Factors Affecting Information Technology Offshoring Decision Making: A Study of the IT Sector in Egypt

العوامل المؤثرة في اتخاذ قرار نقل خدمات تكنولوجيا المعلومات: دراسة في قطاع تكنولوجيا المعلومات في مصر

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Abstract:

This research focuses on the IT offshoring business in the IT sector in Egypt, taking a deeper look in the potential of further offshoring and outsourcing of IT business to Egypt, since the first offshoring initiative taken by Kodal-Eastman, the offshoring business has grown showing huge potential – in today's world offshoring is no longer an option but a necessity for major IT companies to create a competitive advantage.

The research makes the argument that the potential for offshoring to Egypt is huge and has not been fully utilized to-date, Egypt shows potential to be a significant IT hub for offshoring and outsourcing in Africa comparable to India in Asia. The Egyptian talent pool is significant both in size and quality which provides a significant potential to be utilized, other factors like the location, time zone, language skills, some of the cultural dimensions show great potential like change management abilities, flexibility, adaptability and customer empathy.

This qualitative research utilizes the expertise of business leaders both in Egypt (Host country) and American and European leaders (Home Country) who have taken a part of full responsibility of an offshoring decision to Egypt, to ensure that the study has the accurate focus and assessment of this said potential. The researcher hopes that such a study would contribute to focusing on the most important factors that influence the decision making to offshoring IT business to Egypt.

Keywords: IT Offshoring, Outsourcing, Business Process Outsourcing, Information Technology Outsourcing (ITO).

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ملخَّص:

يركز هذا البحث على أعمال نقل تكنولوجيا المعلومات إلى الخارج في قطاع تكنولوجيا المعلومات في مصر، مع إلقاء نظرة أعمق على إمكانية المزيد من نقل أعمال تكنولوجيا المعلومات إلى الخارج ومن ثم إعادتها إلى مصر. منذ مبادرة النقل الخارجي الأولى التي اتخذتها شركة كودال– إيستمان، نمت أعمال النقل الخارجي مُظهرةً إمكانات هائلة – في عالم اليوم لم يعد النقل الخارجي خيارًا، بل ضرورة لشركات تكنولوجيا المعلومات الكبرى لخلق ميزة تنافسية.

يُناقش البحث أن إمكانات نقل الأعمال إلى الخارج إلى مصر هائلة ولم يتم استغلالها بالكامل حتى الآن، حيث تُظهر مصر إمكانات لتصبح مركزًا مهمًا لتكنولوجيا المعلومات لنقل الأعمال إلى الخارج وتعهديها في إفريقيا مقارنةً بالهند في آسيا .يتميز تجمع المواهب المصرية بحجمه وجودته مما يوفر إمكانات كبيرة يمكن استغلالها، كما تُظهر عوامل أخرى مثل الموقع والمنطقة الزمنية والمهارات اللغوية وبعض الأبعاد الثقافية إمكانات كبيرة مثل قدرات إدارة التغيير والمرونة والقدرة على التكيف والتعاطف مع العملاء .يعتمد هذا البحث النوعي على خبرات قادة الأعمال في مصر (الدولة المضيفة) والقادة الأمريكيين والأوروبيين (الوطن الأم)، ممن تولوا مسؤولية كاملة في قرار نقل أعمالهم إلى مصر، وذلك لضمان دقة تركيز الدراسة وتقييمها لهذه الإمكانات .ويأمل الباحث أن تُسهم هذه الدراسة في التركيز على أهم العوامل المؤثرة في اتخاذ قرار نقل أعمال تكنولوجيا المعلومات إلى مصر.

الكلمات المفتاحية: نقل أعمال تكنولوجيا المعلومات، التعهيد الخارجي، تعهيد العمليات التجارية، تعهيد تكنولوجيا المعلومات.(ITO) .

1.1 Preface

Information Technology Outsourcing (ITO) has been a topic of interest for researchers over the past two decades. IT outsourcing has particularly interested many researchers due to the convenience of having minimal transportation costs compared to outsourcing of other industries. Naturally, India and China have been both particularly attractive destinations for ITO due to the low costs of labor and some liberalization of local laws encouraging investment. It is to note however, that some recent research has indicated rising labor costs in countries like India that might create an opportunity for a country like Egypt, which is the focus of this study (Jeong, 2021).

