

## It Offshoring And E\_Business Adoption In Iraq: Study From Smes Perspective

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**Abstract:** The aims of this research were to investigate the factors that influence the IT offshoring approach among the Iraqi SMEs and whether this approach can be considered for the SMEs e\_business implementation. SMEs face many issues such as technological, business, economic and cultural nature, while trying to be in an advantage edge or survive at least. Business offshoring is one of the approaches common especially in IT development to assist the enterprises to automate and streamline the business processes. This research applied the quantitative and qualitative approaches when collecting data from the Iraqi SMEs. SPSS software was used to analyse the collected data.

**Keywords:** SMEs, E\_business , IT offshoring, IT offshoring success factors.

### 1. INTRODUCTION

One of the recognised potential areas in Iraq is business services, especially in involving IT offshoring services [1, 2]. In general, the practices of IT offshoring are being adopted frequently by large local and multi-national companies[3]. Nevertheless, the practices for SMEs are still limited to non-core processes and general office automation [4]. The needs for SMEs is created when the situation of business be further dynamic and moves to e\_business , to improve their effectiveness by spreading their services, for example, storage, data farm, and front and back-end applications. Corresponding to the Iraqi Economic Transformation Plan, SMEs should globally reach customers through e\_business [1]. Nevertheless, at present only 20% of the 700,000 SMEs have websites [5].

Because of the limitations of SMEs, for instance, awareness lack, and rare resources in capital and manpower to improve IT application; becoming a full-fledged e\_business has not been prioritized. Nevertheless, SMEs can compete globally and move forward. Thus, the solution for this problem could be the IT offshoring. Companies use e\_business for improving their business trade opportunities and novel markets; and by rising their sales they tend to shrink their transaction cost, beside, the increase the cooperating flexibility with business partners [6].

E\_business is highly affecting the implementation of business processes; it also improves the industries structure, and eliminates the power balance between the enterprises and their suppliers and customers.

In business, enterprises have to assess the opportunities and threats presented by e\_business. The internet has driven new financial environment, by creating unique opportunities for enterprises, individuals, and countries [7]. In the past decade, the area of IT offshoring faced many failures [8, 9]. Nevertheless, there is still a lack of researches in identifying the parameters that impact the successful offshoring accomplishments. Previous researchers have failed to recognize the parameters that inhibit or influence IT-offshoring [10], accordingly, a very large research gap has showed, and whether IT-offshoring will succeed or fail is a question remained unanswered.

As a fact, many researches and unlimited resources are needed to be able to evaluate and study all the aspects related to successful IT offshoring; as whether IT offshoring will succeed or not is still not proven yet. Nevertheless, this research have identified some factors to be studied and measured.

### 2. IT OFFSHORING

Over these years, companies have used IT offshoring as an approach for shrinking their costs [11, 12]. Besides, IT offshoring has become significant, because of the management pressure, intended establishing the enterprise boundaries, besides, to a growing recognition of the possible advantages, that may be gained from closer collaboration between the enterprise and the service provider [13, 14].

Based on these facts, this present study has recognized that, there is a need to investigate the determinants of success in terms of IT offshoring in a SMEs.

The use of offshoring as a part of the general strategy has become more popular over the time. Furthermore, offshoring could be a short cut to gain useful skills and knowledge in a short term perspective[15]. According to Kessler, Bierly [16], an organization could establish a strategic partnership to gain access to skills and knowledge that could make them more competitive. One objective with the use of offshoring is to get access to some of those competencies, which an organization requires for its operations; so that, an organization gets an opportunity to focus on its core competencies instead, this is the actual source for creating a competitive advantage [17]. The decision to use offshoring as a part of an overall strategy could be rather controversial.

Major companies offshore IT-services focused on their core business activities, and recognize their benefits behind offshore IT services to third party.

The most usual IT services offshoring take account of software development, data/information processing, maintenance, and system hosting.

### 3. E\_BUSINESS PRACTICES IN SMEs

Generally, previous studies have focused on the difference among SME's and large companies, in terms of the contribution of e\_business , particularly on the SME's side [18-20]. On the other hand, both, SME's and large companies share some mutual goals, for instance, stability and long-term profit, etc., all these goals encourage the companies to adapt new methodologies or efficient approaches for enhancing the business process. According to Taylor and Murphy [21] SME's have been trying to succeed on achieving this by less number of resources, and by the strong impact from the owners or the decision makers [22].

