commission, 1995).

From client perspective, client tends to select competitive vendor to achieve their goals. From vendor perspective, they compete and follow client's criteria in order to be selected. The selection criteria common among outsourcers are called 'Driving Factors' which can be adopted by vendors to increase their competitiveness. Besides, there are international barriers that might alienate client from selecting a possible vendor. (Niazia et al. , 2011).

In other words, the researcher of this study explores the competitiveness of a vendor. Nowadays "competitiveness" is probably the most used term from economy. Each vendor wants to be competitive on the market.

In the following sections, the researcher addresses the driving factors and barriers that contribute in to the competitiveness of vendors of outsourcing projects.

¹ Competitive differentiation is a strategic positioning tactic an organization can undertake to set its products, services and brands apart from those of its competitors (Rouse, 2013)

2.3.1 Driving Factors:

1. Appropriate Infrastructure of Vendor:

In the early beginnings of SD outsourcing, it was noted that a vital driving factor associated with successful outsourcing is issues related to vendor appropriate governance structure (Lin & Hekkala, 2016). Studies showed that outsourcing was first considered as a form of IT governance (Lin & Hekkala, 2016).

IT governance means defining and implementing **of processes, structures and relational mechanism[s]** that enable both business and IT people to execute their responsibilities in support of business/IT alignment and the creation of value from IT-enabled business investments (Schlosser, Wagner, Beimborn, & Weitzel, 2010).

IT governance structures include “structural (formal) devices and mechanisms for connecting and enabling horizontal, or liaison, contacts between business and IT management (decision-making) functions” (e.g. steering committees). IT governance processes refer to formalization and institutionalization of strategic IT decision making or IT monitoring procedures (e.g. IT balanced scorecard). The relational mechanisms finally are about “the active participation of, and collaborative relationship among, corporate executives, IT management, and business management (e.g. training) (De Haes & Grembergen, 2008).

IT governance embraces a broader perspective, e.g. how to perform and transform IT to meet both present and future demands of the business and the business “customers” (Lin & Hekkala, 2016)

Therefore, a vendor must conceive and adopt IT governance model and implement it to be complementary to the client governance model. IT governance can be deployed using a mixture of various structures, processes and relational mechanisms as mentioned above. (De Haes & Grembergen, 2008). This will help in achieving better IT and Business alignment within vendor organization and in the relation with client.

However, the vendor conceive IT governance as a framework to ensure the IT infrastructure supports and enables the achievement of the corporate strategies and objectives. This requires a review of the IT infrastructure/network

infrastructure/telecommunication infrastructure , the Physical infrastructure (related both with the country and the company) which includes telecom, power/electric supply, roads·Transportation, physical buildings, office layouts, Internet access and sewer and water system, etc., in addition to sufficient IT resources including hardware and software to maintain large development projects, including the number of servers and the intranet structure (Ahmad et al., 2011).

According to (Willcocks & Feeny, 2006), where the researchers proposed a core IS capability framework that identifies nine IS core capabilities necessary for successful of any outsourcing relationship.

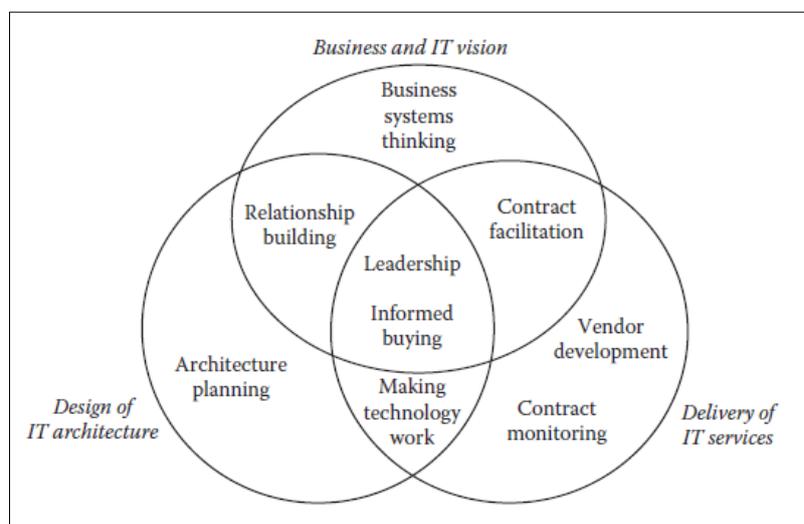


Figure (2.3): Nine Core IS Capabilities((Willcocks & Feeny, 2006)

A core IS capability is a capability needed to facilitate the exploitation of IT, measurable in terms of IT activities supported, and resulting business performance. However, one of these capabilities is the Architecture planning “Creating the coherent blueprint for a technical platform which responds to present and future business needs.” The principal challenge to the architect is to anticipate technology trends so that the organization is consistently able to operate from an effective and efficient platform (Willcocks & Feeny, 2006).

2. Cost Saving:

Cost saving is the most common factor and most important motivation for outsourcing projects (Ahmad et al., 2011). Often the high economical countries who outsource projects to the low-economical countries to take advantage from the

reduced labor costs (Haiwei & Xiquan, 2009). Vendors in the developing countries compete in providing cheaper services to the clients. Therefore, clients in high economical countries package their high cost business or businesses they are not specialized in and transfer them to software corporations in low-economical countries (Haiwei & Xiquan, 2009). Besides, outsourcing allows a business to skip costs such as health insurance and vacation pay. It has been researched and on average, a company can save about 60% in operational costs with an outsourced individual (Rampton, 2012).

The competition level of software industry can be divided into 4 stages: price competition level, quality competition level, brand competition level and supply chain competition level. In low economical countries that practice outsourcing, the fierce competition between corporations is led by low prices as a major driver (Haiwei & Xiquan, 2009). In some countries, there is a real problem in software costs due to the cut-throat competition. Most developers can only gain very small amount of profits, some of them even cannot afford their basic developing and service cost. This raises a question of the value of outsourcing from vendor perspective (Haiwei & Xiquan, 2009).

However, the business environment has changed, and some motivating factors gradually lost relevance. (Liang et al., 2016). For example, cost saving is no longer the primary reason to outsource for some companies. Clients are searching for more added-value and higher quality services from ITO vendors whilst still ensuring that overall costs are reduced (Deloitte, 2013).

The vision of cost saving for most clients does not reflect the reality of it. The problem seems to be that it is quite difficult to determine and know the extent of costs for the implementation of outsourced processes and there are often forgotten additional costs of managing the outsourcing relationship (Giertl, Potkany, & Gejdos, 2015).

Nevertheless, outsourcing costs can be divided into three types (Giert et al. , 2015):

- Production costs in a functional area. These are the costs invoiced by providers for delivery service.

- The transaction costs. Here can be included cost of creating a contract, check of its implementation, a communication and coordination between a client and a provider; and costs of the other expert and consulting services.
- Hidden costs. This area coincides with transaction costs and regards to additional costs incurred for example to manage transition phase of outsourcing implementation, costs of redundancies, and costs of outsourcing relationship termination.

However, when the control over outsourcing project is poor we may reach a cost overrun.

3. Skilled Human Resources

It is obvious that a skilled human resource has great effects on the relationship between client and vendor organizations as well as vendor can provide adequate services to client (Niazia et al., 2011). A Skilled Human Resource is one that has more control over the time and the work schedule of the project (Jannifer , 2009). High-quality skilled staffs are the backbone of the IT industry and vendors should employ high skilled workers with professional degrees in computer science, engineering, management and similar fields (Niazia et al., 2011).

According to (Govindaraju & Lukman, 2012), one of the operational capabilities that are important to the success of the vendor is the human resource (HR) capability. It is defined as the company's ability to manage HR in order to reduce employees' turn over and to develop skills through various methods of HR development. Sub capabilities for HR capability are: recruitment practices, training and coaching programs, systematic career development system, and the rewards, incentives, and benefit programs (Govindaraju & Lukman, 2012).

For example, Alpha, an Indonesian software company located in Jakarta and Amsterdam who practice outsourcing, has paid efforts to enhance the HR capability. Alpha recruits experienced and non-experienced employees. Alpha already has training and coaching programs that have been tailored to the needs of the company and its clients. Alpha has an annual budget for training and certification of its employees. Alpha also has a systematic career development system that gives employees opportunities to develop their carrier. Employee's positions are divided

into several levels, starting from trainee, junior programmer, programmer, senior programmer, programmer analyst, systems analyst, and manager. Alpha has a comprehensive remuneration system. Alpha's Director stated that the interesting remuneration and incentives system is the key for the company to maintain its employees (Govindaraju & Lukman, 2012).

Equally important, the project manager has to be skilled enough in the team management, business domain knowledge of the project, communication, people skills, technical skills, and project management (Keil, Koo Lee, & Deng, 2013).

4. Quality of products and services:

Organizations in the outsourcing market should take advantage of outsourcing strategies to ensure quality of services and products. Indian software companies have been reported to provide high quality software at low cost. This is the reason that in the software export market, India is a dominant software outsourcing provider (Niazia et al., 2011).

More importantly, quality is not limited to products and services only. It is applied to the overall process of creating the product and services at any outsourcing project. The lack of quality at any point in the outsourcing process can result in product recall or major outsourcing risk. (Ramu, 2008). One of the important aspects of quality is to ensure software projects are implemented on time, in and within allocated financial requirements, fulfils user's requirements and the project team members (Ramu, 2008).

It can be seen that quality is a multidimensional concept. Quality of product and service is comprised of a number of dimensions which determine how customer requirements are achieved (Elyse, Pmp, Cphims, 2006).

Commonly, product quality has two dimensions:

- **Physical dimension** - A product's physical dimension measures the tangible product itself and includes such things as length, weight, and temperature.
- **Performance dimension** - A product's performance dimension measures how well a product works and includes such things as speed and capacity (Elyse et al., 2006).

On the other hand, service quality has several dimensions (Elyse et al., 2006):

- **Responsiveness** - Responsiveness refers to the reaction time of the service.
- **Assurance** - Assurance refers to the level of certainty a customer has regarding the quality of the service provided.
- **Tangibles** - Tangibles refers to a service's look or feel.
- **Empathy** - Empathy is when a service employee shows that she understands and sympathizes with the customer's situation. The greater the level of this understanding, the better. Some situations require more empathy than others.
- **Reliability** - Reliability refers to the dependability of the service providers and their ability to keep their promises.

Thus the quality of products and services can be measured by their dimensions. Evaluating all dimensions of a product or service helps to determine how well the service stacks up against meeting the customer requirements (Elyse et al. , 2006).

Another essential point, the quality for the outsourcing process should begin at the planning stages of new product development. Planning must cover material, equipment, manufacturing and transactional processes, hardware, software, domain knowledge, skill sets, people availability, communication protocol and more (Ramu, 2008).

Additionally, the certification for controlling outsourced processes which is ISO 9001 Certification that provides descriptive guidance on the criteria organizations should follow to implement a quality assurance process that helps meet customer expectations (Annous et al., 2010).

In order to succeed in outsourcing project, there are two high- level requirements for quality: the first is 'Due diligence' in applying quality basics that might seem generic to any program. (Example: scope management, roles and responsibilities, risk management, communication protocol, lessons learned, etc.). The second is special circumstances presented by projects and programs in the current global economy. (Intellectual property, trade compliance, cultural differences, communication, virtual teams, tacit knowledge, logistics, process maturity, etc.) (Ramu, 2008).

2.3.2 Barriers:

1. Language & Cultural Barriers

Over the last decade, many firms in the USA and UK have outsourced software development projects to other countries such as India, China, Russia and Malaysia where English is not the first language (Khan et al. , 2011). This language difference affects the exchange of contracts, requirements, and products and joint meetings such as reviews. Moreover, daily communication and technical documentation is affected as well (Kobitzsch, Rombach, & Feldmann, 2001). Usually, English is the language chosen for global communication purposes.

According to Hofstede's work ¹ in cultural differences, he identified five measures: power distance, individualism, uncertainty avoidance, long-term orientation and masculinity. For instance, Western countries like U.S. and U.K. are more individualistic compared to the collective culture in Latin America and Asia; Asian countries like China and Japan score high on long term orientation while western countries are more short-term oriented (Kaushik , 2009).

The cultural differences between two countries in offshore outsourcing could affect the success of the project. The vendor and client have to consider different cultural issues such as differing time zones , for example , arranging a video conference between a site in New York and one in Europe during normal 9-to-5 office hours, with a typical time difference of six hours, offers only a two-hour time slot daily (Kobitzsch et al., 2001). Besides, vendor and client in two different countries usually have different off-days and religious or national holidays. Also, the possible temporal dispersion that result from different time zones may affect delivery deadlines or meeting appointments .This affect the outsourcing project and manager should take it in account (Kobitzsch et al., 2001). In general, country-specific traditions, beliefs, or religions might affect a cooperative venture.

In addition, some small difference in contracts such as the different definitions of the official business year in Germany (1 January to 31 December) and India (1 April to 31 March) may cause problems for proper payment and accounting issues (Kobitzsch et al., 2001).

¹ Hofstede's cultural dimensions theory is a framework for cross-cultural communication , developed by Geert Hofstede.

Individuals have different values and different preferences with regard to management and leadership that are related to their cultural background. The success or failure of global IT projects is highly influenced by culture-based behaviors. According to (Amstera & Böhmb, 2015) , there are a group of behaviors that affect the cross-cultural cooperation. These behaviors are classified into five clusters in table (2.1).

Table (2.1): Behaviors Cluster in Cross Cultural Environment (Amstera & Böhmb, 2015)

Behavior Cluster	Description
Behavior 1: Direct or Indirect Communication	<p>In some cultures, business partners are very direct when communicating (e.g. ‘very open, let you know exactly what they were thinking’) (e.g. Canada, Germany, the Netherlands, and the USA).</p> <p>Other business partners (e.g. from China, India, Japan, and the Philippines) are indirect when communicating (e.g. ‘don’t like admitting mistakes in public’).</p> <p>The difference in communication behavior between Indian managers, who tend to be indirect and managers who were direct, led to project difficulties.</p>
Behavior 2: How Relationships are Formed	<p>In some cultures, individuals tend to form relationships quickly in the work place. (e.g. Canada, Sweden, Brazil and India)</p> <p>On the other hand, individuals from other backgrounds tend not to discuss their private lives in business environments. Relationships are formed slowly over time. (e.g. Austria, China, France, Germany, Japan, and Korea).</p>
Behavior 3: How Decisions are Made and Who Makes Them	<p>In some cultures, the leader takes most of the decisions. (e.g. Canada, China, India, and the USA). In others, leader takes decisions on their own.</p> <p>On the other hand, some leaders need to have full agreement from all stakeholders for a decision. (e.g. Japan).</p>
Behavior 4: How Projects are Planned, Scheduled, and Executed	<p>Some business partners tend to emphasize formal planning methodologies and project performance metrics when developing a project schedule. (e.g. from India)</p> <p>Other partners tend to focus on task descriptions and milestone dates when developing the project schedule. (e.g. Canada and the USA)</p> <p>Some project partners do not assign much importance to detailed schedules. (e.g. China and Korea)</p>
Behavior 5: Following or Not Following Defined Processes	<p>certain business partners (e.g. from Germany, Japan, and the Philippines) became extremely uncomfortable in unstructured environments</p> <p>On the contrary, the Indian interviewees felt constrained by rules and procedures.</p>

It is clear how cultural aspects can impact the success of outsourcing project. Example of failure is when Dell Corporation withdrew some of their business customer service operations from Bangalore back to the US in the face of customer complaints about service quality stemming from language problems and other cultural differences (Dutta & Roy, 2005).

To conclude, cultural barriers can be overcome through adopting cultural awareness and cultural training for members involved in outsourcing projects.

2. Lack of Project Management

In outsourcing case, project management is the process of managing software development project which is divided into 3 major stages: the planning phase, implementation, testing, and documentation phase, and delivery and maintenance stage (Govindaraju & Lukman, 2012).

However, project management is a challenge for variety of outsourcing projects. Coordinating and sharing issues become more difficult, such as with the latest version of design documents 'data availability', necessary interface changes between related modules 'change control and configuration management', or questions to the teams' expert on a certain topic 'knowledge transfer' (Kobitzsch et al., 2001).

In order to obtain well managed outsourcing project, there are several tools and development environments available to support these project management activities (Kobitzsch et al., 2001). One method is: defining standard operating procedure (SOP) and work documentation. Another method is to adopt the working methods of the client. Client companies, especially large clients usually have better work and project management methods. Besides, CMM¹ (Capability Maturity Model) certification by the vendor company is a tool of managing outsourcing process (Govindaraju & Lukman, 2012).

¹ Capability Maturity Model Integration (CMMI) is a process improvement training and appraisal program. It is required by many DoD and U.S. Government contracts, especially in software development. (tutorialspoint, n.d.)

3. Country Instability

Political instability, corruption, peace problems, terrorism threats and uncertainty relating to trade and investment are all faces of country instability. Also, strikes, power cuts, a likelihood of changes in labor market regulations, and environmental laws are considered as country instability faces (Kobitzsch et al., 2001). It is worth mentioning that instability of the political situation could act as a discouragement for the foreign investors to offshore outsourcing (Khan et al., 2011).

An example: by 2012, Ukraine was ranked fourth in the world behind the United States, Russia and India in IT outsourcing. The information technology services industry in Ukraine was described as 'booming' and the reason is outsourcing. But the recent revolution, political instability and the looming threat of a conflict with Russia have turned the industry upside-down. Many of the foreign clients spend millions of dollars on highly sensitive IT projects. And from a corporate risk perspective, investing heavily in a country marred by conflict—and a potential military draft—isn't exactly smart business (Markowitz, 2014). Another example: the increasing tax returns from outsourcing in the U.S.A. have attracted political attention, resulting in governmental efforts to mandate restrictions on offshoring activity (Dutta & Roy, 2005).

4. Communication Gap

Communication is a crucial factor in the success of outsourced projects. It is the project manager responsibility to design effective communication and interaction patterns between clients and vendors.

Direct face-to-face communication is the most effective method to convey information than other communication methods such as e-mail, fax, telephone and tele-conference. However, in this modern age video conferencing is also emerging as a common communication tool (Khan et al, 2011).

Some researchers define the company's ability to perform routine relational /communication and arrangements supporting resources to understand the wishes of the client: ' Client-specific capability '. The aim is to align vendor activities with the

objectives of the clients, both short and long term relationships (Govindaraju & Lukman, 2012).

Establishing branch office in client country, bridging engineer, training foreign language are all methods to improve the client –specific capability. Bridge engineer is described as a vendor’s personnel who stay on client’s site to handle the day-to-day interaction between the client and the offshore vendor (Govindaraju & Lukman, 2012).

An advanced communication infrastructure is a key component for outsourcing project; it must be secure enough to protect sensitive data. Sometimes, the regular communication systems cannot cope with the requested high standards. The company must provide solutions to communication problem. An unpredictable loss of electricity, for instance, might cause lost data, destroyed hardware, or other problems with technical equipment (Kobitzsch et al., 2001).

Equally important aspect of communication is marketing. Vendors should use marketing tools such as advertising, sales promotion, social media and publicity to communicate with offshore clients to promote their products and services. Project managers often have the skilled HR and good quality products but are lazy to find a good marketing employee to publish their work. This is a failure.