Although Egypt has seen growth in such an industry, it is evident that the full potential of Egypt to foster more ITO business is not fully tapped. Several factors that are considered in the ITO decision-making might make Egypt an attractive destination for ITO. However, it is important to gain a full understanding of such factors in depth to reach a solid conclusion of the potential and fully understand why such a business has not yet reached its fully expected maturity.

In this research, the focus is to study the crucial factors affecting ITO decision making and consequently applying such understanding to the potential in Egypt, matching the different individual and organizational capabilities. There is little previous research done on the topic in Egypt, as well as little research that addresses this from a qualitative perspective, both which the researcher hopes to address in this study. The researcher will seek to show significant practical and policymaking implications, which may be useful for entities like ITIDA (Information Technology Industry Development Agency) who focus on encouraging IT outsourcing & offshoring in Egypt.

Most firms today are tempted to consider ITO as a viable option helping with the global economic pressures. Firms today are no longer looking for survival but to provide a handsome reward to their stakeholders. Although classically firms considered ITO to outsource their less-essential functions while retaining the core functions needing their core competencies in the home country, this view is rapidly changing now with many firms seeking ITO for other attractive rewards like innovation, diversity, and risk mitigation (Agrawal et al., 2019). Outsourcing is by all means is a strategic business decision (Alrwashdeh, 2022).

Different research has approached the definitions from several different perspectives although generally they are found to be consistent. Offshoring can be defined as migrating processes & operations with no impact on quality

(Agrawal et al., 2019). It refers to relocating operations beyond country borders to a more cost-effective country (Jeong, 2021). Another interesting definition takes the perspective of selling or sub-contracting either people, assets, or activities to another party (third) who undertakes the responsibility of managing them (Agrawal et al., 2019). Information Technology Outsourcing (ITO) can be defined as mobilizing third parties to take over management responsibility of assets and activities (Hanafizadeh & Zareravasan, 2020).

It is important to note the difference between IT offshoring which in essence focuses on sending IT functions to a lower cost location within the same organization, and ITO which is in essence giving up these functions to a third party. However, there are several similarities between both IT offshoring and IT outsourcing as explained in some of the literature (Bandyopadhyay et al., 2020). Some consider that offshoring is a variation of outsourcing in general (Harshani De Silva, 2018). In that later case, offshoring is defined as outsourcing that has occurred overseas and not in the host firm country (Harshani De Silva, 2018). In that case, "nearshore outsourcing" is defined as the moving of processes to a nearby country sharing a border; this helps with less cross-cultural and language diversity. "Offshore" in this case would indicate a remote country managing the service and associated processes. "Offshore-outsourcing" would hence refer to outsourcing to a remote country with specific skills, flexibility, or some other benefits.

In a study from the financial perspective, Jiang (2021) noted that there is a relationship between outsourcing and offshoring; outsourcing generally yields to a decrease in fixed cost with an increase in variable cost. Jiang (2021) noted that the decision to offshore an existing outsourcing business is based on the productivities of this outsourced business. The offshoring decision is the taken to help the organization make use of the associated reduced cost.

The history of ITO has been seen in business literature since 1989 when Eastman Kodak made such a decision to outsource their IS systems to IBM / Anderson Consulting / DEC and Businessland (Könning et al., 2019). This was named as the "Kodak Effect" and has been a practice followed by many others ever since. Today all Fortune 500 companies follow such a practice with annual growth rates of 10% and an estimated market size of 320 billion dollars. In 2017, ITO was estimated to be around 11.9% of the total IT budgets spent (Akkermans et al., 2021).

It is important to note that the offshoring of IT services does not necessarily with good outcomes to all. In a study by Agrawal et al. (2019), it was found that 34% of the offshoring business initiated in the US and Canada had been "back sourced" or insourced again back to the home country. This was due

to several distinct factors including hidden offshoring costs (excessive administration costs), loss of control, compromised quality, know how mismatch and other external factors. This was named in some literature as a "relationship spiral" (Akkermans et al., 2021). The "Winner's Curse" is a phenomenon noted in literature as well that occurs when the initial low price given by the vendor is low enough to be competitive but doesn't give the vendor room to maneuver which finally ends in a degradation in the quality of service. These setbacks, however, have not shown that the growth of IT offshoring slowed down. Other reasons noted for back sourcing were mentioned by Pisani & Ricart (2016) and included political pressures, low performance, and high complexity in coordination efforts.