Furthermore, in developing countries, the awareness and adoption of e\_business in SME's have been motivated by markets more than the western countries [23]. E\_business technologies have been adapted by SME's as a strategic plan, for smoothing the variances with the big players, or getting an edge advantage over them, for example, obtaining a competitive advantage or improving service quality. One of the most important share between western and developing countries is the requirement to exchange information and knowledge among SME's and their partners all over the world, in an electronic platform [24, 25].

SME's extremely vary in the degree of adopting e\_business technologies, both, globally or even smaller regions. According to Wimmer, Bogataj [26], it is significant to know that, SME and e\_business are assumed rather differently by various researchers and investigators, so exacting one-to-one evaluations are not all the time feasible or meaningful. There are many motivations for IT internationalization of SMEs. However, the core motivations recognized, while working with different companies in the field are: following customers or partners to a new markets, the wish of exploiting comparative advantages, economies of scale and scope, human resource seeking (e.g. analysts, developers, project managers), diversification of the markets, market seeking, experience and information seeking, excess production capabilities available, small local market, owner's ambitions moreover, previous experience in international markets, and manager's competence.

According to Han, Lee [27], adopting e\_business in the supply chain carries a lot of profits to enterprises, recently, researches illustrate that, numerous SMEs have not yet applied e\_business . SMEs are deliberate to be a crucial element for the economic development of the countries [28].

Nevertheless, SMEs are furthermore affected by a competitive pressure from various countries, such as, India, China, and Vietnam. Enterprises in such countries have a lower labour costs, than in Iraq. Thus, to compete with enterprises from these countries, the Iraqi SMEs have to perform effectively. One approach to reach that is to have an effective supply chain over implementing e\_business technologies [29].

### 4. IT OFFSHORING SUCCESS FACTORS

Many IT offshoring success parameters have already gained attention in the literature [9, 30-32]; nevertheless, this present research differs from the previous ones, by focusing on combining three dimensions: relationship, contract and capability, and measure their influence on successful IT offshoring. Business executives were involved, in order to provide their vision regarding to IT offshoring in the literature. The author has reviewed and analysed many models, and identified each model and the specific influencing factors that shows in table 1.

After reviewing these IT offshoring models, the table 1 shows that, the majority of the researchers use trust as a determinant for IT offshoring in their models. Furthermore, several models have revealed that, trust has been frequently used as a determinant for relationship among partners [33, 34]. In this, context this study has considered

trust as an important factor, since it also affects the relationship between the partners. Consequently, commitment is another factor that has been used frequently in many models (see table 1).

According to table 1, there is a lack of research towards information sharing in the previous studies on IT offshoring. Therefore, information sharing has been considered as an important factor affecting the partnership quality of offshoring [35]. The client-vendor relationship critically affect the success or failure of the offshoring arrangement [35].

A way to reach profits from IT offshoring is through sustaining positive client to vendor relationship [36]. Constructing and maintaining a sufficient clients-vendors relationship of IT offshoring initiatives is a way to add values from offshoring [37]. Relationship understanding that grows in IT offshoring is critical, as it comes not only through the contract operationalization, but further as a normal significance of the issues, resulting due to dependency. Besides the collective practice of IT offshoring, the offshoring nature has moved from a pure contractual, to the one, based on relationship [35]. According to these facts, trust and commitment are important factors for building a satisfactory model for successful IT offshoring. This paper has investigated the relationship between each of these two factors and the success of IT offshoring.

Moreover, the literature shows that, completeness of contract has been highly recommended as a determinant for IT offshoring [38]. Consequently, Handley and Benton Jr [39] have found that, completeness of contract is important in determining the performance of IT offshoring. Furthermore, the model proposed by Blumenberg, Beimborn [40] shows that, completeness of contract affects the success of the relationship between partners.

Table 1: Reviewing of determining factors that influencing offshoring

Authors	Factors												
	Trust	Contract completeness	Technical capabilities	Cooperation	Communication	Information Sharing	Cultural compatibility	Culture	Flexibility Capability	Knowledge Sharing	Mutual understanding	Capability Evaluation	Commitment
[39]		√		√									√
[33]	√												√
[35]	√			√	√	√	√		√				
[41]	√			√	√								√
[40]	√	√			√		√			√	√		√
[42]					√								
[36]												√	
[38]													√
[36]	√			√	√								√
[43]	√		√										√
[44]		√											
[45]	√												
[46]			√										
[47]	√							√					√

[37]	√									√			
[22]	√		√		√	√				√			√

Subsequently, Chan [43] has showed that, the internal technical capability for the organization is an important issue related to IT offshoring. By reviewing the dimension of the capabilities for the organization, technical capability has been found essential for IT offshoring initiatives [46]. The literature shows a lack of measuring the effect of internal technical capabilities in the success of IT offshoring. Furthermore, few previous studies have considered cultural compatibility as a factor determining relationship between partners[35].