Therefore, an important aspect in communication is what's called Integrated Marketing Communication (IMC) which seen as major communications development of recent times (Archer, 2006)

IMC is the strategic analysis, selection, execution, evaluation and control of all communicative actions that can effectively and efficiently enable and facilitate productive exchanges in the provider’s stakeholder relationship network (Archer, 2006).

2.4 Outsourcing Reality in the Gaza Strip

2.4.1 Situation of the Gaza Strip

The Gaza Strip, a narrow slice of land situated between Israel, Egypt, and the Mediterranean Sea, boasts one of the highest population density figures in the world. Within its borders approximately 1.5 million people live in less than 360 square kilometers. The population growth rate is also extremely high in Gaza, the birth rate remains above the national average, recording in 2007 at an average of 43 childbirths per 1,000 inhabitants (Freed & Serapioni, 2009).

The Israeli siege was imposed on the Gaza Strip since the summer of 2007 which impacts every aspect of life in Gaza. This included entry of fuel and construction materials and many commodities, the prevention of fishing in the deep sea (Office for the Coordination of Humanitarian Affairs occupied Palestinian territory, 2012).

Consequently, all factories were brought to a virtual halt. According to (PCBS, 2015), the unemployment rate in Gaza Strip was 41.6%. Even more alarming is the situation of youth unemployment which scored to more than 60% by end of 2014 according to the latest (World Bank Economic update,2015).

In recent months, more than 3,100 Gaza businesses have been shut down, and 65,000 workers put out of work. Nearly 40% of households still fall below the poverty line (UNRWA, 2015).

2.4.2 Situation of Outsourcing in Gaza

As previously described, the difficult economic conditions and the lack of opportunities for many of the graduates in the Gaza Strip has prompted IT and communication firms, most of which are run by young people, to outsource their work (Balousha, 2014).

Technically, Gaza has more advanced IT capabilities. Information and Communications Technology (ICT) is among Gaza's few industries able to grow despite the blockade. Approximately 1000 Gazans graduate annually with ICT

degrees (UNRWA, 2013) . Moreover, SD outsourcing is not limited by restrictions in the physical movement of people and goods which is one face of the Gaza Siege.

The knowledge and resources of Gazan community are able to shape Gaza to be a good environment for software development outsourcing where Gaza is the vendor. This will limit the impact of the economic blockade on these firms. In 2012, ICT contributed 0.56% to the real gross domestic product (GDP) growth of the West Bank, and a mere 0.02% to the real GDP growth of Gaza (Palestinian Community Assistance Program, 2013).

Vendor organizations (IT companies) in Gaza are struggling to compete with international firms in attracting outsourced software development projects. The success in this field will create good opportunities for youth to obtain jobs which impacts the Gazan economy.

However, some obstacles limited the development of outsourcing in the Gaza Strip. The Mercy Corps study (2013) on labor market needs of the digital economy in the Gaza Strip has revealed the weak global awareness about Gaza's capabilities is one of the obstacles. Also the potential risk of instable political conditions, the restrictions on travel and the poor technological infrastructure are obstacles. There is also a need for expertise in determining the costs and the entry of local companies in international tenders (Palestinian Community Assistance Program, 2013).

It is worth mentioning, Gazan Companies are not able to market themselves effectively for international contracts, which limit the sector's growth.

Also, new ICT graduates have weak employable skills, limiting the sector's capacity to complete commercial work (UNRWA, 2013).

2.4.3 IT outsourcing Companies in the Gaza Strip

During the past few years, many IT workers in the Gaza Strip have started working remotely. Many have established enterprises that deal with companies in the Gulf , Europe and other countries, with designers and programmers working in offices in Gaza. This phenomenon is gradually increasing. The number of companies working in IT outsourcing ranges from fifteen to twenty legal companies to the

extent of the researcher knowledge. It ranges by size from small, to medium to large based on the number of employees. These companies are the focus of the researcher's study and are listed in Appendix D.

2.5 Successful Outsourcing Models

It is previously known that India is the best known, most used and leading country for offshore Outsourcing. China occupies the second place and offers longer term options for outsourcing as the use of the English language and western business principles are more widely adopted by the Chinese providers and people. Third comes the Asian countries that remain competitive but are generally limited by the availability of qualified staff (International Association of Outsourcing, 2010).

2.5.1 Indian IT Outsourcing Experience

India emerges as the top outsourcing destination. About 80% of European and US outsourcing firms ranked India as their number one outsourcing destination (Outsource 2 India, 2016). The Indian IT outsourcing industry continuing to experience a tremendous growth rate of 25–30% per year. This success is due to the following reasons (Outsource 2 India, 2016):

- India has the largest technical and professional talent pool in the world (vast pool of skilled and talented human resources)
- India also holds the distinction of being the largest English speaking nation in the world,
- India offers flexible pricing options. For example, a good developer in the U.S. can cost anywhere from \$50 to \$80 an hour (for a full-time staffer depending on skills and experience). In comparison, the hourly cost of a developer in India can be negotiated down to as low as \$15 per hour.
- It is not only about cost , it is also the quality of talent that attracts companies wishing to outsource
- India boasts of the best in Infrastructure and technological capabilities. Clients are offered the latest and best in software technology, including customized solutions for various applications such as e-commerce, business process re-engineering, system migration, legacy system maintenance, system integration, and much more. Outsourcing companies also maintain uninterrupted communication

channels with clients by providing high-speed bandwidth via satellite connectivity, submarine cables and fiber optic networks.

- The Indian outsourcing industry is supported by stable political situation. The Indian government offers attractive IT policies such as tax- related and other benefits.
- Indian outsourcing companies are able to provide the quickest time-to-market due to the advantages gained by time zone differences.
- It has gained global confidence with major players such as Cisco, Oracle and Hewlett-Packard.

2.5.2 Egyptian IT Outsourcing Experience

Egypt is a new guest in the IT outsourcing industry. Egypt's outsourcing experience is poor in comparison with the Indian experience. However, it is one of the country's fastest growing sectors, aided by a pool of university graduates fluent in French, German, Spanish and Italian as well as Arabic and English (Sharp, 2010). The following factors strengthen the Egyptian experience:

- Egypt has a good geographical location that located in the Middle East. This encourages Egyptian vendors to contract with Middle Eastern clients. (ElKady, 2012)
- The cost of doing business in Egypt remains highly favorable.
- Egypt has a great technological infrastructure.
- Egypt benefits from a strong, sustainable pool of home-grown talent that is technologically skilled, multi-lingual and entrepreneurial (ElKady, 2012).
- Egypt shares a time zone with many European regions, making doing business easier.
- Because of its longstanding tourism industry and familiarity with Western culture, Egypt's workforce and young people make a good fit with European companies (Marson, 2007).

However, the lack of political instability and communication skills is a risk factor that might prevent Egypt outsourcing from further development. Moreover, the Concerns about personal, property and data safety in Egypt exist. Egyptian

government needs to tackle the structure problems such as quality of life, development of road and rail infrastructure, data and building security, and the education system. Egypt is in needs of urgent attention to leverage the progress made so far (Marson, 2007).

Chapter 3

Previous Studies

Chapter Three: Previous Studies

3.1 Introduction

In this chapter, the researcher aims at providing an overview of the literature that studied outsourcing evolution, understanding factors that impact the process and illustrating some examples of companies and countries that practice outsourcing.

3.2 Previous Studies

1. Liang , Wang , Xue , and Cui (2016)

“IT outsourcing research from 1992 to 2013: A literature review based on main path analysis”

This study investigated the IT outsourcing literature to discover future directions of ITO research by exploring the development of the field. The study investigated the following topics: ITO motivations, ITO decisions, ITO risks, debate around transaction cost theory, client–vendor relationship, the vendor’s perspective, psychological and formal contracts, Application service provision (ASP), BPO, open-sourcing and crowdsourcing, offshore outsourcing, and multi-sourcing.

The researchers used main path analysis by which they selected the top 120,000 main paths from 6.45 million main paths among 798 ITO papers, resulting in a data set of 280 papers that represent the most important nodes supporting ITO knowledge flow.

The findings showed that ITO research themes differentiate from time to time, they appears at a specific point in time and fade away at different point of time. However, the following six areas will attract more attention in future: New forms of ITO decisions, ITO relationships from new angles, ITO risks, Development of ITO theories, and Offshoring and Emerging ITO varieties.

This study provides a comprehensive review of literature regarding ITO motivations, ITO risks, and issues related to vendor perspective.

2. Deraman, Hamzah, and Yahaya(2014)

“Evaluating Vendor’s Performance in Outsource Software Development Risks Using Analytic Hierarchy Process Technique”

Any software project requires implementation to be on time, within budget, and fulfils user’s requirements. The aim of this study was to explore software development risks associated with outsourcing particularly which deals with vendors or third party companies.

The researchers analyzed the data collected from respondents through a survey and questionnaire of one organization named as Rubber Industry Smallholders Development Authority or RISDA in Malaysia.

“The tools used for analysis is AHP technique (Analytical Hierarchy Process) which is an effective technique in modeling criteria for decision making. The risks can be structured into hierarchy and AHP is suitable to modeling complex criteria selection”.

Risks always exist in software development outsourcing. This paper identified main risks and the severity level of each. The researchers identified four main and critical risks from literature review which are vendor’s relationship, services, contract agreement and bond and relationship. The study indicated that 53% of projects ends up with incomplete requirements due to the loss of communication skills which is a critical risk of vendor performance.

This paper is related to this research throughout exploring similar risks that may be developed into barriers, to come up with a model of managing and controlling SD outsourcing risks

3. Rusu and Vorontsova(2014)

“Determinants of IT Outsourcing Relationships: A Recipient -Provider Perspective “

This study was to evaluate the importance of determinants of IT outsourcing relationship from both an outsourcing provider and recipient perspective. A case study methodology was used on two Swedish companies (one is an outsourcing provider and the other is a recipient) to evaluate the determinants of IT outsourcing

relationship. Interviews were conducted to collect data from decision-makers in both companies. Then a content analysis method was used for data analysis.

“There are some determinants like Business and mutual understanding and confidentiality that have turned out to be more important for the outsourcing provider and other determinants, like Satisfaction, for the outsourcing recipient. Also the top management support is more important on the strategic level compared to the operational level”. The determinants ordered by importance are: Top management support , Trust , Commitment, Cooperation, Communication quality , Knowledge and information sharing , Conflicts handling , Confidentiality, Participation , Business and mutual understanding , Satisfaction , Shared benefits and risks, Shared values and objectives , Flexibility and adaptation ,Mutual dependency , Cultural compatibility.

This study has more focus on relationship between provider and client which is considered in my research.

4. Al-Ahmad and Al-Oqaili(2013)

“Towards a Unified Model for Successful Implementation of Outsourcing and Reversibility of Information Systems”

This study explored critical factors affecting the outsourcing and reversibility¹ processes. It focused on pre-outsourcing and post-outsourcing stages in Information systems outsourcing beside the risks associated with the outsourcing process. Basically, "it provides a conceptual framework that can help implement both outsourcing and reversibility projects successfully". The researchers used various approaches from literature review, case studies, and interviews to observations. Interviews and observations were the tool for the primary data collection.

This study came up with a model to close the gap between outsourcing and reversibility. This model introduced the critical factors to be considered in order to achieve successful outsourcing/reversibility which are” 'Scope and objective of outsourcing', 'Management commitment', 'Project planning', 'Precise RFP, vendor assessment contractual issues, and relationship management', 'Assessment of the outsourcing and reversibility business risks' “.

¹ Reversibility can simply be defined as bringing back (in-house) already outsourced IS functions with the goal of rebuilding internal IS.

Some of the critical factors in this study are mainly introduced in my research in different manner and more details.

5. Han, Lee, Uk Chun and Seo (2013)

“Complementarity between Client and Vendor IT Capabilities: An Empirical Investigation in IT Outsourcing Projects”

This study investigated effective interaction and communication between client and vendor through exploring the complementarity between client and vendor IT capabilities. Studying the roles of client and vendor IT capabilities will enhance outsourcing success by building good relationship between client and vendor. The approach used was ” a five-point Likert-style questionnaire which developed for all measures(13 items for vendor IT capability, 15 items for client IT capability, 9 items for outsourcing success, and 13 items for general questions)”. It was conducted with 35 outsourcing project teams in three global IT outsourcing firms located in Korea.

This study found out that: “the higher the level of client IT capability (technology management, organizational relationship, and vendor management capabilities) and vendor IT capability (personnel, methodology, and client management capabilities) the higher the level of outsourcing success”. Also, the complementarity between client and vendor IT capabilities adds value to outsourcing success. Moreover, the increase rate of complementarity between client and vendor IT capabilities is higher when both parties have high or low IT capability levels.

This study provided better understanding for the relationship between client and vendor by giving useful implications in selecting clients and vendors and in developing better outsourcing relationships.

6. Bahli and Rivard(2013)

“Cost Escalation in Information Technology Outsourcing: A Moderated Mediation Study”

Cost escalation¹ contract is a key concern in ITO contracts.” It is a major reason of failures in the ex-post stage of the ITO contract”. This study attempted to advance our knowledge about the mechanisms by which costs escalate in the ex-post

¹ cost escalation is the difference between actual costs and contracted costs

stage by testing a model of the determinants of ITO cost escalation. Data were gathered through a survey. Using a database of 3000 Canadian organizations, 1250 company were randomly selected and contacted by phone.

This study proposed that three major transaction attributes, including relation-specific investments (or asset specificity), bargaining power and measurement difficulties impact cost escalation via two main scenarios (holdup problem and disputes between the contracting parties). “Hold-up is Situation where one partner cannot get out of a relationship except by incurring a loss or sacrificing part or all of its assets to the other partner”. “Disputes are Issues that have escalated to the executive committee; occur when all other governance processes have been exhausted and when the consequences severely commercially disadvantage one party. “

However, Cost saving is a vital factor in outsourcing projects and can cause failure if it hasn't been studied effectively and enough.

7. Brege, Chicksand, Nordigården, and Rehme (2013)

“Outsourcing to a Non-Developed Supplier Market: The Importance of Operational Aspects in Outsourcing”

The objective of this research was to study how companies manage outsourcing aspects in situations where the vendor located in a non-developed supplier market. Two case companies in the 3 wood product manufacturing industry were used as case study approach.

The findings showed that greater focus and effort needs to be placed on operational aspects associated with non-developed supplier markets comparing to a developed one. There should be alternative outsourcing routes available when outsourcing to a non-developed supplier market.

In conclusion, country instability is an important factor that affects outsourcing projects and it is considered in my research.

8. Raju(2012)

“Intercultural Communication Training in IT Outsourcing Companies in India: A Case Study”

This paper approached the communication problems in outsourcing agreements between vendor and client. It actually looked at other type of outsourcing which is the business process outsourcing not the software development outsourcing. However, the communication problems are common in all types of outsourcing.

In this case, a company based in the US outsourced its business processes to a company in India (ABC Corporation). The study was designed as mixed-methods, single-case study with a mix of quantitative and qualitative methods. Quantitative data were gathered through surveys that helped develop a picture of patterns in areas such as communication problems, preferred methods of communication, and patterns of escalation while qualitative data from 45 personal interviews and one group interview provided insights into the nature and resolution of communication dissonances.

The results supported that ongoing training in cross-cultural communication is needed at all stages of the outsourcing cycle, with an emphasis on communication skills in the early stages of the process. Also, technical communication such as Cross' Theory which provided frameworks for assessing and addressing communication problems can offer solutions to these problems.

9. Chang , C. Yen , See-Pui Ng , and Chang (2012)

“An Analysis of IT/IS Outsourcing Provider Selection for Small- and Medium-Sized Enterprises in Taiwan”

The aim of this research was to investigate the selection process of IT/IS outsourcing provider at small and medium sized enterprises in Taiwan, to show how Taiwanese enterprises evaluate their potential outsourcing providers and on what criteria.

An approach of two phases was used to evaluate the selection process. “The first phase used the Delphi method, while the second used AHP. The process of best vendor selection is the outcome of the Delphi test, then the AHP allowed multiple criteria and both quantitative and qualitative considerations to be included”.

Researchers finally came up with a model to assess the selection of IT/IS outsourcing service providers and help in future provider's selection. "The model consists of 19 factors distributed into four dimensions , such as 'capacity of professional skills' , 'capacity of service' , 'capacity of operation' and 'external evaluation'; each factor has a weight to reflect priority".

This research is relevant to my research by the similarity of the selection process but different by the approach and the criteria.

10. Govindaraju and Lukman (2012)

"The Development of Model on Operational Capabilities of IT Vendor serving Offshore Services: case study in an Indonesian IT company"

This study aimed at determining operational capabilities that are important for the success of the vendor like human resource, processes, client-specific capabilities, and technological capability. The focus on outsourcing in Indonesia and methods was to improve the operational capabilities of the Indonesian software vendor to be able to compete with foreign vendors. After developing a conceptual model, empirical investigation was executed using a case study approach. The company under focus had performed a good effort to improve human resources capability, client-specific capability, and technology capability and more effort should be put on developing the process capability. They discovered some mechanism for the development of the capabilities like hiring management and project managers with overseas experience and supporting effective communication by developing a branch office (representative).

Factors like skilled human resources, Appropriate Infrastructure, Communication, and quality of product and services have attained extensive attention in my research.

11. Ahmad, Khan and Niazi (2011)

"Factors influencing Clients in the Selection of Offshore Software Outsourcing Vendors: An Exploratory Study using a Systematic Literature Review"

This paper is aimed to improve the attractiveness of vendor organizations in offshore software development outsourcing projects by addressing the factors that make a vendor attractive for a client. They used a systematic literature review (SLR)

process as the main approach for data collection which is based on Systematic Review Protocol. Their results were distributed on three criteria: continent, type of organization, and decade. They indicated that “appropriate infrastructure, cost-saving, and skilled human resource are common in three continents, namely Asia, North America and Europe. Also, appropriate infrastructure, cost-saving, and quality of products and services are common in three types of organizations (small, medium and large). They also identified appropriate infrastructure, cost-saving, quality of products and services, and skilled human resource as being common in the two decades (1990–1999 and 2000–mid 2008)”.

This research will be the base for my research. Some of these factors will be analyzed and implemented on my sample of companies.

12. Ahmad, Khan and Niazi (2011)

“Barriers in the Selection of Offshore Software Development Outsourcing Vendors: An Exploratory Study using a Systematic Literature Review”

This is a complementary study for the previous one. Its goal was to address various barriers that have negative impact on attractiveness of vendor organizations in offshore software development outsourcing projects. They used a systematic literature review (SLR) process as the main approach for data collection which is based on Systematic Review Protocol. The results were distributed on three criteria: continent, type of organization, and decade. ”To summarize the barriers : ‘language and cultural barriers’, ‘country instability’, ‘lack of project management’, ‘lack of protection for intellectual property rights’ and ‘lack of technical capability’ “. Only one common barrier exist in three types of organizations (i.e. small, medium and large) which is ‘language and cultural barriers’. They did not identify any common frequently cited barrier in three continents (Asia, North America and Europe) and in two decades (1990–1999 and 2000–mid 2008).

This research also formed the base for my research by which deriving some barriers and apply them on my sample of companies.