There are a multitude of benefits for offshoring including innovation and access to innovative technology, access to new markets, cost saving, and quality improvement. However, the most notable is the ability of offshoring to convert fixed cost to variable cost. Specifically fixed cost due to facilities, logistics, personnel, and other associated costs; hence the firm can have better financial flexibility and control over cash flow, which reduces the risk on a firm and diverts this risk to the vendor managing the offshore business (Agrawal, et al., 2019). The potential risks of offshoring include possible hidden costs, losing control over operations, degradation of permanent employee morale due to the associated downsizing that occurs in the home country if a decision is made to offshore, loss of cross-functional skills and developing the wrong skills, and the most notable of course are the difference in infrastructure, culture, language, and time zone alignment.

One of the important risks to consider is the Bandwagon effect, which explains why many decision makers consider offshoring while ignoring the associated risks, that is the fear of losing opportunity or losing competitive advantage (Bianchi, et al., 2017). This "herd behavior" is explained through the fad theory and the information contagion theory.

It is also important to note that the study of IT offshoring has to be specific to the research dedicate to IS in general; other types of offshoring (specifically for good production) cannot be generalized (Bandyopadhyay, et Al., 2020). A good example is a study of off shoring in dual labor markets (having both formal and informal structures in the developing nation). Such a study does not apply to a high-tech industry like IT, where the offshored sites in developing countries are expected to innovate and provide good quality service (Harshani De Silva, 2018). One of the important challenges that should be considered is that offshoring destinations have to be studied well. This was the case for Sri Lanka who is a tier II offshoring destination compared to Egypt which is a tier III destination.

This research proposal will go further to examine the literature pertaining to IT offshoring, and specifically the different SLR (Systematic Literature Reviews) and meta-analysis. The researcher will show that there is an ample amount of previous research looking into the different factors as well as the different categorizations associated with such research. Based on this investigation the researcher will address the research gap showing that there is little study of similar research on the IT industry in Egypt. Consequently, the importance of this research proposal will be to point out the significant potential of this growth in Egypt. From the above, the researcher will move toward the hypothesis formulation of the most important 13 factors affecting such decision-making and the associated proposed qualitative study of these 13 factors.

1.2 Problem Statement

There is no doubt that the IT offshoring business is an important phenomenon and practice that is now a worldwide industry of its own. All IT organizations (and organizations with significant IT reliance in other industries) are challenged daily while considering if they need to offshore or outsource their IT business and functions. Pressures of being profitable and pressures from shareholders are inevitable putting all CIOs in a place where they must tackle this question eventually.

In Egypt, the ICT offshoring business has been growing at a considerable rate of 16.3% year to year. It is the fastest growing industry by far; however, Egypt is yet to catch up with giants of IT outsourcing like India and China. Many other countries are catching up as well like Brazil, Costa Rica, Sri Lanka, and many others.

Hence, the core research problem statement is crystalized as what are the factors affecting the growth of the IT offshoring industry in Egypt. In light of the following literature review, these studies have investigated the same research topic either directly or indirectly, and considering the results of the exploratory study, the researcher is now able to determine the research problem in the following main research question:

What are the factors affecting information technology offshoring decision making in Egypt?

The sub-questions that could be raised under such a main research question may be as follows:

1) Are the top affecting factors affecting the IT outsourcing business in Egypt the same as other parts of the world?

2) What is the order of importance of such factors in the Egyptian ICT industry?
3) Are there specific cultural and / or socioeconomic factors that should be considered in ITO targeting Egypt?

1.3 Study Significance

The researcher views that this study has important significance to the future of the IT offshoring industry in Egypt. With the significant potential of ITO in Egypt (between the geographical location, time zone, language skills, improvement in technical education, and cross-cultural sensitivity), it is important to understand the important factors affecting this growth in the country. Do the same factors that apply globally apply to Egypt, or not? Is the order of factors affecting this decision making the same, or not? These are all important questions that need to be answered.