To construct the model we need to narrow down the area that represent the major indicators, metrics, and determinants of IT offshoring from the point of view of buyer company.

As the approach of this study is to discover the crucial factors that the enterprises are required while having an IT offshoring

preparations, this research went through various sources. The following table shows

the determinants gathered from previous literatures and analysed to formulate the factors, focused by several researchers; some specific factors that have been focused in this research, and their data collection methods, sample size, what to measure, region and if it covers SMEs or not have been presented. Table 2 shows that, several researchers have studied the choosing factors, which have been extracted from table 1; the specific researches in this table have used different data collection methods and different sample size. This table has also showed the variable that has been measured by the determinants of each research. It has also specified the region of the research and if it has covered SMEs or covered organizations in general.

Table 2: Reviewing of choosing factors in the literature of IT offshoring

Prior Studies	Data collection method / Sample Size	Trust	Commitment	Information sharing	Contractual completeness	Technical Capabilities	Cultural Compatibility	Flexible capabilities	Measuring	Region	Covers SMEs
[48]	Interview 2 Case study	√	√						Successful IT offshoring	China	No
[33]	Survey (93)	√	√						Partnership Quality	Korea	No
[35]	Survey & interviews (1 case study)	√	√				√	√	ITO relationship	Korea	Partial
[41]	Survey & case study	√	√						IT offshoring relationship	Iraqian	No
[40]	Interview & survey (1000)	√	√		√				Relationship Quality	General	No
[38]	Survey (92)		√		√				IT offshoring success	General	No
[36]	Online Survey	√	√		√				IT offshoring success	General	No
[43]	3 Case study	√	√						IT offshoring success	General	No
[44]	5 Case study				√				IT offshoring success	General	No
[46]	Survey (122)					√			IT offshoring success	China and India	No
[37]	Survey (267)	√							IT offshoring success	Korea	No
[22]	Survey (198)	√	√			√			IT offshoring success	General	No

As shown in Table 1, many previous researchers have studied the factors related to IT offshoring in the literature. However, the table 2 has consequently focused on the factors that influence success of IT offshoring, performance, relationship quality, and conflict handling. Table 2 differentiates these researches, to show their significance. This table represents that, most of the models emphasis on trust as an important factor to determine IT success of offshoring, performance and relationship.

## 5. RESEARCH METHODOLOGY

Qualitative and quantitative approaches are interactive by involving interviews and structured questionnaire in this research. The strategy of this study was used to have a depth and breadth of this study specially within the process of data collection [49]. The approach of qualitative study was selected for this research to recognizing IT offshoring services, key success factors, and potentials in-depth among SMEs in Iraq.

This required interviews and observation of SMEs common practices with respect to IT offshoring practices. For quantitative approach, a survey technique was used to have more respondents that can contribute to this research. The outcome of this study is an IT offshoring integrated framework for Iraqi SMEs to be used together with their E\_business initiatives.

This research will examine and identify the potential of IT offshoring in E\_business for SMEs, the research also will analyze and evaluate three previous models for offshoring and developing a new model. In addition, the survey will be distributed to conduct the results and analyze it. Therefore a mixed mode of qualitative and quantitative is appropriate for this research. In this research, the scale questions have been used to answer the questions that related to evaluate the influence of the factors. A summary of Item's description, frequency and sources shown in table 5.

## 6. Hypotheses Development

This section covers comprehensive discussions on key relationships in the model and their related hypotheses. The first part presents the hypotheses related to relationship dimension, and the IT offshoring success that have been derived in this research. The second part presents the hypotheses related to contract dimension and IT offshoring success. Moreover, the third section first shows the hypothesis associated with internal technical capabilities and IT offshoring success, and second presents the hypothesis related to cultural compatibility and IT offshoring success, and finally presents the hypothesis related to cultural compatibility and IT offshoring success.

Offshoring success has been gauged by many researchers through measuring a single item such as cost saving [50], and vendor performance [51, 52]. Instead of evaluating cost savings only, Goonetilleke [3] suggested that offshoring success needs to be evaluated from a three perceptions; technical, economic and strategic benefits. Finally, this research viewpoint is to measure IT offshoring success through the three dimensions; relationship, contract and capability dimension.