13. Jiang, Moon , and Yao (2011)

“Outsourcing versus Joint Venture from Vendor’s Perspective”

The goal of this research was to investigate whether a vendor firm should sign an outsourcing contract with its client or establish a joint venture¹ when the market price and the vendor’s operation cost are uncertain. They developed real option models based on the real options theory. They found out that the feasibility of an outsourcing contract to the vendor increases with a higher contract price offered by the client, and the feasibility of a joint venture depends on market conditions. Here it’s obvious the effect of cost element on IT outsourcing projects.

14. Schlosser, Wagner, Weitzel, and Beimborn(2010)

“The Role of Internal Business/IT Alignment and IT Governance for Service Quality in IT Outsourcing Arrangements”

This research contributed in understanding of how IT governance and business/IT alignment are interrelated in regard to explain superior service quality (SQ) in IT outsourcing relationships. Also, it aims at a more granular picture of IT governance through the examination of various formal control processes in an outsourcing relationships. Outsourcing success is measured by the service quality delivered by the outsourcing provider.

The researchers used an empirical survey (questionnaires) conducted among the 1,000 largest German banks. Data collection took place on April till October 2008. They targeted the Chief Information Officer (CIO) in each bank by phone to ask for participation. They received 171 completed and analyzable questionnaires.

The findings stated that there is a positive effect of alignment on service quality that is mediated by formal control processes in an IT governance context.

Moreover, when the client has enough knowledge about IT and business requirements, the client will have good opportunity to adjust services and negotiate for better services provided by vendor and best fit the current and future business

¹ Joint Venture: the client and its vendor(s) proportionally share some of their resources, capabilities and profits.

needs. Another important finding was the insignificance of the direct link between business/IT alignment and service quality.

This research basically investigated the role of IT governance on quality of service in ITO. IT governance is an embedded component of the researcher definition of appropriate infrastructure in ITO.

15. Abufardeh & Magel (2010)

“The Impact of Global Software Cultural and Linguistic Aspects on Global Software Development Process (GSD): Issues and Challenges”

Nowadays, IT outsourcing is becoming a business trend which form the Global Software Development. Global software development (GSD) is two-step internationalization, then localization process in which the main objective is separating the software into two components: a culture-independent and a culture-dependent component.

When developing a GSD product, several aspects related to end users' linguistic and cultural requirements must be estimated. Issues are such as translation, text representation, data formatting, data processing, user interface and the core functionality issues.

This study took a critical look at the Hofstede cultural model which is a framework that addresses culture aspects of software on an organizational level.

They investigated “the effects of Hofstede's cultural dimensions on four critical development activities: choice of the development model most suited for the project, user interface design, core functionality design, and usability testing”.

They found that “GSD is multi-site, multilingual, multicultural, and globally distributed. There is a need for more research to address the impact of the cultural and linguistic aspects of global software globally developed. The Hofstede cultural model is not enough and there is a need for a new cultural model”.

16. Annous, Livadas, and Miles(2010)

“Offshore QA: A Framework for Helping Software Development Outsourcing Companies Comply with ISO 9001:2008 (Extended Abstract)”

This research investigated two important variables that affect offshore software development outsourcing process throughout the exploration of quality assurance

process and project management aspects. It proposed a framework to follow by offshore software development outsourcing vendors which facilitate the compliance with ISO 9001.

It has been shown that the miscommunication of original requirements, the inadequate involvement of users, the lack of offshore project management know-how by clients, and poor change controls are among the top 10 risk factors of offshore-outsourced development projects. The proposed solution deals with the planning, development, and reviews and approvals phase, which form the classical software development life cycle. By specifying the role that each site has in each one of the software development phases, and allowing the system to grant / limit employee access to items and actions in project phases accordingly, responsibilities are no longer confusing and the risk introduced by the inexperience in offshore project management should be successfully reduced. The researchers found out that the offshore QA can provide the client with an efficient quality management system in offshore outsourcing environments, where requirements and specification are changing continuously.

17. Abd Ghani, Solemon, and Sahibuddin(2008)

“Requirements Engineering Problems in 63 Software Companies in Malaysia”

This research investigated the Malaysian outsourcing environment that became a hard number in outsourcing world. Throughout exploring requirements problems that reduce the quality of software in 63 software development companies, three main issues were common in most SD companies: late delivery of product, budget over-runs and poor quality products.

The researchers used exploratory survey that explores the Requirements Engineering problems experienced by the organization and state of practice in the field.

Results showed that 63% of requirements problems can be attributed to organizational factors that are external to the requirements process.

The researchers found out that most of the requirement problems are human-based problems that include lack of customer and user communication, lack of developer communication, lack of training, inappropriate skills, lack of define

responsibility, unstable workforce (low staff retention), and poor time and resource allocations. However, the problems that can be called as requirements process-based include complexity of application; undefined Requirements engineering process, requirements stated by customers are not the actual requirements, poor user understanding, incomplete requirements, inconsistent requirements, inadequate requirements traceability, ambiguous requirements and misplaced requirements in a requirements document.

18. Iwami (2008)

“How to measure quality of software developed by subcontractors”

In development organizations in Japan, one of the ways to assure software quality is the acceptance testing conducted by client (outsourcers) for all the programs delivered from subcontractors. This research aimed to find out a better method to test quality of delivered software. Thus, for estimating the quality of programs, the researcher “developed a measure that we can get without changing development process in subcontractor largely, and they found that it was very effective”. They decided to use the unsuccessful ratio as their methodology. “The unsuccessful ratio in the first time testing pass” is effective measure to identify defect-prone modules. The findings of this research showed that, the modules with high unsuccessful ratios were developed by inexperienced developers. Additionally, process data availability is mandatory and should be in the criteria for selecting subcontractors. It has been showed that good outsourcer address the subcontractor quality improvement practices to enhance software quality.

19. Lin Lee (2008)

“The Off-shoring Strategies Layout of Taiwan’s ICT/IT Industry in China”

Taiwan has already become the largest source of trade deficit for Mainland China although the lack of political understanding between two countries.

This study aimed to assess how Taiwan IT manufacturers launched investment patterns, the forms of division of labor, and the arrangements of production, R&D, and marketing.

“Taiwanese government authorities proposed strategic policy to compete the rising of Mainland China, especially when facing the tendency toward internationalization and the rising production cost”

Taiwan’s information and electronic industries have been investing in China since 1990; the range of investment began with early production activities, marketing activities after 1995 and then the fields of R&D. Nowadays, Taiwan has become the largest source of trade deficit for Mainland China.

This paper ensured the importance of marketing and communication activities, and management activities. It showed how the political situation could not prevent trade from continuing.

20. Dutta & Roy(2005)

“Offshore Outsourcing: Counteracting Forces and Their Dynamic Effects”

The aim was to explore the multiple factors that interact to drive offshoring that can be outsourcing contract or joint venture contract. The factors were either enhancing or inhibiting to outsourcing. Cheap, educated and technically qualified labor were enhancing factors while added complexity of managing at a distance and the potential loss of control besides the cultural differences were inhibiting factors.

However, for the outsourcee country, offshoring means a steady source of high paying jobs that raise the economy in addition to a considerable amount of national pride in that human capital is seen as being competitive.

The chosen methodology was the system dynamics methodology to build a two-country simulation model of offshoring growth that captures the interaction among its major drivers. “One of the countries is an industrialized country with high labor costs and an advanced IT sector such as USA .The second is a developing country in which labor costs are low, there is a growing pool of technically qualified labor, and is otherwise suitable for transfer of IT work such as India”.

This model was a viable model that can be used by policy makers to assess the impact of different alternatives. For example, cost factor is not the only reason to offshore. Some perform offshore to take advantage of time zone differences. Others perform offshore in order to be able to focus on core competencies. Not to mention the dynamics of offshoring IT enabled business processes is somewhat different from that of discrete project oriented IT work.

3.3 Comments

This chapter sheds light on the previous studies discussed and address various dimensions of the IT outsourcing in different countries and places such as profit and non-profit organizations.

- 1- Previous Studies examined IT outsourcing business strategies in different countries. Some studies used systematic literature review of paper all around the world. Some were conducted in Malaysia, Sweden, Korea, Canada, Thailand, India, Taiwan, Indonesia, Germany, and USA.
- 2- Some studies examined issues related to vendor's perspective and the relation with clients.
- 3- Some examined the success of ITO process, and driving factors of success.
- 4- Others examined the failure of such projects, reasons of failure, and risks associated with applying ITO.
- 5- Some studies approached the competitiveness of vendors and the clients selection decisions.
- 6- Some approached the factors attracting clients, success factors of ITO projects or enhancing factors. Besides, the barriers of ITO projects have been mentioned in some studies, the inhibiting factors, and operational capabilities needed for good ITO projects. For instance, cultural issues, quality standards, IT governance, cost related issues, communication problems have been mentioned in a number of previous studies.

The strength of this research comes from two published studies that it depends on. The researcher stems its variables and applies it on the Gaza Strip case. The researcher believes this study will fill the gap and examines the factors that impact competitiveness of Palestinian vendors' affecting clients' selection of IT outsourcing vendor in Palestine. The aim is to provide IT companies in the Gaza strip with knowledge about the market, competitors, driving factors and barriers.

Driving Factors are: Appropriate Infrastructure, Cost Saving, Skilled Human Resource, and Quality of products and services. The Barriers are: Language &

Cultural Barriers, lack of Project Management, Country Instability, and Communication Gap.

This study explores the IT outsourcing from the vendor perspective. It aims at exploring the driving factors that lead an offshore client to select a possible IT vendor based on its competitiveness in the Gaza Strip, Palestine. It also aims at exploring the barriers that prevent an offshore client from selecting a possible IT vendor. These driving factors and barriers work together to increase the competition among IT vendors.

This study is one of the first studies that evaluate outsourcing experience in the Gaza Strip. In addition, the variables which this study focuses on are not mentioned as a set in one of the any studies in Palestine. It is one of the first studies that explores the driving factors and barriers that impact the competitiveness of ITO projects in Gaza Strip. Besides, it proposes a model that is more capable of explaining the success and failure of ITO projects.

The driving factors and barriers, which the researcher selects for her study, are stemmed from an internationally two studies (Khan et al., 2011) & (Niazi et al., 2011) that use systematic literature review approach in determining the most important driving factors and barriers in SD outsourcing over the world. This research categorized the factors according to three areas (continent, decade, company size). The researcher selected the factors that are mentioned in Asia Continent and 2000-2009 Decade whether or not have been mentioned in any company size (small, medium, large).

The following table shows the driving factors and barriers in addition to their percentages which refers to the frequency of factor in international studies according to the Systematic Literature Review done by (Khan et al., 2011) & (Niazi et al., 2011).

Table (3.1): Factors and their Frequency

Factors	Frequency
Success Factors	
Appropriate Infrastructure	60%
Cost Saving	69%
Skilled Human Resource	67%
Quality of products and services	57%
Barriers	
Language & Cultural Barriers	56%
lack of Project Management	49%
Country Instability	51%
Communication Gap	44%

Table (3.2) shows each variable and studies that mention each variable.

Table (3.2): Variables and Its sources

	Driving Factors & Barriers	Sources
Driving Factors	Appropriate Infrastructure	Ahmad, Khan and Niazi (2011), Han, Lee, Uk Chun and Seo (2013), Govindaraju and Lukman (2012), and Schlosser, Wagner, Weitzel, Beimborn(2010)
	Cost Saving	Ahmad, Khan and Niazi (2011), Jiang, Moon, and Yao (2011), Bahli and Rivard(2013), and (Dutta & Roy, 2005)
	Skilled Human Resource	Ahmad, Khan and Niazi (2011), Govindaraju and Lukman (2012), (Dutta & Roy, 2005)
	Quality of products and services	Ahmad, Khan and Niazi (2011), (Iwami, 2008), Annous, Livadas, and Miles(2010), and Abd Ghani, Solemon, and Sahibuddin(2008)
Barriers	Language & Cultural Barriers	Ahmad, Khan and Niazi (2011), Abufardeh & Magel (2010), Rusu and Vorontsova(2014), and Dutta & Roy (2005)
	lack of Project Management	Ahmad, Khan and Niazi (2011), Al-Ahmad and Al-Oqaili(2013), Annous, Livadas, and Miles(2010), and (Dutta & Roy, 2005)

	Country Instability	Ahmad, Khan and Niazi (2011), Brege, Chicksand, Nordigården, and Rehme (2013), and (Lin Lee, 2008)
	Communication Gap	Ahmad, Khan and Niazi (2011), Rusu and Vorontsova(2014), Govindaraju and Lukman (2012), Annous, Livadas, and Miles(2010), Abd Ghani, Solemon, and Sahibuddin(2008), Deraman, Hamzah, and Yahaya(2014),

Chapter 4

Research Methodology

Chapter Four: Research Methodology

4.1 Introduction

This chapter addresses the study methodology and detailed procedures. It includes the research design, population and sample, research Instrument, variables measurement, reliability and validity of the instrument, scoring techniques, data-gathering procedures, and the procedure of statistical analysis.

4.2 Research Method

This research used the descriptive analytical approach which is the most used in business and social studies. It aims at investigating the impact of driving factors and barriers on competitiveness of vendor organization in attracting clients in the Gaza Strip.

The researcher followed the qualitative-quantitative methodology where she targeted some of the local Palestinian ITO companies with questionnaire in addition to deep literature review of previous studies.

Thus, the research depend mainly on data collected from primary sources through a structured questionnaire distributed to a selected target from a specific population identified by the researcher for the research purposes. The collected data was analyzed using the Statistical Package for the Social Sciences (SPSS). The secondary sources are books, journal articles and periodicals, reports, and websites.

4.2.1 Duration of the Study

The study has been conducted on the period of July 2015 – August 2016.

4.3 Research Procedures

The following steps outline the strategy of this research that was followed in order to measure the variables in the research question. It involves plan that guided the collection and analysis of data. This research consists of seven phases:

1. The first phase includes identifying the research problem; and developing the research question, objectives and the research plan.

2. The second phase involves reviewing the literature connected with the problem; through a collection of research publications, papers, books textbooks, internet-based information and other documents related to IT outsourcing globally, and regionally.
3. The third phase includes the field survey, in which the unstructured interviews held with some administrative staff of Palestinian Information Communication Technology Association (PICTA), Palestinian Information Technology Associations of Companies (PITA), Faculty of Information Technology' Deanship at Islamic University of Gaza and some administrative staff in Mobaderoon Project , SEED project and Business and Technology Incubator at IUG . The aim was to identify population size. The researcher selected her population based on these interviews with mentioned organizations. PITA representative said that there are 35 IT companies in the Gaza Strip, but they don't have a list of ITO companies only. Therefore the researcher has used purposive sample.
4. The fourth phase was when the researcher developed a structured questionnaire to survey data from research sample. This step involves: (1) the establishment of an initial structured questionnaire that measure the research's variables, (2) generating the final version of the structured questionnaire after it was judged and reviewed by nine referees from IUG (referees are distributed to Faculty of Information Technology, Faculty of Commerce, Faculty of Engineering).
5. The fifth phase focused on distributing the questionnaires to collect the required data. 148 questionnaires were distributed to the research population; 124 were received.
6. The sixth phase was concerned with the analyzing of data gathered from questionnaire. The Statistical Package for the Social Sciences (SPSS) was used to perform the required analysis.
7. The seventh phase includes compiling the collected data and information in order to reach to conclusion and practical recommendations.

4.4 Data Collection Sources

4.4.1 Secondary Data:

The researcher has used plenty of secondary data sources to justify the problem and gain enough knowledge regarding the outsourcing particularly in the Information Technology field globally, regionally and locally.

The used secondary included:

1. Scientific journals and academic magazines
2. Thesis and dissertations accessed through the universities' libraries.
3. Text books and research papers.
4. Interviews: It is used to gather both reliable and valid data relative to the study population and reality of ITO companies in the Gaza Strip.
5. Internal documents of the investigated companies such as annual reports, news.
6. Internet articles and websites.

The researcher did her best to obtain the mentioned data; but she could not find any written study in Arabic regarding the research topic.

4.4.2 Primary Data

Primary Data was collected through a questionnaire survey. Survey is defined as "investigation of the opinions, behavior, etc. of a particular group of people, which is usually done by asking them questions" (Hornby, Cowie , & Lewis, 2007).

The data which was collected from the questionnaire survey was analyzed using descriptive statistics capability of the SPSS program to calculate ratios and use appropriate statistical tests in order to process the raw data and to transfer them to useful information that can be interpreted to reach connotations and valuable indicators.

4.5 Research Population

The research population consists of all managers, team leaders, system analysts, software developers, and marketing and public relations officers working in ITO companies in the Gaza Strip.

The study took place inside ITO companies in the Gaza Strip. Almost these are the companies: Work without Borders , Haweya, Nebras , iPhone Alsham, Atyaf

, Mezyan, Divvat, Shift ICT, NewLine, Medad, Rozen, Digital Cloud, I-Soft, Perfect Solution, Hope, and Magic Lens.

The total population is about (200) employees distributed in to about seventeen ITO companies listed in Table (4.1):

Table (4.1): Population Size

No.	Company Name	Population Size	Sample Size
1.	Work without Borders	30	30
2.	Haweya	20	14
3.	Nebras	5	5
4.	IPhone-Alsham(6)	6	6
5.	Atyaf	4	4
6.	Mezyan	11	6
7.	Divvat	9	5
8.	Shift ICT	8	4
9.	NewLine	12	5
10.	Medad	7	4
11.	Rozen	11	4
12.	Digital Cloud	12	6
13.	I-Soft	5	4
14.	Perfect Solution	4	4
15.	Hope	20	7
16.	MagicLens	6	5
17.	Unit One	30	Refused
Total		200	124

It is worth mentioning that some employees were excluded due to lack of direct influence on company practices in ITO.

4.6 Research Sample

The sample size needed of this research is 132 employees. The researcher used the purposive sample to distribute the questionnaire to the research sample.

After confirming the validity and reliability of the questionnaire, 148 questionnaires were distributed to the sample, 124 questionnaires valid for statistical analysis with response rate 82.5 %.

The appropriate sample size was calculated using the following site: <http://www.surveysystem.com/sscalc.htm#one> .

As the research population =200, the sample size needed are 132 questionnaires according to the site mentioned above. However, the researcher could collect only 124 questionnaires.

4.7 Research Instruments

The study was conducted using a self-structured questionnaire as a research instrument. Initially the questionnaire was developed by the researcher in Arabic (Appendix A) and reviewed by 11 referees (Appendix C) in the field of business administration, Information Technology , Computer Engineering and statistics.

After modification of the questionnaire according to the referees' recommendations it was distributed to the employees who are working in the investigated companies. A covering letter explaining the purpose of the questionnaire, the aim of the study and the privacy of information has been provided to the questionnaire in order to encourage more responses. The questionnaire has been translated into English for documentation purposes (Appendix B). The questionnaire questions adopt the scale 1-10 (where "10" means strongly agree).

The questionnaire was composed of three main parts:

Part I: personal information which includes gender, age, Job Title, years of Experience in IT field, and educational level.

Part II: company profile which includes work field, sales, years of experience, and company size.