The above is important to understand for the following reasons: 1) What considerations do the home-country decision makers need to consider for Egypt ITO? 2) What are the important factors that entities like ITIDA need to consider for growing ITO in Egypt? 3) What considerations do policy makers need to make to support more and bigger ITO ventures in Egypt to support FDI?

2.1 Introduction

For the purpose of this research, the literature review will start by examining the most recent meta-analysis research contributing to the study on both IT outsourcing and the special cases of IT offshoring. Agrawal et al. (2019) has provided the business literature with such a comprehensive study, as well as a similar study by Hanafizadeh & Zareravasan (2020). A useful focus on the most recent developments was also published by Könning et al. (2019). The literature review then moves to another category of research focusing on a miscellaneous number of specific factors that are being considered recently (Cha & Kim, 2018; Pisani & Ricart, 2018; Presbitero & Toledano, 2018; Harshani De Silva, 2018; Alrwashdeh, 2022; Bandyopadhyay, et al., 2020; Jeong, 2021; Jiang, 2021; Akkermans et al.,2021; Jain, Hazra & Cheng, 2021; Ornaghi at al., 2021). The review will then focus on the 4 most important categories of factors, listing the 13 factors chosen by the researcher for this specific research. For the purpose of facilitation, the researcher will use the following terminology: “client” for the company residing in the home country and working to take an ITO or IT offshoring decision; and “vendor” will refer to the organization offering the

remote or distant outsourcing or offshoring service and residing in the host country.

The recent business literature has been showing growing interest in understanding the factors affecting the associated decisions to offshore or outsource. There is no doubt that such decisions are complicated in nature due to the number of variables involved (Hanafizadeh & Zareravasan, 2020). It is estimated that CIOs (Chief Information Officers) spend 80% of their time for 3 to 6 months on average to make a reliable offshoring decision (Hanafizadeh & Zareravasan, 2020). Some have gone through detailed analysis of previous literature to understand the different variables as well as the extent of the impact associated (Pisani & Ricart, 2016; Harshani De Silva, 2018; Agrawal, Agrawal, Taylor & Seshadri, 2019; Könning, Westner & Strahringer, 2019; Gantman & Fedorowicz, 2020; Hanafizadeh & Zareravasan, 2020).

2.2 Meta Analysis & Systematic Literature Reviews (SLRs)

On the topic of affecting factors to ITO decision making Agrawal et al. (2019) identified 4 factors and studied their correlation, namely: perceived risks, perceived benefits, administrative motivation, and the desired characteristics, as the independent variables. Out of the 4, only “perceived benefits” was found to have a strong positive correlation with the dependent variable “expected growth in offshoring” which the researcher views to be confirming the previous studies and explaining the Bandwagon effect in the sense that many decision makers follow other ITO decisions looking for the opportunities yet not fully considering the risks of offshoring.

On a more systematic approach of the factors Hanafizadeh & Zareravasan (2020) studied the related literature using the Systematic Literature Review (SLR) approach, investigating 12 previous literature reviews, including approximately 2308 previous papers spanning from the year 1981 to 2018 and investigating different fields of Strategic Management, International Business, Supply Chain Management, and IT. In this research the factors were categorized into 3 types of studies: descriptive studies, relational studies, and comparative studies. The nature of the studied factors has been categorized as follows: technological factors, organizational factors, environmental factors, and user factors.

In a similar meta-analysis study examining around 146 papers of the high-level theories involved, Pankowska (2019) argued that there were numerous theories used previously such as Agency Theory, Resource Dependance, Game theory, Transaction cost among others. These are no longer enough to study the

governance of such a business strategy like ITO. More recently business literature seems to point to "Vertical Outsourcing" as well as "Chain Management" that need to be considered further in literature. The emergence of blockchain technology in financial service and Fintech is also another trend that needs to be researched in more depth, which is useful considering that the researcher will investigate factors such as "trust", "perceived risk" and "perceived security".