### 6.1.1 Hypotheses related to Relationship Dimension and IT Offshoring Success

Relationship shows the degree to which the offshoring enterprise are attempt to create and maintain a sustain beneficial relationship with the provider [43]. Many researchers have previously addressed the significance of relationships on the success of IT offshoring, Han, Lee [27] have studied the influence of trust and commitment in the relationships on the IT offshoring success. According to Lee [53] trust affects the way in which inter organization interactions are conducted and organized.

Based on our literature review we have identified that, it is unlikely to involve with minimally interdependent relationships, since it is less related to the functioning of such relationships. On the other hand, interdependent relationships can greatly improve and develop a greater degree of trust. A high interdependence relationship is dangerous for both partners, to involve in adaptable behavior or pressure, since both parties have a lot to lose. These interdependences also improves the power asymmetry between the organization and the provider, and motivate each party to cultivate trust in the partner, because none of the partner can use their non-convergent power to get the cooperation from the other [43]. Consequently, common dependence generates a greater need for trust and motivate for developing it.

Trust in a relationship adopts the theory, which assumes that, the partner will achieve an action that brings positive results, and refrain from involving in unexpected behaviour. As a fact, trust is showed in different direct and indirect manners by researchers, in the relationships environment of IT offshoring. This shows that, it is crucial for the

companies to reach high degree of trust as a relationship quality measurement, and involve several strategies, behavioral and advices patterns for this goal. This insistence of the enterprises on this parameter has motivated the researchers to take trust as an IT offshoring factor. These imperatives have provided the foundation for *hypothesis 1*:

**Hypothesis 1:** Trust positively influences the degree of IT offshoring success

Based on our literature review it is evident that, trust and commitment are interdependent factors in the relationships between the buyers and providers of IT services; the greater commitment leads to greater trust and vice versa [9]. Furthermore, commitment to the sustain relationship can add more efficiency to the *enforcement plan*, due to the parties that would take the economic and legal consequences, more serious. Thus, the intensity of relationship commitment is associated with IT offshoring success; hence, we have derived the *hypothesis 2*:

**Hypothesis 2:** Commitment positively influences the degree of IT offshoring success.

Essential information sharing happens by contractually agreed upon communications, for instance, regular meetings and exchanges [27]. By sharing information both partners are able to behave more efficiently and being knowledgeable partners. Therefore, intense relationship may build a competitive advantage through key information sharing. Consequently, *hypothesis 3* has been formulated as follows:

**Hypothesis 3:** Information sharing positively influences the degree of IT offshoring success

#### 6.1.2 Hypotheses related to Contract Dimension and IT Offshoring Success

Formal contracts assist in two main purposes regarding inter-firm exchanges coordination, and control. Nowadays, contracts developed without concerning about the operating environment, are of limited value [39]. A sophisticated understanding of the offshoring strategy's insinuations places the offshoring enterprises in an improved location to create and agree to a contract with more efficient. A deeper evaluation of the risks related to offshoring and the strategic importance of activity of the outsourced business drive to develop a specific contractual provision [54-57]. Contractual completeness is the extent to which the enterprise and the provider develop a contract, which effectively coordinates resources, and addresses identified organizational risks. Thus, the *hypothesis 4* has been proposed:

**Hypothesis 4:** contractual completeness positively influences the degree of IT offshoring success.

#### 6.1.3 Hypotheses related to Capability Dimension And It Offshoring Success

In the case of offshoring, the enterprise's critical functions might be moved out of the enterprise due to cost or other considerations; nevertheless, moving out the entire IT department may drive the enterprise to face many risks such as loss of effectiveness [43]. In this context, Grover, Cheon [58] have also declared that an enterprise's previous investments in it's technical abilities might have sustained economic value in the present and future investments, those previous investments could push the enterprise to understand new knowledge and technology more efficiently.

Consequently, it is essential for an enterprise to preserve internal technological capabilities to improve experience and revel in more profits from the offshoring arrangement. Some researches on inter-organizational relationships have considered capability crucial in assuring project success, therefore shows that vendors should have the capability to keep up-to-date with ever changing technologies and maintain higher quality services and relationships [59]. Based on the above discussion the *hypothesis 5* has been stated as follows:

**Hypothesis 5:** Technological capability positively correlated to the level of IT offshoring success.

Cultural compatibility capability refers to the extent to which the partners can coexist with each other's beliefs on behaviours, goals , and policies, values [35, 57]. Furthermore, Blumenberg, Beimborn [40] have discussed that partnership with incompatible organizational cultures create obstacles in inter-organizational relationships in general. In contrast, the relationship between organizations with compatible cultures are more probably successful than the organizations with incompatible cultures [35, 57]. The existence of a cultural compatibility between organizations is believed to improve the relationship quality [40]. Consequently, the *hypothesis 6* has been formulated:

**Hypothesis 6:** Cultural Compatibility Capability positively influences the level of IT offshoring success.

Flexibility capability, in which flexibility refers to a bilateral expectation of willingness to make adaptations as circumstances change [35, 60]. According to the long-term nature of the arrangements of IT offshoring, it is practically impossible to accurately pre-specify the entire process in detail [52, 61]. Moreover, to cope with the growing nature of technology, the emergence of competitive services and changing the business environment flexibility is necessary [35, 52, 62]. Therefore, the involved partners need to deal with the possible changes by being flexible. A relationship between parties needs to be able to accommodate changes otherwise it might break down under the pressure generated by the change.

According to Wang and Yang [63], the loss of flexibility increases the complexity of information services management and damages the organization's innovative capability. Hence, flexibility should not be ignored in offshoring activities. Maximizing the flexibility should be one of the main objectives of the organizations involved in IT offshoring processes [2, 35]. Additionally, in case of public sector the offshoring, contract is maintained strictly. However, being flexible will seriously improve the quality of the relationship between the partners. Accordingly, the hypothesis 7 has been formulated:

**Hypothesis 7:** Flexibility Capability positively influences the level of IT offshoring success.

The Table 3 below illustrates the summary of the hypotheses derived in our study based on the extensive literature review.

Table 3: Summary of hypotheses

Hypotheses
<b>Hypothesis 1:</b> Trust positively influences the level of IT offshoring success
<b>Hypothesis 2:</b> commitment positively influence the level of IT offshoring success
<b>Hypothesis 3:</b> Information sharing positively influences the degree of IT offshoring success
<b>Hypothesis 4:</b> contractual completeness positively influences the level of IT offshoring success
<b>Hypothesis 5:</b> Technological capability positively influences the level of IT offshoring success.
<b>Hypothesis 6:</b> Cultural compatibility positively influences the level of IT offshoring success.
<b>Hypothesis 7:</b> Flexibility capability positively influences the level of IT offshoring success.

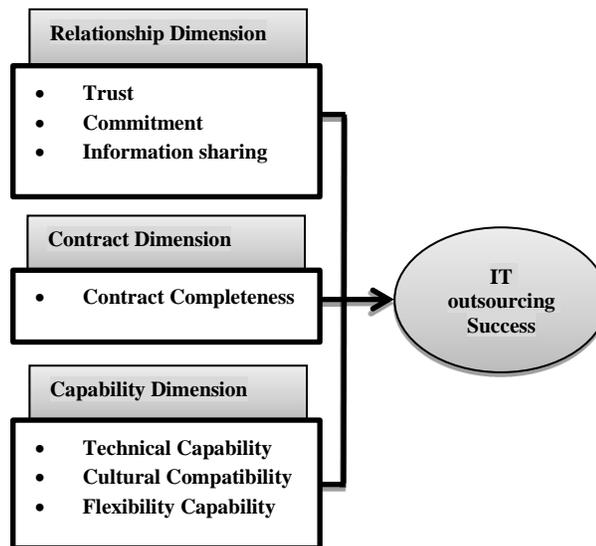


Table 4: The proposed model

7. QUESTIONNAIRE DESIGN

The questionnaire is a well-known technique that many researchers depend on it to collect data and to find answers. This research uses the questionnaire as a resource for its data by the method of structured questions that contain critical questions regarding various characteristics surrounding IT offshoring in e\_business among Iraqiann SME’s. Questionnaires had to be short, attractive, divided by issue [64]. The questionnaire was sequentially and logically structured as the questions tracked the sequence of the research. For this research, the questionnaire was adapted from many sources as shown in table 5 below. The content of each question was adopted from the critical literature review. The questionnaire consisted of 48 questions, but there is a space in section (A) for the respondent to specify his/her own answer of some questions.