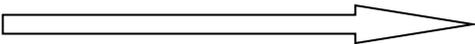
Part III: includes 67 paragraphs grouped into 9 sections that include questions about:

1. Appropriate Infrastructure
2. Cost Saving
3. Skilled Human Resource
4. Quality of products and services
5. Language and Culture
6. Project Management
7. Political Instability
8. Communication
9. Competitiveness of vendors

4.8 Statistical Analysis

Data Measurement

In order to be able to select the appropriate method of analysis, the level of measurement must be understood. For each type of measurement, there is/are an appropriate method/s that can be applied and not others. In this research, scale 1-10 is used.

Item	<i>Strongly Disagree</i>									<i>Strongly agree</i>
Scale	1	2	3	4	5	6	7	8	9	10

4.8.1 Test of Normality

The One-Sample Kolmogorov-Smirnov test procedure compares the observed cumulative distribution function for a variable with a specified theoretical distribution, which may be normal, uniform, Poisson, or exponential. The Kolmogorov-Smirnov Z is computed from the largest difference (in absolute value) between the observed and theoretical cumulative distribution functions. This goodness-of-fit test tests whether the observations could reasonably have come from the specified distribution. Many parametric tests require normally distributed variables. The one-sample Kolmogorov-Smirnov test can be used to test that a variable of interest is normally distributed (Henry & Thode, 2002).

Table (4.2) shows the results for Kolmogorov-Smirnov test of normality. From Table (4.2), the p-value for each variable is greater than 0.05 level of significance, then the distributions for these variables are normally distributed. Consequently, parametric tests should be used to perform the statistical data analysis.

Table (1.2):Kolmogorov-Smirnov test

No.	Field	Kolmogorov-Smirnov	
		Statistic	P-value
	Level of Appropriate Infrastructure	0.924	0.361
	Cost Impact on Client	0.694	0.721
	Level of Skilled Human Resource	0.589	0.878
	Level of quality of services and products	0.560	0.912
	Level of language and Culture	0.541	0.932
	Level of Project Management	0.850	0.466
	Level of political and Legal instability	0.696	0.718
	Level of Communication	0.409	0.996
	Driving factors	0.518	0.951
	Level of Company Competitiveness	0.702	0.707
	All items of the questionnaire	0.641	0.806

4.9 Statistical Analysis Tools

The researcher used data analysis both qualitative and quantitative data analysis methods. The Data analysis is made utilizing (SPSS 23). The researcher utilized the following statistical tools:

1. Kolmogorov-Smirnov test of Normality.
2. Pearson correlation coefficient for Validity.
3. Cronbach's Alpha for Reliability Statistics.
4. Frequency and Descriptive analysis
5. Stepwise regression.
6. Parametric Tests (One-sample T test, Independent Samples T-test, Analysis of Variance).

T-test is used to determine if the mean of an item is significantly different from a hypothesized value 6. If the P-value (Sig.) is smaller than or equal to the level of

significance, $\alpha = 0.05$, then the mean of an item is significantly different from a hypothesized value 6. The sign of the Test value indicates whether the mean is significantly greater or smaller than hypothesized value 6. On the other hand, if the P-value (Sig.) is greater than the level of significance, $\alpha = 0.05$, then the mean an item is insignificantly different from a hypothesized value 6.

The Independent Samples T-test is used to examine if there is a statistical significant difference between two means among the respondents toward –The Driving factors and barriers that impact competitiveness of vendors (ITO companies) in the Gaza Strip due to (gender).

The One- Way Analysis of Variance (ANOVA) is used to examine if there is a statistical significant difference between several means among the respondents toward the Driving factors and Barriers that impact competitiveness of vendors (ITO companies) in the Gaza Strip due to (Age, Job Title, Years of Experience in IT field, Educational Level, company Years of Experience and Company Size).

4.10 Validity & Reliability of the Study Instruments

Validity of Questionnaire

Validity refers to the degree to which an instrument measures what it is supposed to be measuring. Validity has a number of different aspects and assessment approaches. Statistical validity is used to evaluate instrument validity, which include internal validity and structure validity.

Pilot Study:

A pilot study for the questionnaire was conducted before collecting the results of the sample. It provides a trial run for the questionnaire, which involves testing the wordings of question, identifying ambiguous questions, testing the techniques that used to collect data, and measuring the effectiveness of standard invitation to respondents.

4.10.1 Internal Validity

Internal validity of the questionnaire is the first statistical test that used to test the validity of the questionnaire. It is measured by a scouting sample, which

consisted of 50 questionnaires through measuring the correlation coefficients between each item in one field and the whole field.

Table (4.3) clarifies the correlation coefficient for each item of the "level of Appropriate Infrastructure" and the total of the field. The p-values (Sig.) are less than 0.05, so the correlation coefficients of this field are significant at $\alpha = 0.05$, so it can be said that the items of this field are consistent and valid to be measure what it was set for.

Table (4.3): Correlation coefficient of each item of "level of Appropriate Infrastructure" and the total of this field

No.	Item	Pearson Correlation Coefficient	P-Value (Sig.)
1.	The company has high tech and modern equipment	.613	0.000*
2.	The company offer programs, software, applications and scientific database in a legal way	.580	0.000*
3.	The company has electricity and all types of communication tools.	.826	0.000*
4.	Company follow up with technological developments and provide it for its staff	.761	0.000*
5.	Company provide good internet service with high speed for staff	.544	0.000*
6.	Company applies IT governance aspects	.607	0.000*

* Correlation is significant at the 0.05 level

Table (4.4) clarifies the correlation coefficient for each item of the "Cost Impact on Client" and the total of the field. The p-values (Sig.) are less than 0.05, so the correlation coefficients of this field are significant at $\alpha = 0.05$, so it can be said that the items of this field are consistent and valid to measure what it was set for.

Table (4.4):Correlation coefficient of each item of "Cost Impact on Client" and the total of this field

No.	Item	Pearson Correlation Coefficient	P-Value (Sig.)
	Company follows a standard way in pricing services and products	.602	0.000*
2.	Company price fit all customers from all countries	.627	0.000*
3.	The competition among outsourcing companies affect the price proposed by the company	.583	0.000*
4.	The company includes with contract the cost of project management , risk management, signing contracts ...etc	.471	0.000*
5.	There is a large difference on price provided by the company and price provided in client country	.524	0.000*

* Correlation is significant at the 0.05 level

Table (4.5) clarifies the correlation coefficient for each item of the "level of Skilled Human Resource" and the total of the field. The p-values (Sig.) are less than 0.05, so the correlation coefficients of this field are significant at $\alpha = 0.05$, so it can be said that the items of this field are consistent and valid to measure what it was set for.

Table (4.5): Correlation coefficient of each item of "level of Skilled Human Resource" and the total of this field

No.	Item	Pearson Correlation Coefficient	P-Value (Sig.)
	Company conducts training courses to build employees capabilities	.661	0.000*
2.	Company follow a transparent and professional recruitment process in selecting new employees	.538	0.000*
3.	Company send a mission of its staff abroad to build their capacities	.799	0.000*
4.	Company contract with expert trainers from outside Gaza	.782	0.000*
5.	Company allocate from budget for training and on-job training	.763	0.000*
6.	Every team leader has good skills in project management and communication	.503	0.000*
7.	Company gives its employees fair incentives and wages.	.311	0.025*

* Correlation is significant at the 0.05 level

Table (4.6) clarifies the correlation coefficient for each item of the "Level of quality of services and products" and the total of the field. The p-values (Sig.) are less than 0.05, so the correlation coefficients of this field are significant at $\alpha = 0.05$, so it can be said that the items of this field are consistent and valid to measure what it was set for.

Table (4.6): Correlation coefficient of each item of "Level of quality of services and products" and the total of this field

No.	Item	Pearson Correlation Coefficient	P-Value (Sig.)
	Company conducts its project within proposed budget and on time	.616	0.000*
2.	Company provide products that satisfy customer needs	.696	0.000*
3.	Company provide its services and products according to specifications agreed upon	.860	0.000*
4.	Company contacts customer immediately when any change to work is required	.880	0.000*
5.	Company provides services up to quality measures of services (responsiveness, tangible, assurance... etc)	.685	0.000*
6.	Company evaluates its services and takes advantage of feedback	.601	0.000*
7.	Company use specific criteria to assure quality of outsourcing services such as ISO 90001	.544	0.000*
8.	Company protects intellectual property and copyrights of software and applications.	.679	0.000*

* Correlation is significant at the 0.05 level

Table (4.7) clarifies the correlation coefficient for each item of the "level of language and Culture" and the total of the field. The p-values (Sig.) are less than 0.05, so the correlation coefficients of this field are significant at $\alpha = 0.05$, so it can be said that the items of this field are consistent and valid to measure what it was set for.

Table (4.7): Correlation coefficient of each item of "level of language and Culture" and the total of this field

No.	Item	Pearson Correlation Coefficient	P-Value (Sig.)
	Company recruits who has good English skills	.581	0.000*
2.	Company is aware of cultural differences when designing products and services	.698	0.000*
3.	Company is aware of differences in off-days, holidays, and time.	.423	0.003*
4.	Company employs women without discrimination	.479	0.001*
5.	Company enforces outsourcing culture and encourage telework in community	.447	0.002*
6.	Client notices the commitment towards work and deadlines	.644	0.000*

* Correlation is significant at the 0.05 level

Table (4.8) clarifies the correlation coefficient for each item of the “Level of Project Management” and the total of the field. The p-values (Sig.) are less than 0.05, so the correlation coefficients of this field are significant at $\alpha = 0.05$, so it can be said that the items of this field are consistent and valid to measure what it was set for.

Table (4.8): Correlation coefficient of each item of "Level of Project Management" and the total of this field

No.	Item	Pearson Correlation Coefficient	P-Value (Sig.)
	Company follows the methodology of planning, design, execution, maintenance and documentation of projects.	.741	0.000*
2.	Company provides maintenance services within project scope.	.735	0.000*
3.	Company manages the process of documentation and archiving of all activities of project.	.878	0.000*
4.	Company offers required knowledge sources to all company's member	.926	0.000*
5.	Company makes data available to employees within boundaries of work needed	.900	0.000*
6.	Company manages projects according to methodology suggested by clients.	.678	0.000*
7.	Company follow suitable methodology of management based on project type	.649	0.000*
8.	Company applies the CMMI framework	.752	0.000*

* Correlation is significant at the 0.05 level

Table (4.9) clarifies the correlation coefficient for each item of the "level of political and legal instability" and the total of the field. The p-values (Sig.) are less than 0.05, so the correlation coefficients of this field are significant at $\alpha = 0.05$, so it can be said that the items of this field are consistent and valid to measure what it was set for.

Table 2: Correlation coefficient of each item of "level of political and legal instability" and the total of this field

No.	Item	Pearson Correlation Coefficient	P-Value (Sig.)
	Governmental procedures facilitate and promote IT outsourcing	.645	0.000*
2.	The government encourage ITO companies and mitigate taxes and laws	.749	0.000*
3.	Ministry of Economy enact special laws to facilitate ITO companies' establishment.	.904	0.000*
4.	ITO companies is not affected by inspection of data from official bodies	.864	0.000*
5.	Instable political situation in Gaza doesn't affect the company work and development	.837	0.000*
6.	The government provides robust infrastructure in the field of Information technology	.827	0.000*
7.	The enacting of a law for ITO to facilitate and protect will help in the spread of outsourcing services.	.775	0.000*

* Correlation is significant at the 0.05 level

Table (4.10) clarifies the correlation coefficient for each item of the "Level of Communication" and the total of the field. The p-values (Sig.) are less than 0.05, so the correlation coefficients of this field are significant at $\alpha = 0.05$, so it can be said that the items of this field are consistent and valid to measure what it was set for.

Table (4.10): Correlation coefficient of each item of "Level of Communication" and the total of this field

No.	Item	Pearson Correlation Coefficient	P-Value (Sig.)
	Company utilize different tools to communicate with client (email - fax- Telephone- video conference).	.382	0.008*
2.	Company contact client immediately and phase by phase to follow up	.622	0.000*
3.	The client-desires are clearly understood before the start of work	.707	0.000*
4.	The company holds short and long-term relationships with clients	.847	0.000*
5.	The contact with clients continues after the end of service.	.719	0.000*
6.	The company uses the Bridge engineer(company representative) in the country of client	.586	0.000*
7.	Company uses communication tools that are confidential, secure, safe and private in data transfer	.665	0.000*
8.	Company utilizes all marketing tools to promote its services and products	.732	0.000*

* Correlation is significant at the 0.05 level

Table (4.11) clarifies the correlation coefficient for each item of the "Level of Company Competitiveness" and the total of the field. The p-values (Sig.) are less than 0.05, so the correlation coefficients of this field are significant at $\alpha = 0.05$, so it can be said that the items of this field are consistent and valid to measure what it was set for.

Table (4.11): Correlation coefficient of each item of "Level of Company Competitiveness" and the total of this field

No.	Item	Pearson Correlation Coefficient	P-Value (Sig.)
	Company Sales are increasing yearly	.858	0.000*
2.	The strengths of the company are enough to compete in the market	.896	0.000*
3.	The competitive position of the company has continues to improve	.902	0.000*
4.	Company has Return on investment higher than its competitors	.792	0.000*

No.	Item	Pearson Correlation Coefficient	P-Value (Sig.)
5.	Market Share of the company is higher than the rest of competitors	.837	0.000*
6.	Market Share is increasing year by year	.796	0.000*
7.	Company is distinguished by its brand awareness in the market	.798	0.000*
8.	Company clients has customer loyalty to company products and services.	.783	0.000*
9.	Company has strategic plan to increase competitiveness	.794	0.000*
10.	Company has marketing plan to increase competitiveness	.786	0.000*

* Correlation is significant at the 0.05 level

4.10.2 Structure Validity of the Questionnaire

Structure validity is the second statistical test that used to test the validity of the questionnaire structure by testing the validity of each field and the validity of the whole questionnaire. It measures the correlation coefficient between one field and all the fields of the questionnaire that have the same level of scale.

Table (4.12) clarifies the correlation coefficient for each field and the whole questionnaire. The p-values (Sig.) are less than 0.05, so the correlation coefficients of all the fields are significant at $\alpha = 0.05$, so it can be said that the fields are valid to be measured what it was set for to achieve the main aim of the study.

Table (4.12): Correlation coefficient of each field and the whole of questionnaire

No.	Field	Pearson Correlation Coefficient	P-Value (Sig.)
1.	Level of Appropriate Infrastructure	.558	0.000*
2.	Cost Impact on Client	.455	0.003*
3.	Level of Skilled Human Resource	.495	0.001*
4.	Level of quality of services and products	.775	0.000*
5.	Level of language and Culture	.461	0.001*
6.	Level of Project Management	.789	0.000*
7.	Level of political and Legal instability	.642	0.000*
8.	Level of Communication	.727	0.000*
	Driving factors	.985	0.000*
	Level of Company Competitiveness	.856	0.000*

* Correlation is significant at the 0.05 level

4.10.3 Questionnaire Reliability

The reliability of an instrument is the degree of consistency which measures the attribute; it is supposed to be measuring (George and Mallery, 2006). The less variation an instrument produces in repeated measurements of an attribute, the higher its reliability. Reliability can be equated with the stability, consistency, or dependability of a measuring tool. The test is repeated to the same sample of people on two occasions and then compares the scores obtained by computing a reliability coefficient (George and Mallery, 2006). To insure the reliability of the questionnaire, Cronbach's Coefficient Alpha should be applied.

Cronbach's Coefficient Alpha

Cronbach's alpha (George & Mallery, 2006) is designed as a measure of internal consistency, that is, do all items within the instrument measure the same thing? The normal range of Cronbach's coefficient alpha value between 0.0 and + 1.0, and the higher values reflects a higher degree of internal consistency. The Cronbach's coefficient alpha was calculated for each field of the questionnaire.

Table (4.13) shows the values of Cronbach's Alpha for each field of the questionnaire and the entire questionnaire. For the fields, values of Cronbach's Alpha were in the range from 0.625 and 0.947. This range is considered high; the result ensures the reliability of each field of the questionnaire. Cronbach's Alpha equals 0.946 for the entire questionnaire which indicates an excellent reliability of the entire questionnaire.

Table (4.13):Cronbach's Alpha for each field of the questionnaire

No.	Field	Cronbach's Alpha
1.	Level of Appropriate Infrastructure	0.698
2.	Cost Impact on Client	0.696
3.	Level of Skilled Human Resource	0.769
4.	Level of quality of services and products	0.833
5.	Level of language and Culture	0.625
6.	Level of Project Management	0.910
7.	Level of political and Legal instability	0.909
8.	Level of Communication	0.798
	Driving factors	0.921
	Level of Company Competitiveness	0.947
	All items of the questionnaire	0.946

The Thereby, it can be said that the researcher proved that the questionnaire was valid, reliable, and ready for distribution for the population sample.

Chapter 5

Data Analysis and Discussion

Chapter Five: Data Analysis and Discussions

5.1 Introduction

This chapter includes detailed description of the findings resulted from applying the statistical tests on the collected data from the questionnaires. The collected data of the respondents is presented and the findings are described and discussed in three main parts:

- The first part tackles the analysis of the personal information and company profile of the questionnaire respondents.
- The second part applies the statistical tests indicated in chapter 4: (Statistical Analysis on the collected data from questionnaire respondents). The overall results are compared with the previous studies results.
- The third part testifies the study hypothesis. The findings of this test will be discussed and compared with previous studies results.

5.2 Demographic Data Analysis

5.2.1 Personal Information

Table (5.1) shows the personal information distribution among the sample.

Table (5.1): Personal Information (N=124)

Personal Information		Frequency	Percent
Gender	Male	86	69.4
	Female	38	30.6
Age	less than 25years	37	41.1
	25 – less than 30 years	42	46.7
	30 years and more	11	12.2
Job Title	Manager	11	8.9
	Developer	34	27.4
	Team Leader	13	10.5
	System Analysis	5	4.0
	Marketing & Public Relations Officer	9	7.3
	Other	52	41.9
Years of Experience in IT field	less than 3 years	30	27.5
	3 – less than 6 years	55	50.5
	6 years and more	24	22.0
Educational Level	Secondary School	1	0.8
	Diploma	15	12.1
	Bachelor Degree	94	75.8
	Master	14	11.3
	Degree others	-	-

Table (5.1) shows that 69.4% of the samples are males and 30.6% are females which indicate the dominance of male in IT outsourcing field. The result is agreed with International Telecommunication Union (ITU) report that shows technology industries are commonly known to be male dominate and the participation of women in information technology design and development is generally low (Sanou, 2016). The researcher **attributes** that to the too much commitments of women towards their families inside the home which decrease the work opportunities. However, the society culture prefers jobs in education field for women instead of working with companies in ICT sector.

Also, it is obvious from Table (5.1) that the majority of the surveyed sample is from age below 30 years (87.8%) and (12.2%) are above 30 years old, which indicates that the majority of employees in ICT sector are youth. The researcher **attributes** that to the relatively modern and developed IT field that require keeping pace with latest innovations in the field. Youth always has the interest in technology and keeping pace with latest tools and skills.

Regarding job title attribute, Table (5.1) shows that 8.9% of samples are managers, 27.4% are developers, 10.5% are team leaders, 4.0% are system analysts, 7.3% are marketing & public relations officers and the rest are from different disciplines. This shows the sample includes people from various IT disciplines and different managerial levels that impact the company decision making in critical issues.