With a more recent focus, Könning et al. (2019) studied 38 new independent variables, investigating any contradictory findings with a focus on the innovation found in ITO. The study focused on research between 2015 to 2017 since previous Systematic Literature Reviews (SLRs) had focused on the period until 2014. The research included 24 conference outputs as well as 115 journals. Sixteen meta-categories of independent variables were identified. The research concluded that in addition to some of the known factors, some new ones have been uncovered. These new factors include: 1) transaction attributes: hidden costs, transaction plan accordance, project newness, 2) relational governance: fairness, provider autonomy, 3) client firm characteristics: communication model with providers, decision authorities, involvement of business units into IT, organizational roles structure, and governance, ITO process design, duration of neighboring contracts, organizational identity strength, internal communication – client, 4) sourcing motivation: security improvement, 5) sourcing motivation – provider: long-term motivation – provider, short-term motivation – provider, 6) provider firm capabilities: flexibility – provider, provider empathy for the client's position, business case management – provider, 7) client firm capabilities: service integration capabilities, retention of expertise, business case management – client, 8) contractual governance: contract compliance, 9) relational characteristics: intrapreneurship, complementarity of capabilities, 10) provider firm characteristics: duration of neighboring contracts, number of existing contracts, perceived price/ performance ratio, internal communication – provider, legal compliance, client dependency, transparency of provider firm activities, 11) environment: legal requirements, market concentration, internet speed/infrastructure, advisory/consultant support in client/ provider matching, and 12) employee level: quality of personal relationships between client and provider team, reliability of team members.

On a systems level perspective, Pisani & Ricart (2016) argued that the antecedents of OS (Outsourcing of Services) need to be considered together as one system and not as independent factors. This helps better rationalize some of the conclusions and effects of such antecedents, which helps explain some of the conflicting findings and rationalizes better trends in general. The following

findings are noted: 1) managerial intention is essential for ITO success and is linked to the top management support discussed in this research; 2) top management is generally the layer more interested in ITO initiatives due to the conceptual problem solving skills needed; 3) a challenge to ITO is the data collecting across borders making ITO decisions more challenging, the researcher would link this to other studies which have suggested the importance of transparency, security and information sharing between client and vendor; 4) the global distribution of work remains challenging with no specific best practice, most of this activity is done on a subjective basis; 5) most ITO decisions are taken from firms with headquarters in the US or Europe, other parts of the world need to be considered for further study to better understand how ITO decisions are made in other parts of the world and for a more global view of such practices, firm capabilities relating to ITO need more understanding and focus; 6) knowledge sharing capabilities need more in-depth best practices to enable better global decision making on orchestration of activities, 7) knowledge sharing is essential for managing complex ITO ventures, 8) client organizations can suffer from knowledge eroding if the client activities require a high degree of specialization, this in turn might affect the client organization's core competencies; and 9) the study of big data is essential for the future of ITO ventures and how successful they can be.

2.3 Other Factors Affecting ITO Decision Making

Although the location of IT outsourcing is classically thought of as a differentiator and a factor in ITO decisions, some recent research indicated that the location itself doesn't affect the ITO decision making but rather more importantly a good understanding of the complexity of offshoring businesses (Jeong, 2021). This is an interesting conclusion and does match the previous findings from literature which included factors more oriented towards understanding and the acceptance of the model in addition to top management support. Location does not seem to be an issue since the cultural difference can pause risks more than benefits in general. The researchers go on to specify that the best way to overcome these non-country specific barriers is to find the right vendor who has the skill and capacity to overcome the local barriers.

It is important to note that most of the literature has previously focused on cross sectional studies, which- although important- do not fully explain and observe the "relationship spiral" from a longitudinal perspective; hence it is important to observe from a process point of view (Akkermans et al., 2021). Although several factors were noted to affect the relationship, like trust,

alignment, and service quality, it was observed that the cost-focused approach had the most negative impact on performance. The authors suggested a framework to ensure that the planning is done transparently and collaboratively between vendor and owner to ensure the ITO is free from the possible gridlock reached in many situations. In an in-depth study of the cost associated with outsourcing and the effect of asymmetrical information, Jain, et al. (2021) found that the sourcing decision differed depending on the cost of the vendor's "learning by doing". A low vendor cost would push the decision towards biding, while a high vendor cost would push it towards a dual sourcing strategy.