The questionnaire was designed based on two approaches which are paper-based approach and web-based approach. The sample size of a research is a vital consideration, since a large enough sample size makes it possible to generalize the target population, besides have enough statistical power to a confidential results. According to Bless and Higson-Smith [65], the size of the sample is an important element in the research. There were a total of 47,695 SMEs in all over Iraqiann according toSMIDEC [66] dictionary official website, a total of 9074 SMEs of them located at Kuala Lumpur were be

Table 5: Summary of Items frequency and sources

Constructs	Descriptions	Items	Sources
Trust	Measuring trust in the relationship between the partners	4	[37, 43, 47, 67, 68]
Commitment	Measuring commitment in the relationship between the partners	4	[27, 47]
Information Sharing	Measuring the information sharing in the relationship between partners	3	[27]
Contract completeness	Measuring completeness contract between the partners	6	[39]
Internal IT capability	Measuring the internal Technical IT capability of the enterprise	3	[27, 43]
Cultural Compatibility Capability	Measuring the capability of cultural compatibility	3	[35]
Flexibility Capability	Measuring the flexibility capability	4	[35]
IT offshoring success	Strategic, economic, and technological benefits of IT offshoring	9	[27, 37, 38, 43]
Checklist question	Consist of demographic questions and the rest of the questions related to IT offshoring potentials, services and providers	12	[42, 43, 69]
Total	-----	48	-----

the population of this study. According to Sekaran [70], a sample size of 368 is enough for this population. However, not all of the SMEs that recorded in SMIDEC [66] were putting their full information. Accordingly, the actual respondents for this study were only 113 enterprises, which represent 30.7% of the total sample size.

8. DATA ANALYSIS AND RESULTS

Once collect the required data, the analysis of the collected data the next step. The analysis of the data will include analysing and categorizing the collected data. In this study the data collected from the questionnaire are analyzed quantitatively. In this research, the statistical analysis and data management offshoring software package that will be used is SPSS version 17. Descriptive statistics, correlation, regression and mean tools will be involved to deliberate the results of this research. The analysis will be done by taking the answers from the questionnaires and entered them into SPSS to analyse. Formerly, the questionnaire data have been moved into SPSS, the analyses will then perform.

In this study, it’s good to know which sector that each enterprise belongs to, in order to have a clear understanding of SMEs and the sectors that they fills under, which gives this research a knowledge of the SMEs respondents and how they think about IT. The result of (113) respondents for the job title question shows that most of the respondents mention their job titles as a IT employee that represent 35.4% of the respondents which is 40 participants. Moreover,

29 of the respondents are Professional which represents 25.7% of the overall participants. While, there are 25 of the respondents are managers which represent 22.1% of the participants. We could see that 64.6% of our total respondent's rate worked within a company with 5 to 19 employees. The second largest group was companies with 20 to 50 employees with a respondents' rate of 30.1%. The remaining six respondents were working within a company with 51 to 150 employees.

Knowing the sizes of the enterprises that has been participated in this survey is very important to achieve the objective of this work. For this research, the sizes of the involved enterprises will help to identify the capabilities, resources and limitations of the enterprises. The results show that the majority of the involved enterprises were small sized, since they chose a number of employees from 5 to 19. The small enterprises suffer from many obstacles such as limited capabilities and resources. After analyzing the data, the next step was testing the proposed determinants model that has been constructed by this study. Testing the model includes examining the factors which involved in this model. Each factor in this model will be evaluated, while showing its relationship degree and influence on IT offshoring success. A significant and positive relationship of any factor in this model will make this factor supported and this will improve its existence in the model, while insignificant factors in this model will be ignored. The supported factors will formulate the new supported determinants model.

### 8.1 Descriptive Statistics of Variables

The descriptive analysis was prepared to measure the dependent and independent variables. The measurements for the overall variables were based on 5-point Likert scale. Mean and standard deviation for each variable were shown in Table 6.

Table 6: Summary of descriptive statistics of variables and items

Item	Mean	Overall Mean
TRUST1	4.29	4.24
TRUST2	4.23	
TRUST3	4.19	
TRUST4	4.27	
COMIT1	4.26	4.00
COMIT2	3.89	
COMIT3	3.94	
COMIT4	3.93	
INFO1	4.03	3.96
INFO2	3.96	
INFO3	3.96	
INFO4	3.98	
CONT1	4.06	4.07
CONT2	4.01	
CONT3	4.02	
CONT4	3.99	
CONT5	4.18	
CONT6	4.19	
TECH1	2.27	2.02
TECH2	1.92	
TECH3	1.87	
CULT1	4.03	4.08
CULT2	4.14	
CULT3	4.08	
FLXI 1	4.17	4.17
FLXI2	4.18	
FLXI 3	4.18	
SUCC1	3.89	3.94

SUCC2	3.94
SUCC3	3.93
SUCC4	4.03
SUCC5	3.89
SUCC6	3.94
SUCC7	3.93
SUCC8	4.03
SUCC9	3.89

The variables have maximum and minimum values equivalent to the extreme scales representing a good spread of the responses.