With regard to years of experience in IT field, Table (5.1) shows that 27.5% of sample has less than three years of experience, 50.5% has between 3-6 years of experience and 22% of the sample has 6 years or above of experience in IT field. The researcher **attributes** the results to the relatively modern ICT sector that appear in mid-nineties and enter Palestine recently. More, the size and kind of projects are in the beginning yet and they are developing as well as staff IT experience increasing.

In addition, Table (5.1) shows the educational level of 75.8% is Bachelor degree holders, 12.1% are diploma holders, 11.3% are master degree holders. The result shows that sample members have different qualifications. The researcher

attributes the majority of sample are Bachelor degree holders to the reason that ITO jobs are technical work that needs the technical experience and basic academic knowledge available in diplomas and bachelor degrees.

5.2.2 Company Profile

Table (5.2) shows the company profile distribution among the sample.

Table (5.2): Company profile

Company Profile		Frequency	Percent
Work Field	Software Development	83	66.9
	Graphic Design	56	45.2
	Maintenance	3	2.4
	Data Entry	8	6.5
	Others	21	16.9
Sales	Services	101	86.3
	Products	35	29.9
	Consulting Services	18	15.4
Years of Experience	less than 3 years	14	14.0
	3 – less than 6 years	51	51.0
	6 years and more	35	35.0
Company Size (based on number of employees)	Small	59	47.6
	Medium	48	38.7
	Large	17	13.7

Table (5.2) shows the company profile data. According to work field attribute, it is obvious the majority of surveyed companies 66.9% are working in software development (SD), 45.2% are in graphic design, 2.4% are in maintenance, 6.5% are in data entry, and 16.9% are in other fields. The researcher attributes that the SD is the most common trend of ICT fields around the world. According to (PITA, 2015), SD is 50% of ICT services in Palestine. As well as SD don't require high specification tools and equipment to start.

Table (5.2) also shows that most of companies' sales are services 86.3%, 29.9% are products, and 15.4% are consulting services.

Regarding the company years of experience, it is shown from table (5.2) that 14% of companies surveyed are less than three years, 51% between three and six years, and 35% are six years and more. The majority are between three and six years.

This is attributed to ICT sector is a new trend and businesses that use such trend is relatively new in Palestine.

According to company size based on the number of employees, it is shown from table (5.2) that 47.6% are small, 38.7% are medium and 13.7% are large. It is obvious that small and medium companies are the majority. The researcher attributed that to yet even small type of ITO projects.

5.3 Data Analysis for each field

In this section, the researcher describes the collected data from the second part of questionnaire. These findings will be discussed and interpreted to answer the study questions and testify its hypothesis

5.3.1 First Field: Appropriate Infrastructure

Table (5.3): Means and Test values for “level of Appropriate Infrastructure”

	Item	Mean	S.D	Proportional mean (%)	Test value	P-value (Sig.)	Rank
1.	The company has high tech and modern equipment	7.38	2.44	73.79	6.28	0.000*	4
2.	The company offer programs, software, applications and scientific database in a legal way	7.10	2.74	70.97	4.45	0.000*	5
3.	The company has permanent electricity and good quality communication tools.	8.29	1.97	82.93	12.88	0.000*	1
4.	Company follow up with technological developments and provide it for its staff	7.96	2.05	79.59	10.58	0.000*	3
5.	Company provide good internet service with high speed for staff	7.96	1.71	79.60	12.74	0.000*	2
6.	Company applies IT governance aspects	6.23	2.67	62.31	0.94	0.176	6
	All items of the field	7.50	1.63	75.02	10.27	0.000*	

* The mean is significantly different from 6

Table (5.3) shows the following results:

- The mean of item #3 “The company has permanent electricity and good quality communication tools” equals 8.29 (82.93%), Test-value = 12.88, and P-value = 0.000 which is smaller than the level of significance $\alpha = 0.05$. The sign of the test is positive, so the mean of this item is significantly greater than the hypothesized value 6. We conclude that the respondents agreed to this item.
- The mean of item #6 “Company applies IT governance aspects” equals 6.23 (62.31%), Test-value = 0.94, and P-value = 0.176 which is greater than the level of significance $\alpha = 0.05$. Then the mean of this item is insignificantly different from the hypothesized value 6. We conclude that the respondents (Do not know, neutral) to this item.
- The mean of the field “level of Appropriate Infrastructure” equals 7.50 (75.02%), Test-value = 10.27, and P-value=0.000 which is smaller than the level of significance $\alpha = 0.05$. The sign of the test is positive, so the mean of this field is significantly greater than the hypothesized value 6. We conclude that the respondents agreed to field of “level of Appropriate Infrastructure ”.

Comments

- The result of "Appropriate Infrastructure (75%)" reflects to which degree the ITO companies in Gaza have appropriate and robust infrastructure. Although the difficulties that face businesses and companies in the Gaza Strip, but companies have good technologies, permanent electricity, and robust infrastructure which means that companies are paying extra efforts to keep pace with global technological infrastructure. This is attributed to globalization age that makes it easy to acquire high technology tools despite distance, borders, and barriers.
- The result is consistent with (Khan et al., 2011) study, which indicates that developing an appropriate infrastructure by vendor organizations has a positive impact on client organizations. They considered the infrastructure to be the third factor affecting client with weight of 60%.
- The study of (Govindaraju and Lukman, 2012) declared that for companies that have experience in the offshore outsourcing services, technological capabilities (Knowledge transfer, Infrastructure development based on client’s need and

market; Work with highly skilled partners) are important to deliver good quality works.

- The study of (Han et al., 2013) emphasized the importance of client and vendor IT capabilities which considered being significant factors in outsourcing success.
- However, the item regarding "applying IT governance aspects" shows that the respondents (Do not know, neutral) to this item. This is justified because it is an advanced and modern concept applied in advanced outsourcing companies which requires formal control processes. The result states that ITO companies in Gaza actually are not aware of this new strategy.
- This concept appears in the study of (Schlosser et al., 2010) which reveals that the IT governance processes have predominantly been considered as pre-stage of alignment. It shows that there is a positive effect of IT alignment on service quality that is mediated by formal control processes in an IT governance context. It is shown that good internal business/IT alignment leads to better and more accurate provider control processes.

5.3.2 Second Field: Cost Impact on Client

Table (5.4): Means and Test values for “Cost Impact on Client”

	Item	Mean	S.D	Proportional mean	Test value	P-value (Sig.)	Rank
1.	Company follows a standard way in pricing services and products	7.84	1.94	78.36	10.46	0.000*	1
2.	Company price fit all customers from all countries	7.55	1.93	75.45	8.80	0.000*	2
3.	The competition among outsourcing companies affect the price proposed by the company	7.16	1.89	71.56	6.74	0.000*	4
4.	The company includes with contract the cost of project management , risk management, signing contracts ...etc	7.40	2.01	74.03	7.62	0.000*	3
5.	There is a large difference on price provided by the company and price provided in client country	7.09	2.28	70.92	5.26	0.000*	5
	All items of the field	7.42	1.23	74.21	12.84	0.000*	

* The mean is significantly different from 6

Table (5.4) shows the following results:

- The mean of item #1 “Company follows a standard way in pricing services and products” equals 7.84 (78.36%), Test-value = 10.46, and P-value = 0.000 which is smaller than the level of significance $\alpha = 0.05$. The sign of the test is positive, so the mean of this item is significantly greater than the hypothesized value 6. We conclude that the respondents agreed to this item.
- The mean of item #5 “There is a large difference on price provided by the company and price provided in client country” equals 7.09 (70.92%), Test-value = 5.26, and P-value = 0.000 which is smaller than the level of significance $\alpha = 0.05$. The sign of the test is positive, so the mean of this item is significantly greater than the hypothesized value 6. We conclude that the respondents agreed to this item.
- The mean of the field “Cost Impact on Client” equals 7.42 (74.21%), Test-value = 12.84, and P-value=0.000 which is smaller than the level of significance $\alpha = 0.05$. The sign of the test is positive, so the mean of this field is significantly greater than the hypothesized value 6. We conclude that the respondents agreed to field of “Cost Impact on Client ”.

Comments

- The result of the "cost impact on client (74%)" reflects the importance of cost factor on client. This is consistent with global outsourcing practices that consider cost saving as an aim of outsourcing process. The result indicates that Gazan companies provide suitable prices for clients and are aware of the importance of reducing cost to a client. Cost saving is a driver for vendor competitiveness. Moreover, Palestine is considered from third world countries where Gazan workforce is cheap since the high unemployment rate. This has positive impact on Clients.
- The result is agreed with the study of (Ahmad et al., 2011). This study indicates that Cost-saving' is the most common factor, i.e. 69%. This suggests that low-cost software production has a positive impact on the outsourcing clients in the

selection process of outsourcing vendors. That's why advanced countries outsource to developing countries to take advantage of the reduced labor cost.

- (Jiang et al., 2011) study investigates from vendor perspective if a vendor should sign an outsourcing contract while cost issue is uncertain. It emphasizes that where a feasibility of a fixed-price outsourcing contract can be improved by increase in the contract price offered by the client, then an outsourcing contract should be signed.

It shows that cost saving is not always the matter. Sometimes clients' offers are loss for vendors.

- The study of (Bahli and Rivard, 2013) suggests that cost saving is a vital factor in outsourcing projects and can cause failure if it hasn't been studied effectively. It indicates that cost escalation is common in ITO engagements and it is a major reason of failures in the ex-post stage of the ITO contract. This study shows that one party has to sacrifice in case of cost escalation. It investigates the cost saving factor more comprehensively than this research do where it considers cost saving suitable for vendor and client.
- The result is in line with (Dutta & Roy, 2005) study which indicates that cheap, educated and technically qualified labor are enhancing factors of outsourcing although cost factor is not the only reason to offshore outsourcing.
- (Gierl et al., 2015) study mentions that practice has confirmed the vision at a cost saving is often greater than it actually is. The problem seems to be that it is quite difficult to determine and know the extent of its costs for the implementation of outsourced processes. It thinks of cost saving factor as a complex overlapping problem that contains other hidden costs that are not determined easily.

5.3.3 Third Field: Skilled Human Resource

Table (5.5): Means and Test values for “level of Skilled Human Resource”

	Item	Mean	S.D	Proportional mean (%)	Test value	P-value (Sig.)	Rank
1.	Company conducts training courses to build employees capabilities	6.22	2.66	62.18	0.91	0.182	4
2.	Company follow a transparent and professional recruitment process in selecting new employees	7.85	1.77	78.54	11.63	0.000*	1
3.	Company send a mission of its staff abroad to build their capacities	3.48	2.82	34.75	-9.88	0.000*	7
4.	Company contract with expert trainers from outside Gaza	4.15	2.83	41.46	-7.26	0.000*	6
5.	Company allocate from budget for training and on-job training	5.32	2.80	53.23	-2.69	0.004*	5
6.	Every team leader has good skills in project management and communication	7.33	1.95	73.31	7.58	0.000*	2
7.	Company gives its employees fair incentives and wages.	6.85	2.29	68.46	4.09	0.000*	3
	All items of the field	5.91	1.67	59.06	-0.63	0.267	

* The mean is significantly different from 6

Table (5.5) shows the following results:

- The mean of item #2 “Company follow a transparent and professional recruitment process in selecting new employees” equals 7.85 (78.54%), Test-value = 11.63, and P-value = 0.000 which is smaller than the level of significance $\alpha = 0.05$. The sign of the test is positive, so the mean of this item is significantly greater than the hypothesized value 6. We conclude that the respondents agreed to this item.
- The mean of item #3 “Company send a mission of its staff abroad to build their capacities” equals 3.48 (34.75%), Test-value = -9.88, and P-value = 0.000 which is smaller than the level of significance $\alpha = 0.05$. The sign of the test is negative, so the mean of this item is significantly smaller than the hypothesized value 6. We conclude that the respondents disagreed to this item.

- The mean of the field “level of Skilled Human Resource” equals 5.91 (59.06%), Test-value = -0.63, and P-value=0.267 which is greater than the level of significance $\alpha = 0.05$. The mean of this field is insignificantly different from the hypothesized value 6. We conclude that the respondents (Do not know, neutral) to field of “level of Skilled Human Resource ”.

Comments

- The result of the "Skilled Human Resource (59.06%)" reflects that the technical and managerial skills need to be improved and developed to match ITO clients abroad. The ITO vendors need to exert more effort to be up-to-date and to keep pace with technological skills that are developing quickly. Also, ITO vendors need to pay attention at managerial skills that team leaders have since it is important as technological skills. The weak managerial skills might be due to small teams and little experience of ITO vendors in Gaza. The prolong siege on Gaza and the close of borders prevent any mission to get out for training or any expert trainers to enter Gaza, and that explains the result in item #3 and #4. However, it is obvious that most companies follow a transparent and professional recruitment process in selecting new employees as item #2 shows. It has been shown that respondents of this research consider the factor Skilled Human resource as a barrier to be competitive in outsourcing world.
- After examining (Khan et al., 2011) study, it is obvious that which indicates that skilled human resource’ can play a vital role in establishing a good relationship between client and vendor considering this factor as a driving factor. The researcher result considers this factor as a barrier which contradicts with the mentioned study.
- (Govindaraju and Lukman, 2012) study indicates that HR capability is important to deliver good quality works in offshore outsourcing services. For instance, Recruitment of experience, non-experience, and foreign employees; External and internal knowledge transfer; employee certification; Employee rotation; Foreign language training; Employee’s career development system; Wages and bonuses system are included in HR capability.

- (Dutta & Roy, 2005) study considers major factor driving offshoring rate is the availability of educated and technically qualified labor in the country.

5.3.4 Fourth Field: Quality of Services and Products

Table (5.6): Means and Test values for “Level of quality of services and products”

	Item	Mean	S.D	Proportional mean (%)	Test value	P-value (Sig.)	Rank
1.	Company conducts its project within proposed budget and on time	7.81	1.80	78.15	11.22	0.000*	6
2.	Company provide products that satisfy customer needs	8.30	1.60	82.98	16.02	0.000*	1
3.	Company provide its services and products according to specifications agreed upon	8.29	1.69	82.90	15.09	0.000*	2
4.	Company contacts customer immediately when any change to work is required	8.10	1.91	80.97	12.20	0.000*	3
5.	Company provides services up to quality measures of services (responsiveness, tangible, assurance...etc)	8.01	1.92	80.08	11.61	0.000*	4
6.	Company evaluates its services and takes advantage of feedback	7.83	1.86	78.31	10.94	0.000*	5
7.	Company use specific criteria to assure quality of outsourcing services such as ISO 90001	5.98	2.75	59.75	-0.10	0.461	8
8.	Company protects intellectual property and copyrights of software and applications.	7.65	2.22	76.45	8.25	0.000*	7
	All items of the field	7.75	1.38	77.51	14.16	0.000*	

* The mean is significantly different from 6

Table (5.6) shows the following results:

- The mean of item #2 “Company provide products that satisfy customer needs” equals 8.30 (82.98%), Test-value = 16.02, and P-value = 0.000 which is smaller than the level of significance $\alpha = 0.05$. The sign of the test is positive, so the mean of this item is significantly greater than the hypothesized value 6. We conclude that the respondents agreed to this item.

- The mean of item #7 “Company use specific criteria to assure quality of outsourcing services such as ISO 90001” equals 5.98 (59.75%), Test-value = -0.10, and P-value = 0.461 which is greater than the level of significance $\alpha = 0.05$. Then the mean of this item is insignificantly different from the hypothesized value 6. We conclude that the respondents (Do not know, neutral) to this item.
- The mean of the field “Level of quality of services and products” equals 7.75 (77.51%), Test-value = 14.16, and P-value=0.000 which is smaller than the level of significance $\alpha = 0.05$. The sign of the test is positive, so the mean of this field is significantly greater than the hypothesized value 6. We conclude that the respondents agreed to field of “Level of quality of services and products ”.

Comments

- The result of the "Quality of services and products (77.5%)" indicates highly agreement on the level of quality provided by ITO vendors in the Gaza Strip. This is justified by that companies and their employees are committed to work and deadlines. They are exact and accurate in executing the customer desires. They are faithful to their work requirements and take advantage of feedback and lessons learned.
- However, item#7 has attained low agreement level (59.75%). Most companies are not committed to international standards of quality. They apply quality aspects in its general form.
- The result is in line with (khan et al., 2011) study which found that 57% of articles have cited a factor ‘quality of products and services’ that has a positive impact on the attractiveness of client organizations.
- The study of (Iwami, 2008) declared that good outsourcer addresses the subcontractor quality improvement practices to enhance software quality; taking in account experienced developers results into good software quality.
- The study of (Annous et al., 2010) proposed a framework (offshore QA) for quality management which provides the client with an efficient quality management system in offshore outsourcing environments, where requirements and specification are changing continuously. The framework complies with ISO 9001:2008 which relates to product realization.

- (Abd Ghani et al., 2008) study investigates the Malaysian outsourcing environment throughout exploring problems that reduce the quality of software. Mainly: late delivery of product, budget over-runs and poor quality products.
- (Chang et al., 2012) study shows that providers should not only enhance their professional knowledge but also improve the quality of their service in order to help in provider selection of outsourcing.

5.3.5 Fifth Field: language and Culture

Table (5.7):Means and Test values for “level of language and Culture”

No .	Item	Mean	S.D	Proportional mean (%)	Test value	P-value (Sig.)	Rank
1.	Company recruits who has good English skills	6.64	2.28	66.37	3.12	0.001*	6
2.	Company is aware of cultural differences when designing products and services	7.60	2.06	76.05	8.69	0.000*	2
3.	Company is aware of differences in off-days, holidays, and time.	7.46	2.05	74.60	7.93	0.000*	4
4.	Company employs women without discrimination	6.93	2.95	69.26	3.46	0.000*	5
5.	Company enforces outsourcing culture and encourage telework in community	7.55	2.07	75.48	8.32	0.000*	3
6.	Client notices the commitment towards work and deadlines	7.65	2.04	76.53	9.04	0.000*	1
	All items of the field	7.31	1.46	73.08	10.00	0.000*	

* The mean is significantly different from 6

Table (5.7) shows the following results:

- The mean of item #6 “Client notices the commitment towards work and deadlines” equals 7.65 (76.53%), Test-value = 9.04, and P-value = 0.000 which is smaller than the level of significance $\alpha = 0.05$. The sign of the test is positive, so the mean of this item is significantly greater than the hypothesized value 6. We conclude that the respondents agreed to this item.

- The mean of item #1 “Company recruits who has good English skills” equals 6.64 (66.37%), Test-value = 3.12, and P-value = 0.001 which is smaller than the level of significance $\alpha = 0.05$. The sign of the test is positive, so the mean of this item is significantly greater than the hypothesized value 6. We conclude that the respondents agreed to this item.
- The mean of the field “level of language and Culture” equals 7.31 (73.08%), Test-value = 10.00, and P-value=0.000 which is smaller than the level of significance $\alpha = 0.05$. The sign of the test is positive, so the mean of this field is significantly greater than the hypothesized value 6. We conclude that the respondents agreed that language and culture is not considered a barrier to companies to operate internationally. Companies are qualified in terms of English and culture .