In a study of the labor costs associated from a Supplier Relationship Management (SRM) perspective, the following factors were identified: 1) process innovation, 2) information sharing and communication, 3) collaboration, 4) goal sharing, 5) evaluation standardization, 6) evaluation feedback. The research emphasized that long-term strategic partnerships to happen trust and communication are essential, rather than merely focusing on evaluation and management (Cha & Kim, 2018). The link between possible innovation as an outcome of ITO is not straight forward; such a relationship may require the study of "credible commitments" (a reciprocal agreement to encourage investment and lower risk) and contingent control rights (agreement to give one party the right in specific situations) (Susarla & Mukhopadhyay, 2019).

On the effects of offshoring activities on employment; Ornaghi et al., (2021) showed that offshoring decisions tend to have a negative effect on the employment of employees with higher education – this conclusion is specific to the service sector business and is different from the production sector. The researcher found that this is an important point to take into consideration when offshoring business to Egypt as it does affect the perception of offshoring decision to countries such as Egypt.

Regarding the impact of IP (Intellectual Property) protection Pisani & Ricart (2018) suggested that the existence of effective IP protection is important to safeguard the knowledge shared by the DMNEs (Developed Countries Multinational Enterprise) for strategic offshoring decision making. The same research emphasized that the bigger the gap in diversity between the host country and the home country, the more contribution to innovation is expected.

Studies also mentioned that cross-cultural training was essential to develop CQ (Cultural Quotient), consequently improving the chances of IT offshoring success (Presbitero & Toledano, 2018). The evidence suggested that due to the needed travel and interactions between home country and host country, it was essential for HR to support the offshoring business with the needed cross-cultural training. The study also showed that the "contact intensity" (quality) and "contact

frequency" (quantity) both have a positive effect on intercultural effectiveness. Although the contact intensity was more prevalent, evidence indicated that the two factors moderate the effect of CQ on task performance.

Organizational structure and organizational culture were both shown to be mediating factors linking ITO to operational performance (Alrwashdeh, 2022). The same study shows that the relationship between the vendor and the organization is essential, any conflicts arising directly impact the performance of the vendor matching with the previous findings of Akkermans et al. (2021).

For lean methodology implementation in ITO, 30 Critical Success Factors were studied (Blijleven, et al., 2019). The 4 most notable CSFs with the most apparent impact were management leadership, compensation mechanism, voice of the end-customer, and culture compatibility. It is worthy to note that the organizational culture had previous noted in matching literature (Presbitero & Toledano, 2018; Akkermans et Al., 2021; Alrwashdeh, 2022).

On studying the practices for offshoring companies, Ekberg & Jouin (2016) compared offshoring of service companies compared to construction companies. The researcher found that the findings of the offshoring practices in service offshoring companies is useful and related to the study topic of this paper. One of the interesting findings relates to the fact that services companies put more focus and effort on execution than building sustainable trust, which may contradict with some of the previous findings. However, with a further detailed investigation it became evident that knowing proper implementation would result in benefits and lowered cost to the client organization hence the better correlation than trust factors (which is important to consider as an important correlation and considered factor in this study). The study goes further to show that service offshoring creates teams based on new projects and not on geographical location which relates to our factor of interest **"perceived complexity"**. To support integration service offshoring companies relied on more information-based practices, which also relates to our dimension of interest **"trust"**. The study argues that service businesses can learn from construction business practices, in which the later coincides more with theoretical research.

With a focus on the health care industry in Canadian hospitals and factors affecting ITO decisions, Stewart (2015) found that although cost benefit is the most common reason it was not the only or the most important one. With health care systems "performance" was found to be more important since such health care institutions focused on saving lives and impact the quality of life in general. A hospital's reputation was the most important matter at stake in such a sense. "Security" and "data protection" were also a critical matter. The example of "WannaCry" ransomware which crippled many information systems running

Windows XP including the NHS (National Health Service) was presented in that case. In general, health care institutions prefer to outsource IT functions to be able to focus more on their core competencies which are more related to saving lives. A preference to focus on partners rather than third parties was also noted, with the focus on having an ally who can understand the business priority in this situation. The researcher notes the interest in that specific requirement considering offshoring as a special case of ITO. The factors considered in this specific case were staff, contract, core competencies, cost, performance and policies.