Table 6 illustrate that, the means of the adoption of e\_business among SMEs and IS usage were 3.91 each. The external pressure demonstrates the highest mean of 3.98 while administrative innovation and customers' pressure were 3.90 each. As well, the system innovation shows the mean of 3.93. The means of top management support and knowledge sources were 3.96 and 3.81, respectively. The overall variables were nearly 4 indicating that most respondents agreed that the items corresponded to the variables. The correlation degree cares about measuring the significance and strength of a relationship between the variables. Pearson's correlation coefficient (r) with significance levels was involved to assess the correlations between the variables. Pearson's correlation was applied to show the inter-correlation of independent variables in terms of trust, commitment, information sharing, contract completeness, technological capabilities, cultural compatibility and flexibility capability and dependent variables, which means the IT offshoring success among SMEs. Table 7 shows the Cronbach's alpha and Correlations for the overall variables, as follows:

Table 7: The Correlations and Cronbach's alpha for all variables

Items	Factors	1	2	3	4	5	6	7	8
4	Trust	<u>0.919</u>							
4	Commitment	.834**	<u>0.740</u>						
3	Information technology	.872**	.700**	<u>0.707</u>					
6	Contract completeness	.909**	.832**	.819**	<u>0.824</u>				
3	Flexibility capability	.909**	.791**	.841**	.870**	<u>0.679</u>			
3	Culture compatibility	.919**	.837**	.810**	.911**	.884**	<u>0.765</u>		
4	Technological capability	-.110-	-.062-	-.056-	-.096-	-.071-	-.108-	<u>0.896</u>	
9	IT offshoring success	.768**	.950**	.700**	.783**	.715**	.792**	-.024-	<u>0.884</u>

Notes: \*\*  $p < 0.01$ , \*  $p < 0.05$ . Underlined diagonal entries are the Cronbach's alpha.

As Table 7 indicates, the technical capabilities showed negative correlation ( $r = -.024$ ) whereas all other variables showed positive correlation with the dependent variables, as follow; trust ( $r = .768^{**}$ ), commitment ( $r = 0.950^{**}$ ), information sharing ( $r = 0.700^{**}$ ), contract completeness ( $r = 0.783^{**}$ ), cultural compatibility ( $r = 0.792^{**}$ ) and flexibility capability ( $r = 0.715^{**}$ ).The Cronbach's alpha values of all the study variables were also presented in Table 7. The reliability test shows Cronbach alphas in the range of 0.707 to 0.919, while the Cronbach alpha for the overall factors is 0.91.

## 8.2 Regression Analysis

This research was used regression analysis to shows the relationship analyze between different variables as assumed in the hypothesis. Besides, linear regression analysis was calculated in order to test the relationship between trust, commitment, information sharing, contract completeness, technological capabilities, cultural compatibility and flexibility capability (independent variables) and IT offshoring success (dependent variable). The basic assumptions underlying linear regression analyses were inspected, to ascertain the requirements. For all the results the regression results are available in table 8 below. This explains the hypotheses H1, H2, H3, H4, H5, H6 and H7, by using the linear regression due to the significance based on the regression equations are illustrated as follows:

Table 8: Regression results for hypotheses H1, H2, H3, H4, H5, H6 and H7

No.	Variable	Beta	Sig	R Square	F change
1	Trust	0.768	.015	.590	159.405
2	Commitment	0.950	.224	.902	1.026E3
3	Information sharing	0.700	.000	.490	106.711
4	Contract completeness	0.783	.158	.613	175.808
5	Technical capability	-0.024	.000	.001	.064
6	Cultural compatibility capability	0.792	.003	.627	186.250
7	Flexibility capability	0.715	.000	.511	115.885

The results showed that trust (B= 0.768, t = 2.477, p< .001), commitment (B= 0.950, t = 1.223, p< .001), and information sharing (B= 0.700, t = 3.849, p< .001) were significant to the IT offshoring success. Moreover, contract completeness (B= 0.783, t = 1.422, p< .001), cultural compatibility capability (B= 0.792, t = 3.074, p< .001) and flexibility capability (B= 0.715, t = 4.302, p< .001) were also significant to the IT offshoring success. While, technological capabilities (B= -0.024, t = -.254-, p< .001) was not significant to IT offshoring success. The result only explained that the technological capability was not significant to the IT offshoring success. Thus, hypotheses H1, H2, H3, H4, H6 and H7 were positively related to the IT offshoring success, whereas H5 (technical capability) was negatively related to the IT offshoring success among SMEs in Iraqian. Table 8 shows the summary of hypotheses testing.