Comments

- The result of language and Culture (73.08%) reflects the awareness of cultural differences and the ability to adapt to change for employees of ITO vendors in the Gaza Strip. It also reflects the high education level and language skills for employees.
- The result is inconsistent with (Khan, et al, 2011) study which considers ‘Language and cultural barriers’ (56%) is the most common barrier in IT outsourcing.
- (Abufardeh & Magel, 2010) study shows the importance of language and cultural aspects. It addresses the impact of the cultural and linguistic aspects of global software globally developed. They found that “Global Software Development is multi-site, multilingual, multicultural, and globally distributed that need a new cultural model”.
- The study of (Rusu and Vorontsova, 2014) is to evaluate the importance of determinants of IT outsourcing relationship from both an outsourcing provider and recipient perspective. Cultural compatibility is one of the determinants that lead to success relationship and consequently success outsourcing project.
- (Raju, 2012) study also assesses problems of intercultural communications, such as language use and differences in culture. (Raju, 2012) results prove that

ongoing training in cross-cultural communication is needed at all stages of the outsourcing cycle.

5.3.6 Sixth Field: Project Management

Table (5.8): Means and Test values for “Level of Project Management”

	Item	Mean	S.D	Proportional mean (%)	Test value	P-value (Sig.)	Rank
1.	Company follows the methodology of planning, design, execution, maintenance and documentation of projects.	7.46	2.20	74.60	7.40	0.000*	1
2.	Company provides maintenance services within project scope.	7.34	2.33	73.39	6.41	0.000*	2
3.	Company manages the process of documentation and archiving of all activities of project.	7.00	2.27	70.00	4.90	0.000*	7
4.	Company offers required knowledge sources to all company's member	7.23	2.20	72.26	6.19	0.000*	5
5.	Company makes data available to employees within boundaries of work needed	7.20	2.15	72.02	6.24	0.000*	6
6.	Company manages projects according to methodology suggested by clients.	7.30	2.12	73.01	6.82	0.000*	3
7.	Company follow suitable methodology of management based on project type	7.30	2.18	72.98	6.65	0.000*	4
8.	Company applies the CMMI framework	5.14	2.72	51.44	-3.31	0.001*	8
	All items of the field	7.03	1.76	70.34	6.54	0.000*	

* The mean is significantly different from 6

Table (5.8) shows the following results:

- The mean of item #1 “Company follows the methodology of planning, design, execution, maintenance and documentation of projects” equals 7.46 (74.60%), Test-value = 7.40, and P-value = 0.000 which is smaller than the level of significance $\alpha = 0.05$. The sign of the test is positive, so the mean of this item is significantly greater than the hypothesized value 6. We conclude that the respondents agreed to this item.

- The mean of item #8 “Company applies the CMMI ¹ framework” equals 5.14 (51.44%), Test-value = -3.31, and P-value = 0.001 which is smaller than the level of significance $\alpha = 0.05$. The sign of the test is negative, so the mean of this item is significantly smaller than the hypothesized value 6. We conclude that the respondents disagreed to this item.
- The mean of the field “Level of Project Management” equals 7.03 (70.34%), Test-value = 6.54, and P-value=0.000 which is smaller than the level of significance $\alpha = 0.05$. The sign of the test is positive, so the mean of this field is significantly greater than the hypothesized value 6. We conclude that the respondents agreed to field of “Level of Project Management ”.

Comments

- The result of project management (70.34%) reflects high agreement on the level of management exist in ITO companies in the Gaza Strip. It is acceptable to indicate that most ITO companies are very small in size regarding the number of employees. Also, the size of projects outsourced is also not large. That reflects why the level of management needed is not advanced and the level of satisfaction on level of project management is moderately high. An evidence of this is item#8 “Company applies the CMMI framework” equals (51.44%).
- The result reveals that project management is a driving factor which is not in line with (Khan et al., 2011) which considers 'project management' as a barrier and weakness point that can have a negative impact on outsourcing clients.
- The result is in line with (Al-Ahmad and Al-Oqaili, 2013) study that comes up with a model that introduced 'Management commitment', 'Project planning' as critical factors for successful outsourcing/reversibility.
- However, (Annous et al., 2010) study shows the lack of offshore project management know-how by clients, and poor change controls are among the top 10 risk factors of offshore-outsourced development projects.

¹ Capability Maturity Model Integration (CMMI) is a process improvement training and appraisal program. It is required by many DoD and U.S. Government contracts, especially in software development. (tutorialspoint, n.d.)

- (Dutta & Roy, 2005) study considers project management as inhibiting factor. It indicates that complexity of managing at a distance and the potential loss of control are inhibiting factors to outsourcing.

5.3.7 Seventh Field: Political and Legal Instability

Table (5.9): Means and Test values for “level of political and legal instability”

	Item	Mean	S.D	Proportional mean (%)	Test value	P-value (Sig.)	Rank
1.	Governmental procedures facilitate and promote IT outsourcing	5.29	2.80	52.92	-2.77	0.003*	1
2.	The government encourage ITO companies and mitigate taxes and laws	4.57	2.59	45.71	-6.03	0.000*	3
3.	Ministry of Economy enacts special laws to facilitate ITO companies' establishment.	4.50	2.50	45.04	-6.57	0.000*	4
4.	ITO companies is not affected by inspection of data from official bodies	5.29	2.42	52.89	-3.23	0.001*	2
5.	Instable political situation in Gaza doesn't affect the company work and development	4.46	2.87	44.63	-5.90	0.000*	5
6.	The government provides robust infrastructure in the field of Information technology	4.23	2.86	42.31	-6.80	0.000*	7
7.	The enacting of a law for ITO to facilitate and protect will help in the spread of outsourcing services.	4.39	2.87	43.88	-6.17	0.000*	6
	All items of the field	4.67	2.18	46.71	-6.70	0.000*	

* The mean is significantly different from 6

Table (5.9) shows the following results:

- The mean of item #1 “Governmental procedures facilitate and promote IT outsourcing” equals 5.29 (52.92%), Test-value = -2.77, and P-value = 0.003 which is smaller than the level of significance $\alpha = 0.05$. The sign of the test is

negative, so the mean of this item is significantly smaller than the hypothesized value 6. We conclude that the respondents disagreed to this item.

- The mean of item #6 “The government provides robust infrastructure in the field of Information technology” equals 4.23 (42.31%), Test-value = -6.80, and P-value = 0.000 which is smaller than the level of significance $\alpha = 0.05$. The sign of the test is negative, so the mean of this item is significantly smaller than the hypothesized value 6. We conclude that the respondents disagreed to this item.
- The mean of the field “level of political and Legal instability” equals 4.67 (46.71%), Test-value = -6.70, and P-value=0.000 which is smaller than the level of significance $\alpha = 0.05$. The sign of the test is negative, so the mean of this field is significantly smaller than the hypothesized value 6. We conclude that the respondents disagreed to field of “level of political and legal instability ”.

Comments

- The result of political and legal instability (46.71%) reflects highly disagreement on the role of legal and political situation in encouraging ITO vendors. Most ITO companies believe that government does not pay enough attention to infrastructure to encourage IT outsourcing. Even more, the legal instability due to conflicting governments, terrorism threats and Israeli occupation has worsen any business trying to start.
- The result is in line with (Ahmad, et al, 2011) study which indicates that ‘country instability’ (51%) has a negative impact on software development outsourcing clients.
- The (Brege et al., 2013) study findings reveal a greater focus and effort needs to be placed on operational aspects associated with non-developed supplier markets. There should be alternative outsourcing routes available when outsourcing to a non-developed supplier market.
- On the other side, (Lin Lee, 2008) study shows a case study of Taiwan’s information and electronic industries has already become the largest source of trade deficit for Mainland China although the lack of political understanding between two countries.

5.3.8 Eighth Field: Communication Gap

Table (5.10): Means and Test values for “Level of Communication”

	Item	Mean	S.D	Proportional mean (%)	Test value	P-value (Sig.)	Rank
1.	Company utilize different tools to communicate with client (email - fax- Telephone- video conference).	8.59	1.61	85.85	17.82	0.000*	1
2.	Company contact client immediately and phase by phase to follow up	8.34	1.67	83.41	15.52	0.000*	2
3.	The client-desires are clearly understood before the start of work	8.06	2.10	80.57	10.88	0.000*	3
4.	The company holds short and long-term relationships with clients	8.00	2.10	80.00	10.54	0.000*	4
5.	The contact with clients continues after the end of service.	7.62	2.23	76.18	8.04	0.000*	6
6.	The company uses the Bridge engineer(company representative) in the country of client	4.77	3.05	47.70	-4.45	0.000*	8
7.	Company uses communication tools that are confidential, secure, safe and private in data transfer	7.64	2.17	76.39	8.36	0.000*	5
8.	Company utilizes all marketing tools to promote its services and products	7.36	2.51	73.61	6.00	0.000*	7
	All items of the field	7.57	1.55	75.71	11.26	0.000*	

* The mean is significantly different from 6

Table (5.10) shows the following results:

- The mean of item #1 “Company utilize different tools to communicate with client (email - fax- Telephone- video conference)” equals 8.59 (85.85%), Test-value = 17.82, and P-value = 0.000 which is smaller than the level of significance $\alpha = 0.05$. The sign of the test is positive, so the mean of this item is significantly greater than the hypothesized value 6. We conclude that the respondents agreed to this item.
- The mean of item #6 “The company uses the Bridge engineer (company representative) in the country of client” equals 4.77 (47.70%), Test-value = -4.45, and P-value = 0.000 which is smaller than the level of significance $\alpha = 0.05$. The sign of the test is negative, so the mean of this item is significantly smaller than

the hypothesized value 6. We conclude that the respondents disagreed to this item.

- The mean of the field “Level of Communication” equals 7.57 (75.71%), Test-value = 11.26, and P-value=0.000 which is smaller than the level of significance $\alpha = 0.05$. The sign of the test is positive, so the mean of this field is significantly greater than the hypothesized value 6. We conclude that the respondents agreed to field of “Level of Communication ”.

Comments

- The result of level of communication (75.71%) reflects highly satisfaction of communication level in ITO vendor in the Gaza Strip. This is attributed to Palestinian society that is well educated, modernized towards technology and globalization. Also, the Palestinian society has high percentage of youth who looks for latest technologies in communication and always are up to date with latest communication tools. Also managers pay attention to communication skills with clients since it is the way that can bring money. However, Item#6 gained low agreement since the closure of borders where companies could not send any representative outside. Moreover, the small types of software projects do not require such tool of communication.
- The result is not consistent with (Khan et al., 2011) study that describes communication gap’ as a barrier in outsourcing business.
- (Rusu and Vorontsova, 2014) study emphasizes that Communication quality , Knowledge and information sharing , Conflicts handling , Confidentiality, Participation , Business and mutual understanding , Satisfaction are determinants of the success of an outsourcing relationship .
- (Govindaraju and Lukman, 2012) study determines operational capabilities that are important for the success of the vendor such as Gaining client’s trust through interaction and long term cooperation; establishing branch office in client country; bridging engineer..etc.
- Equally important is (Abd Ghani et al., 2008) study which finds out that most of the requirement problems that reduce quality of software are human-based problems that include lack of customer and user communication.

- (Deraman et al., 2014) study identified four main and critical software development risks associated with outsourcing which are vendor's rapport, services, contract agreement and bond and relationship that include the communication.

In General, All "Driving Factors" together:

Table (5.11) shows the mean of all items equals 6.89 (68.90%), Test-value = 8.97 and P-value =0.000 which is smaller than the level of significance $\alpha = 0.05$. The mean of all items is significantly different from the hypothesized value 6. We conclude that the respondents agreed to all items of driving factors.

Table (5.11): Means and Test values for "Driving factors"

Item	Mean	S.D	Proportional mean (%)	Test value	P-value (Sig.)	Rank
Level of Appropriate Infrastructure	7.50	1.63	75.02	10.27	0.000*	3
Cost Impact on Client	7.42	1.23	74.21	12.84	0.000*	4
Level of Skilled Human Resource	5.91	1.67	59.06	-0.63	0.267	7
Level of quality of services and products	7.75	1.38	77.51	14.16	0.000*	1
Level of language and Culture	7.31	1.46	73.08	10.00	0.000*	5
Level of Project Management	7.03	1.76	70.34	6.54	0.000*	6
Level of political and Legal instability	4.67	2.18	46.71	-6.70	0.000*	8
Level of Communication	7.57	1.55	75.71	11.26	0.000*	2
All Items of driving factors	6.89	1.10	68.90	8.97	0.000*	

*The mean is significantly different from 6

5.3.9 Ninth Field: Company Competitiveness

Table (5.12): Means and Test values for “Level of Company Competitiveness”

	Item	Mean	S.D	Proportional mean (%)	Test value	P-value (Sig.)	Rank
1.	Company Sales are increasing yearly	6.93	2.34	69.34	4.40	0.000*	8
2.	The strengths of the company are enough to compete in the market	7.55	2.00	75.49	8.55	0.000*	3
3.	The competitive position of the company has continues to improve	7.34	2.10	73.44	7.08	0.000*	5
4.	Company has Return on investment higher than its competitors	6.74	2.01	67.44	4.06	0.000*	9
5.	Market Share of the company is higher than the rest of competitors	6.55	2.11	65.49	2.88	0.002*	10
6.	Market Share is increasing year by year	6.99	1.92	69.92	5.70	0.000*	7
7.	Company is distinguished by its brand awareness in the market	7.60	2.00	75.98	8.82	0.000*	2
8.	Company clients has customer loyalty to company products and services.	7.66	1.89	76.64	9.71	0.000*	1
9.	Company has strategic plan to increase competitiveness	7.34	2.17	73.44	6.83	0.000*	5
10.	Company has marketing plan to increase competitiveness	7.38	2.10	73.77	7.25	0.000*	4
	All items of the field	7.21	1.58	72.10	8.45	0.000*	

* The mean is significantly different from 6

Table (5.12) shows the following results:

- The mean of item #8 “Company clients has customer loyalty to company products and services” equals 7.66 (76.64%), Test-value = 9.71, and P-value = 0.000 which is smaller than the level of significance $\alpha = 0.05$. The sign of the test is positive, so the mean of this item is significantly greater than the hypothesized value 6. The researcher concludes that the respondents agreed to this item.
- The mean of item #5 “Market Share of the company is higher than the rest of competitors” equals 6.55 (65.49%), Test-value = 2.88, and P-value = 0.002 which is smaller than the level of significance $\alpha = 0.05$. The sign of the test is

positive, so the mean of this item is significantly greater than the hypothesized value 6. We conclude that the respondents agreed to this item.

- The mean of the field “Level of Company Competitiveness” equals 7.21 (72.10%), Test-value = 8.45, and P-value=0.000 which is smaller than the level of significance $\alpha = 0.05$. The sign of the test is positive, so the mean of this field is significantly greater than the hypothesized value 6. We conclude that the respondents agreed to field of “Level of Company Competitiveness ”.

Comments

- The item "Company clients have customer loyalty to company products and services" has gained high agreement by the sample (76.64%). This reflects the high loyalty of customers towards Gazan companies. The researcher attributes that to good quality of services and products provided which encourage customers to preserve this relationship and conduct new business with these companies.
- The result of competitiveness (72.10%) which reflects high agreement on competitiveness of Gazan companies among the sample. The researcher attributes that to the fact these companies are achieving an increase in sales and return on investments year by year. The Palestinian IT Association of Companies (PITA) estimates that the annual growth of the local IT market is about 25% a year and that it is now worth more than \$300m (Palestine Economic Policy Research Institute, 2012). According to the (Palestinian Central Bureau of Statistics , 2010) the output of the sector was worth \$588.9m in 2010. Perhaps, this justifies the increase in the number of graduates who work in ITO fields to earn a living. However, the researcher believes that these numbers of competitiveness is obtained locally and it will be different if it is measured abroad.
- Considering (Khan et al., 2011) study, it emphasizes the importance of being competitive as an ITO firm. The competitiveness in outsourcing business will lead to the selection of vendor by clients as it suggested.
- Also, (Dutta & Roy, 2005) study mentions that ITO firms were forced to develop their competitive strategies because of intense competition among firms. It

declared that competitive pressure is forcing companies to follow enhancing factors.

- More, the study of (Govindaraju & Lukman, 2012) suggests good practices that had been implemented to develop a company's operational capabilities and enhance company's competitive advantage to compete with foreign vendors.
- Furthermore, (Chang et al., 2012) study mentions how to maintain global competitiveness of SME(Small and Medium Enterprises) by developing model of selecting an IT/IS outsourcing provider for an SME.

5.4 Hypothesis Testing

- 1) **Hypothesis 1:** There is a significant relationship at $\alpha \leq 0.05$ between driving factors and competitiveness of vendor organization in attracting clients.

Table (5.13): Correlation coefficient between driving factors and competitiveness of vendor organization in attracting clients

Item	Pearson Correlation Coefficient	P-Value (Sig.)
Relationship between Level of Appropriate Infrastructure and competitiveness of vendor organization in attracting clients	.409	0.000*
Relationship between Cost Impact on Client and competitiveness of vendor organization in attracting clients	.281	0.001*
Relationship between Level of Skilled Human Resource and competitiveness of vendor organization in attracting clients	.193	0.017*
Relationship between Level of quality of services and products and competitiveness of vendor organization in attracting clients	.696	0.000*
Relationship between Level of language and Culture and competitiveness of vendor organization in attracting clients	.459	0.000*
Relationship between Level of Project Management and competitiveness of vendor organization in attracting clients	.666	0.000*
Relationship between Level of political and Legal instability and competitiveness of vendor organization in attracting clients	.423	0.000*
Relationship between Level of Communication and competitiveness of vendor organization in attracting clients	.708	0.000*
Relationship between driving factors and competitiveness of vendor organization in attracting clients	.727	0.000*

* Correlation is statistically significant at 0.05 level

Table (5.13) shows that the correlation coefficient between driving factors and competitiveness of vendor organization in attracting clients equals 0.727 and the p-value (Sig.) equals 0.000. The p-value (Sig.) is less than 0.05, so the correlation coefficient is statistically significant at $\alpha = 0.05$. The researcher concludes there exists a significant relationship between driving factors and competitiveness of vendor organization in attracting clients.

Comments:

- It is obvious from table (5.13) that the strongest relationship is the relation between communication factor and competitiveness (.708), and the weakest relation is the one between cost factor and skilled HR and competitiveness.
- The strongest relationship is the one between communication and competitiveness (0.708). This is also reflected by the mean value (75.7) which indicates high agreement among respondents. This is attributed to the nature of Palestinian society which most of it are youth. Youth are always aggressive for the latest technologies in communication kinds. Moreover, communication factor was mentioned in most of previous studies, which lead to the conclusion communication is the strongest driving factor to competitiveness.
 - ✓ It is the element that has most replication in previous studies. Communication quality has been mentioned as determinants of IT outsourcing relationship in Rusu and Vorontsova (2014).
 - ✓ Also, communication gap was identified as a barrier of the selection of ITO vendor in Niazi et al (2011).
 - ✓ Govindaraju and Lukman (2012) study indicated effective communication as a supporting operational capabilities that are important for the success of IT vendor.
 - ✓ Annous, Livadas, and Miles (2010) revealed that the miscommunication is among the 10 top risk factors of offshore-outsourced development projects.
 - ✓ Abd Ghani, Solemon, and Sahibuddin(2008) study showed that lack of customer and user communication is one of the most requirements problem in software companies in Malaysia.