Table 8: Summary of hypotheses testing

Hypotheses	Statement	Accepted\ Rejected
Hypothesis 1:	Trust positively influences the level of IT offshoring success	Accepted
Hypothesis 2:	commitment positively influence the level of IT offshoring success	Accepted
Hypothesis 3:	Information sharing is positively influence the degree of IT offshoring success	Accepted
Hypothesis 4:	contractual completeness is positively influence the level of IT offshoring success	Accepted
Hypothesis 5:	Technological capability is positively influence the level of IT offshoring success.	Rejected
Hypothesis 6:	Cultural compatibility is positively influence the level of IT offshoring success.	Accepted
Hypothesis 7:	Flexibility capability is positively influence the level of IT offshoring success.	Accepted

### 8.3 Discussion And Conclusion

Our results show that trust and commitment across client and vendor relationship are strongly related to IT offshoring success as it is consistent with the results of Han, Lee [27]. However, this result shows that trust and commitment in relationship are not enough for successful IT offshoring arrangements at large scale, complex offshoring arrangements, information sharing within relationship also has a direct significant influence of IT offshoring success.

While we saw some highly successful enterprises use a sufficient contract standards to control their offshoring arrangements, it seems that the majority of enterprises relies on a high level of contract completeness. Thus, this research attempts to involve contract completeness as a determinant for IT offshoring. The results for contract completeness shows a highly significant influence related to IT offshoring success.

As a step to improve a strategic IT offshoring integration, capability dimension for the client enterprises has been considered within the results of this research. Three main capability factors have been tested, the technical capability is the first factor shown within these results, which illustrated insignificant influence on IT offshoring success.

Nevertheless, the results displayed that the internal technological capabilities were negatively affecting offshoring success, which denied the hypothesis in this research.

This was surprising, as some literature also indicate this artefact. The study [71], stated that when employees shared expertise, coding scheme, or specialized language, this technical strength “impedes the incorporation of outside knowledge and results in the pathology of the not-invented-here (NIH) syndrome”(p.133). Rigby and Zook [69], likewise stated that two out of five executives surveyed shows that their enterprises suffered from the NIH syndrome.

This had affecting the willingness of enterprises to adopt external knowledge and ideas. Besides, another study indicated that the NIH syndrome was one of the obstacles for collaboration [71][72]. When an enterprise had a strong internal technical team, it could suffer the same syndrome, and not be accepted external ideas or not completely collaborate with external service providers [43, 72].

On the other hand, this findings is in contrast with other researchers such as Han, Lee [27], since they found that the firm's IT capability positively effects the information sharing level, the degree of communication quality and collaborative participation.

The Conflict between external and internal IT capabilities might decline the overall organizational IT efficiency [73], which negatively affect the offshoring project impact in turn. Offshoring organization moreover seek to improve interaction routines that maximize the intensity and frequency of sociotechnical interaction before they can have supernormal relational rents.

Furthermore, strong internal technological capabilities could help enterprises to step in and internally accomplish the project, in occasions that their service providers were not performing as expected [13].

Simply having higher technological capabilities might not be sufficient to aid offshores enjoying better knowledge share between business partners.

At contrast, cultural compatibility capability has shown highly direct significant influence on IT offshoring success. Similarly, flexibility capability for the enterprise has shown significant influence related to IT offshoring success. However, in spite of the statistical analyses, content validity is untested.

## 9. CONCLUSION

IT offshoring alternatives are a fact of modern business. For several enterprises, offshoring may be a feasible and smooth way to emphasis on core competencies, then improve the business model and accomplish important enhancements in revenue. As chances to offshore non-core operations shows themselves, nevertheless, this research highly urges a method that involve these steps that are not considered normally.

Indicating the processes benefit of tight control could aid the enterprises understanding the overall scope of the IT offshored functions and establish mechanisms for managing the IT offshoring relationship. The potential recognitions of change and defect offered by offshoring may help the enterprise not only saving money and time, but also improve the management team and the offshoring partner reputation. And, above all, communication of the offshoring decision and implementation can go a long way to smoothing the roadblocks inherent in such projects. In this research, by conducting a survey and interview, the proposed framework was presented based on the understanding and analysing of the literature review, survey, and interview. The proposed framework provides the way of enhancing the knowledge of IT offshoring in SMEs as well as the ability to identify IT offshoring potentials.

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