- ✓ Deraman, Hamzah, and Yahaya(2014) identified the incomplete requirements due to the loss of communication skills as critical risk of vendor performance.
- The weakest relation is the relation between cost impact and skilled HR and competitiveness; the Pearson coefficient values are (0.281), (0.193) respectively.
 - ✓ For the cost impact: the weak relation between cost and competitiveness indicates that cost has nothing to do with increasing or decreasing competitiveness of ITO firms. Nowadays, cost is not the strongest reason to outsource. This is consistent with the result of (Dutta & Roy, 2005) study which indicated that cheap, educated and technically qualified labor are enhancing factors of outsourcing although cost factor is not the only reason to offshore outsourcing. Also, Palestinian ITO firms are aware of the cost factor if not managed and controlled properly may cause failure. This is in line with the study of (Bahli and Rivard, 2013). It suggested that cost saving is a vital factor in outsourcing projects and can cause failure if it hasn't been studied effectively. It found out cost escalation is common in ITO engagements and it is a major reason of failures.
 - ✓ For the Skilled human resources factor: the weak relation between this factor and competitiveness in addition to the weak value of proportional mean of skilled HR (59.06) shed the light on the necessity of improving this factor. Respondents considered this factor as a barrier to clients' selection decision. The ITO vendors need to exert more effort to be up-to-date and to keep pace with technological skills that are developing quickly. The result is not in line with (Khan et al., 2011) study which indicates that skilled human resource' can play a vital role in establishing a good relationship between client and vendor and drive high competitiveness of ITO firms.

2) **Hypothesis 2:** There is a significant effect at $\alpha \leq 0.05$ of driving factors on competitiveness of vendor organization in attracting clients.

Table (5.14): Result of Stepwise regression analysis

Variable	B	T	Sig.	R	R-Square	F	Sig.
(Constant)	0.173	-0.327	0.744	0.804	0.646	69.427	0.000**
Level of Communication	0.398	5.348	0.000*				
Level of political and Legal instability	0.493	6.104	0.000*				
Level of quality of services and products	0.113	2.566	0.012*				

* The variable is statistically significant at 0.05 level

** The relationship is statistically significant at 0.05 level

The researcher uses Stepwise regression, and obtains the following results:

- Table (5.14) shows the Multiple correlation coefficient $R = 0.804$ and R-Square = 0.646. This means 64.6% of the variation in Level of Company Competitiveness is explained by Level of Communication, Level of political and legal instability and Level of quality of services and products.
- Table (5.14) shows the Analysis of Variance for the regression model. $F=69.427$, $Sig. = 0.000$, so there is a significant impact between the dependent variable r Level of Company Competitiveness and the independent variables " Level of Communication, Level of political and Legal instability and Level of quality of services and products ".
- Based on Stepwise regression method, the variables "Level of Appropriate Infrastructure, Cost Impact on Client, Level of Skilled Human Resource, Level of language and Culture and Level of Project Management" have insignificant effect on competitiveness of ITO companies.

The estimated regression equation is:

$$\text{Level of Company Competitiveness} = 0.173 + 0.398* (\text{Level of Communication}) + 0.493* (\text{Level of political and Legal instability}) + 0.113* (\text{Level of quality of services and products})$$

The estimated regression equation is used to predict the value of Company Competitiveness for any given values (responses) to the independent variables

"Level of Communication, Level of political and legal instability and Level of quality of services and products ".

Comments:

The above results revealed that only three factors (Level of Communication, Level of political and legal instability and Level of quality of services and products) together do significantly impact competitiveness of vendor organizations. This was reflected by the relationship where communication factor was the most related to competitiveness and quality of services and products comes second. The researcher attributed the result to the level of quality that Palestinian ITO firms provide to clients. They are committed to work, admire deadlines, exact and accurate in executing customer requirements, faithful, and take advantage of lessons learned and feedback. In addition to that Palestinian firms use latest and up to date communication tools. However, the political and legal instability affect competitiveness negatively which was reflected by respondents to consider this factor as a barrier.

The model has been interpreted by 68%. On the other hand, there should be some factors outside the scope of this study which impact the competitiveness of ITO vendors. Financial stability of ITO vendors, Company size (large and medium) and Industry–university linkage could be effective factors of competitiveness.

The result is consistent with the study of (Khan et al., 2011) which identified quality of services and products as a success factor **affecting the competitiveness** of a company to be attracted by clients.

The study of (Niazi et al., 2011) of barriers has identified country instability and the communication gap as barriers **affecting the competitiveness** of a company and repels the clients. The result is in line with our study in one way and opposite in the other one. Our result considered country instability as a barrier but communication was considered as driving factor.

The result is not in line with the study of (Dutta & Roy, 2005) which has divided the factors **affecting outsourcing competitiveness** into enhancing factors such as Cheap, educated and technically qualified labor and inhibiting factors such as

the added complexity of managing at a distance and the potential loss of control besides the cultural differences. The factors mentioned in this study were not mark as effective to competitiveness in our result.

The study of (Govindaraju and Lukman, 2012) mentioned that there are operational capabilities that **affect the competitive advantage** of providers such as human resource capabilities; processes capabilities, client-specific capabilities (Gaining client's trust through interaction and long term cooperation), and technological capability (Work with highly skilled partners). This is in line with our result in considering communication to impact competitiveness.

- The study of (Chang et al., 2012) identified 19 factors classified into four dimensions which **affect selection of providers** such as 'capacity of professional skills', 'capacity of service', 'capacity of operation' and 'external evaluation'. This is in line with our result in considering quality of services to impact competitiveness.

- 3) **Hypothesis 3:** There are significant differences among respondents at level $\alpha = 0.05$ toward the Driving factors and Barriers that impact the competitiveness of ITO Vendors in Gaza due to gender, age, Job Title , Years of Experience in IT field , Educational Level, Years of Experience for Company and Company Size.

This hypothesis can be divided into the following sub-hypotheses:

Personal Characteristics:

- a) There are significant differences among respondents at level $\alpha = 0.05$ toward the Driving factors and Barriers that impact the competitiveness of ITO Vendors in Gaza due to gender.

For the other fields, the p-value (Sig.) is greater than the level of significance $\alpha = 0.05$, then there is insignificant difference among the respondents toward these fields due to Gender. Researcher concludes that the personal characteristics' Gender has no effect on the other fields.

- b) There are significant differences among respondents at level $\alpha = 0.05$ toward the Driving factors and Barriers that impact the competitiveness of ITO Vendors in Gaza due to age.

Table (5.15) shows that the p-value (Sig.) is greater than the level of significance $\alpha = 0.05$ for each field, then there is in significant difference among the respondents toward each field due to age. Researcher concludes that the personal characteristics' age has no effect on each field.

- c) There are significant differences among respondents at level $\alpha = 0.05$ toward the Driving factors and Barriers that impact the competitiveness of ITO Vendors in Gaza due to Job Title.

For the other fields, the p-value (Sig.) is greater than the level of significance $\alpha = 0.05$, then there is insignificant difference among the respondents toward these fields due to Job Title. Researcher concludes that the personal characteristics' Job Title has no effect on the other fields.

- d) There are significant differences among respondents at level $\alpha = 0.05$ toward the Driving factors and Barriers that impact the competitiveness of ITO Vendors in Gaza due to Years of Experience in IT field.

Table (5.15) shows that the p-value (Sig.) is greater than the level of significance $\alpha = 0.05$ for each field, then there is in significant difference among the respondents toward each field due to Years of Experience in IT field. Researcher concludes that the personal characteristics' Years of Experience in IT field has no effect on each field.

- e) There are significant differences among respondents at level $\alpha = 0.05$ toward the Driving factors and Barriers that impact the competitiveness of ITO Vendors in Gaza due to Educational Level.

Table (5.15) shows that the p-value (Sig.) is greater than the level of significance $\alpha = 0.05$ for each field, then there is in significant difference among the respondents toward each field due to Educational Level. Researcher concludes that the personal characteristics' Educational Level has no effect on each field.

Table (5.15): Independent Samples T-test of the fields and their p-values for gender, age, Job Title, Years of Experience in IT field and Educational Level

Field	Means		Test Value	Sig.				
	Male	Female						
Driving factors together	6.85	6.99	-0.657	0.512				
Level of Company Competitiveness	7.16	7.32	-0.505	0.614				
All items of the questionnaire	6.90	7.04	-0.669	0.505				
Field	Means			Test Value	Sig.			
	less than 25years	25 – less than 30 years	30 years and more					
Driving factors	6.91	6.90	7.30	0.640	0.530			
Level of Company Competitiveness	7.49	7.24	8.05	1.445	0.241			
All items of the questionnaire	6.99	6.96	7.43	0.843	0.434			
Field	Means						Test Value	Sig.
	Manager	Developer	Team Leader	System Analyst	Marketing & Public Relations Officer	Other		
Driving factors	7.00	6.70	6.92	6.53	6.66	7.06	0.635	0.674
Level of Company Competitiveness	6.92	6.99	7.03	6.40	6.92	7.59	1.150	0.338
All items of the questionnaire	6.99	6.75	6.94	6.51	6.70	7.14	0.744	0.592
Field	Mean			Test Value	Sig.			
	less than 3 years	3 – less than 6 years	6 years and more					
Driving factors	6.92	6.74	6.82	0.275	0.760			
Level of Company Competitiveness	6.99	7.22	7.14	0.189	0.828			
All items of the questionnaire	6.93	6.81	6.87	0.119	0.888			
Field	Mean			Test Value	Sig.			
	Diploma	Bachelor Degree	Master					
Driving factors	7.00	6.88	6.84	0.089	0.915			
Level of Company Competitiveness	7.51	7.20	6.94	0.488	0.615			
All items of the questionnaire	7.08	6.93	6.86	0.158	0.854			

* The mean difference is significant a 0.05 level

Comments:

The table (5.15) shows that the personal characteristics gender, age, Job Title, Years of Experience in IT field and Educational Level has no effect on driving factors and barriers that impact competitiveness of ITO vendors. The researcher attributes that to the ICT community in Gaza which is yet even small and new society located in small populated place 'The Gaza Strip' where no clear difference in demographic factors appears.

Company Profile:

- f) There are significant differences among respondents at level $\alpha = 0.05$ toward the Driving factors and Barriers that impact the competitiveness of ITO Vendors in Gaza due to Years of Experience for company.

Table (5.16) shows that the p-value (Sig.) is greater than the level of significance $\alpha = 0.05$ for each field, then there is in significant difference among the respondents toward each field due to Years of Experience for company. Researcher concludes that the Years of Experience for company has no effect on each field.

Table (5.16): ANOVA test of the fields and their p-values for Company Years of Experience and Company Size

No.	Field	Means			Test Value	Sig.
		less than 3 years	3 – less than 6 years	6 years and more		
	Driving factors	6.85	7.01	6.82	0.380	0.685
	Level of Company Competitiveness	7.11	7.24	7.34	0.111	0.895
	All items of the questionnaire	6.90	7.05	6.90	0.248	0.781
No.	Field	Means			Test Value	Sig.
		Small	Medium	Large		
	Driving factors	7.06	6.77	6.64	1.442	0.240
	Level of Company Competitiveness	7.26	7.25	6.94	0.296	0.744
	All items of the questionnaire	7.09	6.85	6.68	1.144	0.322

* The mean difference is significant a 0.05 level

- g) There are significant differences among respondents at level $\alpha = 0.05$ toward the Driving factors and Barriers that impact the competitiveness of ITO Vendors in Gaza due to Company Size.

Table (5.16) shows that the p-value (Sig.) is less than the level of significance $\alpha = 0.05$ for the field “Level of Project Management”, then there is significant difference among the respondents toward this field due to Company Size. Researcher concludes that Company Size has an effect on this field. The researcher attributes that to the management practices that change totally if the company was of small size than if it is of large size.

For the other fields, the p-value (Sig.) is greater than the level of significance $\alpha = 0.05$, then there is insignificant difference among the respondents toward these fields due to Company Size. We conclude that the Company Size has no effect on the other fields. The researcher attributes that to the little number of companies in the Gaza Strip in the field of ITO. These companies are similar in many faces. Most of them are small size and have similar years of experience. That’s why company size and its years of experience has no effect on other fields.

Chapter 6

Conclusion and Recommendations

Chapter Six: Conclusion and Recommendations

6.1 Introduction

In this chapter, the first section will summarize the study findings. The study conclusion will be listed and then the study recommendations will be presented. Finally the future research ideas are stated.

6.2 Conclusion

In this section the findings of the study are presented and analyzed in the light of previous studies and qualitative data from the interviews with senior manager of targeted companies and other expertise in the same filed.

The results revealed that the selected variables: appropriate infrastructure, cost-saving, skilled human resource, quality of services and products, language and culture, project management, political and legal instability, and communication as driving factors affect the competitiveness of vendors in IT outsourcing in the Gaza Strip.

The most notable conclusions were:

First: Driving Factors

- The study revealed that the level of all driving factors exist with the mean (68.90%).
- There is a significant relationship with correlation coefficient value (.727) between driving factors and competitiveness of vendor firms in attracting clients in the Gaza Strip.

A. Appropriate Infrastructure:

- The study revealed that the level of appropriate infrastructure exist with mean (75.02%).
- There is a significant relationship with correlation coefficient value (.409) between level of appropriate infrastructure and competitiveness of vendor firms in attracting clients in the Gaza Strip.

B. Cost Saving:

- The study revealed that the level of cost saving exist with mean (74.21%).

- There is a significant relationship with correlation coefficient value (.281) between level of cost saving and competitiveness of vendor firms in attracting clients in the Gaza Strip.

C. Skilled Human Resource:

- The study revealed that the level of Skilled Human Resource exist with mean (59.06%).
- There is a significant relationship with correlation coefficient value (.193) between level of skilled human resource and competitiveness of vendor firms in attracting clients in the Gaza Strip.

D. Quality of Services and Products:

- The study revealed that the level of quality of services exist with mean (77.51%).
- There is a significant relationship with correlation coefficient value (.696) between level of quality of services and competitiveness of vendor firms in attracting clients in the Gaza Strip.

E. Language and Culture

- The study revealed that the level of language and culture exist with mean (73.08%).
- There is a significant relationship with correlation coefficient value (.459) between level of language and culture and competitiveness of vendor firms in attracting clients in the Gaza Strip.

F. Project Management

- The study revealed that the level of project management exist with mean (70.34%).
- There is a significant relationship with correlation coefficient value (.666) between level of project management and competitiveness of vendor firms in attracting clients in the Gaza Strip.

G. Political and Legal Instability

- The study revealed that the level of political and legal instability exist with mean (46.71%).

- There is a significant relationship with correlation coefficient value (.423) between level of political and legal instability and competitiveness of vendor firms in attracting clients in the Gaza Strip.

H. Communication

- The study revealed that the level of communication exist with mean (75.71%).
- There is a significant relationship with correlation coefficient value (.708) between level of communication and competitiveness of vendor firms in attracting clients in the Gaza Strip.

Second: Competitiveness of Vendors

- The study revealed that the level of competitiveness exist with mean (72.10%).
- There is a significant relationship with correlation coefficient value (.727) between driving factors and competitiveness of vendor firms in attracting clients in the Gaza Strip.
- The study concludes that only three factors (Level of Communication, Level of political and legal instability and Level of quality of services and products) together do significantly impact competitiveness of vendor organizations and the rest of factors are insignificant to competitiveness.
- The study concludes the insignificant difference among the respondents toward these fields due to the personal characteristics of Gender, age, job title, Years of Experience in IT field, Educational level, and years of Experience for company. However, there is significant difference among the respondents due to company size.

6.3 Recommendations

In light of the study results, researcher recommends firms working in ITO sector, universities and government with the following:

ITO firms:

- Exerting more efforts in providing robust information technology infrastructure and the latest tools, technologies, and machines that help in developing the provision of services.
- Delivering prices after detailed study of other firms' prices, different pricing methods and different countries prices.
- Re-evaluating human resources skills and conduct needs assessment for the labor market.
- Building the capacities of employees by delivering more intensive and advanced training programs in technical and administrative fields.
- Developing technical and managerial skills to match ITO clients abroad.
- Exerting more efforts to send missions of employees for training purposes.
- Adopting practices for building capacities such as:
 - ✓ Recruitment of experiences and foreign employees.
 - ✓ External and internal knowledge transfer.
 - ✓ Employee's rotation.
 - ✓ Employee certification.
 - ✓ Foreign language training.
 - ✓ Employee's career development system.
- Applying quality standards and criteria for software development and outsourcing process. ITO firms need a control and quality assurance system to ensure quality measures.
- Promoting the diversity of different cultures and customization of services and products to fit the culture receiving the service.
- Encouraging advanced management strategies for projects.
- Increasing the level of communication between firms and clients and put the client in the situation phase by phase.

- Provide employees a good work climate since it deeply affects their performance. The good work climate motivates employees to perform well

Universities and institutions:

- Enhancing the role of educational institutions in promoting the outsourcing culture particularly the IT faculties and technical colleges.
- Enforcing and promoting learning of foreign languages for students.
- Incubating entrepreneurs and new ideas in the field of IT.
- Conducting awareness campaigns about the importance of ITO as business trend for students, undergraduates, and others.

Government:

- Promoting the cooperation between government and ITO firms to facilitate the creation of more ITO in the Gaza Strip and make government aware of all requirements and benefits of such a business on economy.
- Building relationships with international organizations to support ITO in the Gaza Strip.
- Reducing taxes and facilitating the establishment of this type of business.
- Mitigating conditions forced by government upon new firms.

6.4 Future Researches

Future studies may need to consider:

- In-depth analysis of barriers coming out of this study that prevent the development of ITO in the Gaza Strip.
- How to manage the relationship between vendors and clients in outsourcing relationship.
- How to increase competitiveness of vendor companies.
- Comparative studies of an international model and local model in ITO.

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Appendices

الاستبيان

1. البيانات الشخصية:

الجنس	<input type="checkbox"/> ذكر <input type="checkbox"/> أنثى
العمر
المسمى الوظيفي	<input type="checkbox"/> مدير <input type="checkbox"/> مطور أعمال <input type="checkbox"/> مسؤول فريق <input type="checkbox"/> محل أنظمة <input type="checkbox"/> مسؤول علاقات عامة وتسويق <input type="checkbox"/> غير ذلك: اذكر.....
سنوات الخبرة في مجال الـ IT
الشهادة العلمية	<input type="checkbox"/> ثانوية عامة <input type="checkbox"/> دبلوم <input type="checkbox"/> كالوريوس <input type="checkbox"/> ماجستير <input type="checkbox"/> غير ذلك

2. بيانات الشركة:

مجال عمل	<input type="checkbox"/> تطوير برمجيات <input type="checkbox"/> تصميم جرافيكي <input type="checkbox"/> صيانة <input type="checkbox"/> إدخال بيانات <input type="checkbox"/> غير ذلك
المبيعات	<input type="checkbox"/> خدمات <input type="checkbox"/> منتجات <input type="checkbox"/> خدمات استشارية
عدد سنوات الخبرة
حجم الشركة:	<input type="checkbox"/> صغير (0-15 موظف) <input type="checkbox"/> متوسط (15-50) <input type="checkbox"/> كبير (+50 موظفين)

يرجى وضع الدرجة التي تناسبك ، حيث كلما اقتربت الإجابة من 10 دل على الموافقة الكبيرة جدا على ما ورد في العبارة وتقل بالتدرج

م	السؤال	10-1
أولا :مدى ملائمة البنية التحتية للشركة		
1.	تتمتع الشركة بوجود أجهزة حديثة وذات تقنيات عالية	
2.	توفر الشركة البرامج والتطبيقات وقواعد البيانات العلمية بشكل مرخص وقانوني	
3.	تتميز الشركة بوجود التيار الكهربائي بشكل دائم وجودة الاتصال	
4.	تتابع الشركة التطورات التكنولوجية والتقنيات الحديثة وتقدمها للموظفين	
5.	توفر الشركة خدمة انترنت مميزة وبسرعة عالية للموظفين	
6.	تقوم الشركة بتطبيق مفاهيم الـ IT governance ¹	

¹ العمليات التي تضمن الاستخدام الفعال والمؤثر لتقنية المعلومات لإتاحة الفرصة للمؤسسة لتحقيق أهدافها

ثانيا: تأثير التكلفة على الزبون	
7.	تتبع الشركة طريقة واضحة ومحددة في تسعير خدمات الشركة ومنتجاتها
8.	يناسب سعر الشركة كافة أنواع الزبائن من مختلف الدول
9.	تؤثر المنافسة بين شركات التعهيد على الأسعار التي تضعها الشركة؟
10.	تضع الشركة ضمن العقد مع الزبون تكاليف إدارة المشروع وإدارة المخاطر وإبرام العقود وهكذا
11.	يوجد فرق كبير بين السعر الذي تقدمه الشركة و السعر المقدم في بلد الزبون
ثالثا: مستوى مهارات الموارد البشرية	
12.	تعقد الشركة دورات تدريبية لتطوير قدرات العاملين
13.	تعتمد الشركة على عملية توظيف شفافة ومهنية في اختيار العاملين
14.	تبتعث الشركة من موظفيها لتطوير قدراتهم خارج قطاع غزة
15.	تقوم الشركة بالتعاقد مع مدربين متخصصين من خارج القطاع
16.	تقوم الشركة بتخصيص موازنة للتدريب وال on-job training
17.	يتمتع كل مسؤول ضمن فريق العمل بمهارات عالية في مجال إدارة المشاريع والتواصل
18.	تقوم الشركة بإعطاء الموظفين ما يستحقون من علاوات و مكافئات
رابعا: مستوى جودة الخدمات والمنتجات	
19.	تنفذ الشركة مشاريعها ضمن الوقت المحدد و الموازنة المطروحة
20.	تقدم الشركة منتجات تلبي متطلبات الزبائن
21.	تقدم الشركة منتجاتها وخدماتها طبقا للمواصفات المتفق عليها
22.	عند حدوث أي تغيير على تنفيذ طلبات الزبائن ، تقوم الشركة بإبلاغ الزبون أولا بأول
23.	تراعي الشركة عند تقديم خدمة أو منتج مقاييس جودة الخدمة مثل (Responsiveness , Assurance, Tangible,)
24.	تقوم الشركة بتقييم خدماتها والاستفادة من التغذية الراجعة
25.	تستخدم الشركة معيار محدد لضمان ضبط جودة خدمة التعهيد مثل ISO90001
26.	تحمي الشركة الملكية الفكرية وتراعي في استخدامها للبرمجيات حقوق الطبع والنسخ
خامسا: مستوى اللغة والثقافة	
27.	تقوم الشركة بتوظيف من يتقن اللغة الانجليزية
28.	تراعي الشركة الفروق الثقافية عند تصميم منتجاتها

29.	تأخذ الشركة بعين الاعتبار فرق التوقيت بين الدول وأيام الاجازات الرسمية
30.	تقوم الشركة بتوظيف النساء بشفافية و بدون تمييز
31.	تقوم الشركة بتعزيز ثقافة التعهيد وتشجيع العمل عن بعد في المجتمع
32.	يلاحظ الزبون ثقافة الالتزام بالموعد و أهمية العمل عند الشركة
سادسا: مستوى إدارة المشاريع	
33.	تتبع الشركة منهجية التخطيط والتنفيذ والفحص والتوثيق للمشاريع البرمجية
34.	تقدم الشركة خدمات الصيانة للخدمة والمنتج ضمن نطاق المشروع
35.	تقوم الشركة بإدارة عملية التوثيق لكل نشاط وأرشفة الوثائق الخاصة بالمشروع
36.	تتيح الشركة مصادر المعرفة اللازمة لكل أفراد الشركة
37.	تتيح الشركة البيانات في حدود حاجة العمل لكل أفراد الشركة
38.	تدير الشركة المشاريع وفق المنهجية المقترحة من قبل الزبائن
39.	تتبع الشركة المنهجية المناسبة حسب طبيعة المشروع
40.	تقوم الشركة بتطبيق نموذج CMMI ¹
سابعا: مستوى الاستقرار السياسي	
41.	تعزز الاجراءات والتسهيلات الحكومية من انتشار خدمات التعهيد
42.	تسهل الحكومة على شركات التعهيد و تخفف من الضرائب
43.	تشجع وزارة الاقتصاد شركات التعهيد وتسن قوانين تسهل من عملهم
44.	لا تتأثر الشركات بمراقبة البيانات من قبل الجهات الرسمية
45.	الوضع السياسي الغير مستقر في غزة لا يؤثر على عمل الشركة وتطورها
46.	توفر الحكومة بنية تحتية يمكن التعويل عليها في مجال تكنولوجيا المعلومات
47.	يساعد وجود حماية وقانون خاص بخدمات التعهيد على انتشار خدمات التعهيد
ثامنا: مستوى الاتصال والتواصل بين مزود الخدمة والزبون	
48.	تستخدم الشركة كافة أشكال التواصل (ايميل – فاكس – تلفون- فيديوكونفرنس) للتواصل مع الزبائن
49.	يتم التواصل أولا بأول ومرحلة مرحلة مع الزبون(متابعة سير العمل)
50.	يتم فهم المتطلبات جيدا وفهم ما يريده الزبون قبل البدء بالعمل

1 إطار عمل يقوم بتوصيف العناصر الأساسية للإجراءات الفعالة في عملية تطوير البرمجيات من خلال النماذج المستخدمة وطرق التقييم والدورات التدريبية.

.51	تنسج الشركة علاقات قصيرة و طويلة الأمد مع الزبائن
.52	يستمر التواصل مع الزبائن بعد انتهاء الخدمة
.53	يوجد ممثل للشركة في بلد الزبون كحلقة للتواصل
.54	تتمتع وسائل الاتصال بالأمان والسرية والخصوصية والموثوقية في نقل البيانات
.55	تقوم الشركة باستخدام أدوات التسويق لتسويق خدماتها ومنتجاتها
تاسعا: مستوى تنافسية الشركة	
.56	تزداد مبيعات الشركة سنويا
.57	نقاط القوة لدى الشركة كافية للمنافسة في السوق
.58	يتحسن الوضع التنافسي للشركة بعد مرور 3 سنوات
.59	يزداد عدد الشركات المحلية المنافسة سنويا
.60	لدى الشركة معدل عائد على الاستثمار أعلى من منافسيها
.61	الحصة السوقية للشركة أعلى من باقي المنافسين
.62	تزداد الحصة السوقية للشركة سنويا
.63	لدى الشركة سمعة قوية في السوق تميزها عن غيرها
.64	لدى زبائن الشركة ولاء لخدمات الشركة ومنتجاتها
.65	لدى الشركة خطة استراتيجية لزيادة التنافسية
.66	لدى الشركة خطة تسويقية لزيادة التنافسية

شاكرين حسن تعاونكم...

Appendix B

Questionnaire (English Version)

First: Personal Information

Gender	<input type="checkbox"/> Male <input type="checkbox"/> Female
Age	
Job Title	<input type="checkbox"/> Manager <input type="checkbox"/> Software Developer <input type="checkbox"/> Team Leader <input type="checkbox"/> System Analyst <input type="checkbox"/> Marketing & Public Relations Officer <input type="checkbox"/> Other:.....
Years of Experience in IT field
Educational Level	<input type="checkbox"/> Secondary School <input type="checkbox"/> Diploma <input type="checkbox"/> Bachelor Degree <input type="checkbox"/> Master Degree <input type="checkbox"/> others:.....

Second: Company Profile

Work Field	<input type="checkbox"/> Software Development <input type="checkbox"/> Graphic Design <input type="checkbox"/> Maintenance <input type="checkbox"/> Data Entry <input type="checkbox"/> Others
Sales	Services Products Consulting Services
Years of Experience
Company Size	<input type="checkbox"/> Small <input type="checkbox"/> Medium <input type="checkbox"/> Large (0-15 employee) (15-50) (50+employees)

Third: Questionnaire Sentences

Please evaluate the impact of the following factors on competitiveness of IT outsourcing vendors; by writing the number between 1 and 10 to evaluate your agreement to the following sentences, where number 10 indicates highly agreement and it decreases gradually

NO.	Sentence	1-10
First: level of Appropriate Infrastructure		
1.	The company has high tech and modern equipment	
2.	The company offer programs, software, applications and scientific database in a legal way	
3.	The company has permanent electricity and good quality communication tools.	

4.	Company follow up with technological developments and provide it for its staff	
5.	Company provide good internet service with high speed for staff	
6.	Company applies IT governance aspects	
Second: Cost Impact on Client		
7.	Company follows a standard way in pricing services and products	
8.	Company price fit all customers from all countries	
9.	The competition among outsourcing companies affect the price proposed by the company	
10.	The company includes with contract the cost of project management , risk management, signing contracts ...etc	
11.	There is a large difference on price provided by the company and price provided in client country	
Third: level of Skilled Human Resource		
12.	Company conducts training courses to build employees capabilities	
13.	Company follow a transparent and professional recruitment process in selecting new employees	
14.	Company send a mission of its staff abroad to build their capacities	
15.	Company contract with expert trainers from outside Gaza	
16.	Company allocate from budget for training and on-job training	
17.	Every team leader has good skills in project management and communication	
18.	Company gives its employees fair incentives and wages.	
Fourth: Level of quality of services and products		
19.	Company conducts its project within proposed budget and on time	
20.	Company provide products that satisfy customer needs	
21.	Company provide its services and products according to specifications agreed upon	
22.	Company contacts customer immediately when any change to work is required	
23.	Company provides services up to quality measures of services (responsiveness, tangible, assurance...etc)	
24.	Company evaluates its services and takes advantage of feedback	
25.	Company use specific criteria to assure quality of outsourcing services such as ISO 90001	

26.	Company protects intellectual property and copyrights of software and applications.	
Fifth: level of language and Culture		
27.	Company recruits who has good English skills	
28.	Company is aware of cultural differences when designing products and services	
29.	Company is aware of differences in off-days, holidays, and time.	
30.	Company employs women without discrimination	
31.	Company enforces outsourcing culture and encourage telework in community	
32.	Client notices the commitment towards work and deadlines	
Sixth: Level of Project Management		
33.	Company follows the methodology of planning, design, execution, maintenance and documentation of projects.	
34.	Company provides maintenance services within project scope.	
35.	Company manage the process of documentation and archiving of all activities of project.	
36.	Company offers required knowledge sources to all company's member	
37.	Company makes data available to employees within boundaries of work needed	
38.	Company manages projects according to methodology suggested by clients.	
39.	Company follow suitable methodology of management based on project type	
40.	Company applies the CMMI framework	
Seventh: level of political and Legal instability		
41.	Governmental procedures facilitate and promote IT outsourcing	
42.	The government encourage ITO companies and mitigate taxes and laws	
43.	Ministry of Economy enact special laws to facilitate ITO companies' establishment.	
44.	ITO companies is not affected by inspection of data from official bodies	
45.	Instable political situation in Gaza doesn't affect the company work and development	
46.	The government provides robust infrastructure in the field of Information technology	
47.	The enacting of a law for ITO to facilitate and protect will help in the spread of outsourcing services.	

Eighth: Level of Communication		
48.	Company utilize different tools to communicate with client (email - fax- Telephone- video conference).	
49.	Company contact client immediately and phase by phase to follow up	
50.	The requirement client-desires are clearly understood before the start of work	
51.	The company holds short and long-term relationships with clients	
52.	The contact with clients continues after the end of service.	
53.	The company uses the Bridge engineer(company representative) in the country of client	
54.	Company uses communication tools that are confidential, secure, safe and private in data transfer	
55.	Company utilizes all marketing tools to promote its services and products	
Ninth: Level of Company Competitiveness		
56.	Company Sales are increasing yearly	
57.	The strengths of the company are enough to compete in the market	
58.	The competitive position of the company has continues to improve	
59.	Company has Return on investment higher than its competitors	
60.	Market Share of the company is higher than the rest of competitors	
61.	Market Share is increasing year by year	
62.	Company is distinguished by its brand awareness in the market	
63.	Company clients has customer loyalty to company products and services.	
64.	Company has strategic plan to increase competitiveness	
65.	Company has marketing plan to increase competitiveness	

Appendix C
List of Referees

	Name of Refree	Specialization	Position
1.	Dr. Waseem Elhabeel	PhD in Public Administration	Vice Dean of Community Service & Continuing Education Department at IUG
2.	Prof. Dr. Samir Safi	Ph.D. in Statistics	Prof. of Statistical in Faculty of commerce at IUG
3.	Dr. Khaleel Elnamrooti	Ph.D. in Business Economics	Associate Professor of Economics Department, IUG
4.	Dr. Yasser Elshorafa	Ph.D. Islamic banking & financial studies	Assistant professor in Business Administration Department , IUG
5.	Dr. Khaled Eldehleez	PhD in management	Assistant Professor of Business Administration Department, IUG
6.	Dr. Rebhi Baraka	Ph.D. in Computer Science	Dean of Faculty of Information Technology, IUG Associate professor of Computer Science
7.	Dr. Iyad Elagha	Ph.D. in Software Development	Assistant Professor of Software Development Head of Multimedia Department
8.	Dr. Alaa Elhalees	PhD in Data mining	Professor of Computer Science at Faculty of Information Technology, IUG
9.	Dr. Wissam Ashour	PhD. Data Mining	Associate Professor at Faculty of Engineering
10	Dr. Rawia Radi	PhD in Computer Science	Teacher at Faculty of Information Technology, IUG
11	Mr. Ali Sunallah		Statistical Analyst in Alpha office for Statistics

Appendix D

ITO Companies in the Gaza Strip

❖ Unit One:

A company founded by two friends, Ahmad Abu Shaaban and Saadi Lazan, was one of the first to conduct contracts with firms outside Palestine, whether directly or through other intermediate companies operating in the West Bank.

Unit One is a professional Palestinian ICT company which has been evolved since 2005 providing Enterprise Software Development, Branding and Identity Development, Business Process Outsourcing, and Online Presence services targeting the global market (Unit One ICT, 2016).

❖ HAWEYA for Information Technology:

A leading company in the field of design and innovation, they provide the best graphic design, high quality marketing devices, and faster performance. They provide services such as: designing brands, designing and developing websites, designing and developing smart phones applicationsetc. They work remotely and serve clients across Arab countries and others.

(HAWEYA for IT, 2015)

❖ Work without Borders:

"Work without borders", a not-for-profit corporation registered in Palestine in 2007, to reduce unemployment in the Gaza Strip and the West Bank and to provide good and suitable employment opportunities for qualified graduates through telework system.

Work without borders asserted the existence of guarantees in the telework, through a tripartite contract signed to ensure that the rights of the employer abroad and the employee inside. In that tripartite contract, the foreign employer is the first party while the second party is the employee; the third party is work without Borders Company, where its role is providing a comfortable work place to work from Gaza City, and rent and providing the tools necessary to do so. (Work Without Borders, 2016)

Work without Borders involves about thirteen other companies that work for different offshore clients. The number of employees reaches 110.

❖ **NEPRAS for Media and IT:**

Nepras is a Palestinian leading company that was established since 2001 it combines between the Media power and Information Technology efficiency. It is the first time to combine between media work and information technology in a specialist way, so it aims to provide distinctive services and effective solutions that matches the local and international market's requirements. After 13 years of success, Nepras is seeking to expand its services and enlarge its market by providing a trustworthy solutions as well as unique creative and best afforded services, to meet different institution's needs (Nepras for media and IT, 2016).

❖ **IPhone Alsham:**

IPhone Alsham is a new company that provides a wide range of comprehensive services for all type of business and clients. Their services include Mobile Applications, websites and APIs, ERP consultancy, and other technical services outside of Gaza (Iphone Alsham Company, 2014).

❖ **ATYAf for Technology:**

ATYAF is a company follows outsourcing to enlarge its business. It has a high qualified team in IT that is able to deliver: web Design, web apps, web development, mobile development, social media services, online marketing, custom software development, web hosting, and server's management and support.

❖ **Mezian:**

Mezian for programming and digital marketing is a company that provides software solutions in web, and Mobile applications world. They are experts at digital marketing in all fields and all places.

❖ **New Line for Technology and Development:**

New Line works closely with clients outside Gaza to develop software and provide mobile applications and other solutions (NewLine for IT, 2015).

❖ MIDAD:

Midad is a Palestinian national company was founded in 2009 in Gaza City in order to provide many miscellaneous services, where it works with a group of experts and specialists in their fields. Midad is one of the leading companies in Palestine, which adopts a method of outsourcing and works professionally in a variety of areas, including software and multimedia, telecommunications, training, and consulting, according to global standards.

❖ Rozn:

Rozn works closely with organizations to design and build forward thinking web and mobile products. Their solutions work across a multitude of platforms to help businesses run more efficiently, make better decisions, and connect with more customers. They've been lucky enough to work with businesses from around the world, from startups to fortune 500's (Rozn , 2016).

❖ Digital Cloud:

Digital Cloud has for many years been a trusted digital marketing company. They provide quality solutions for clients who seek to succeed through innovative communications.

❖ Magic Lens:

Magic Lens is a media production company based in Gaza City, Palestine. Its team of experts creates graphic designs, high quality motion graphics as well as 3D explainer and promotional videos for companies and individuals. In addition, we are media-sponsor of local events as a part of our social support efforts.

❖ Divvat for Information Technology:

Divvat is located in Gaza city. They are specialized in programming and developing websites and mobile applications.

❖ Shift ICT:

Shift ICT Company is a global software service provider focused on enterprise software services. It provides services in ERP (Enterprise Resource Planning), and CMS (Content Management Systems) based on Open Source products. It provides consulting, customization, implementation, training and support services for Odoo.

They are head-quartered at Palestine. With an experienced team of Functional and Technical experts, we currently provide our services in Palestine, Middle-East, Africa, and Europe either directly or through strategic partnership with local partners.

The rest of companies are new-established and has no sufficient information neither profiles yet. They are listed below:

- ❖ **I-Soft:** a company located in Rafah. It consists of a team working in web development and design.
- ❖ **Perfect Solution:** a company located in Gaza. Its team works in mobile applications and web programming.
- ❖ **Hope:** a company located in Jabalia. Its team works in mobile applications and web development.

Thank you for your Cooperation