Most business literature points to the fact that technology and software development in specific are a core competency for organizations today; offshoring strategies in turn seem to thrive with ubiquitous technology and enable it to create a competitive advantage (Tarkington, 2021). The stronger the link between the organization's software developer and the organization's vision yields to better quality and less execution time. Digital ubiquity being the capacity of the organization to acquire, manage and interpret a vast amount of data for learning and making informed decisions.

With a specific focus on offshoring and offshoring financial performance Kharroubi (2014) studied several factors including knowledge absorbing capacity, governance mode, strategic drivers, and task nature. A general conclusion made showed that a higher degree of offshoring high value activities yields a better performance in general. This is similar to the conclusion by Gopalakrishnan & Zhang (2019). Such results took around 3 years to prove. Kharroubi went further to make the following conclusions: 1) a negative relation was found between cost-reduction and performance of offshoring, 2) a positive relationship between efficiency enhancement and performance, 3) a positive relationship between growth strategies and performance, 4) the ability of an organization to absorb new knowledge has a positive effect on performance, 5) international experience has a positive effect on performance, 6) the age of the organization has a negative effect on performance (this indicates that younger organizations are more adaptable to perform well with offshoring activity which is consistent with previous findings that confirm that innovation and technical ubiquity are important for offshoring performance and success of ITO decisions, and 7) governance mode has a positive effect on performance (governance mode describes how the remote operations are managed either a) captive, b) hybrid or c) offshore outsourcing) (Pisani & Ricart, 2018; Gopalakrishnan & Zhang, 2019; Tarkington, 2021).

With a transactional point of view, Larsson & Groening (2018) studied the internal controls with the associated outsourcing decisions in Swedish companies. The study came to the following conclusions: 1) access to expertise of the vendor companies, helps the internal control of the client companies and 2) healthy control actives improve associated risks, risks become easier to detect and mitigate.

Investigating the interdependence between client and vendor, Wilson (2022) examined the complementarity among other factors affecting the ITO decision success. "Complementarity" is understood as taking the view that both client and vendor capabilities should be seen as complementing each other. Among vendor maturity, financial stability, and ITO outcomes, complementing shows the strongest positive correlation, which is explained by the ability of the client to free more time and resources to focus on their core competences which can be related to other reviewed literature in this study as well (Montaseb, 2018). This complementary perspective is suggested to extend to include incentives for both client and vendor for full effect.

2.4 Capability Models

Vos (2020) proposed a model which is argued to be successful in enabling IT sourcing decisions. The model is based on the following factors: 1) behavioral, 2) technical, 3) functional, 4) business, 5) infrastructural, 6) organizational, and 7) management practice. The model was designed by combining the literature on these seven factors and using a card sort method to develop a matrix between IT assets and capabilities.

Looking from another capability-based perspective, Karimi-Alaghehband & Rivard (2020) highlighted very interesting findings. "ITO sensing capabilities" were found to have a positive impact on ITO success, encompassing sub-capabilities such as outsourcing the right functions, finding the right vendors as well as the right sourcing agreement. "ITO orchestrating" was another capability noted to have positive impact on ITO success, namely this is the ability of the client to orchestrate more than one vendor to ensure end-to-end success and delivery of service. Interestingly "contract management" capabilities were found to have insignificant impact on ITO success. The researcher finds this interesting; not only due to the rejected hypothesis but also due to the fact that such a capability is not significantly addressed in other literature. The authors of the research emphasized that the trust built and the cooperation with the outsourcing vendor were far more prevalent and had a more significant impact. The researcher finds the above interesting in the context that it is on the same line of

thought as one of the dimensions used in this research, which is the "trust" dimension.

It is important to note that it is essential to base the contractual agreement on objective data rather than on subjective judgements for healthy ITO decisions as suggested by Lu et al. (2018) in their proposed model to assess both cost and schedule through ISEA (Improved Standard English Auction) & MUAT (Multi-Attribute Utility Theory). In a similar study Dutta & Omolayole (2017) used CMMI (Capability Maturity Model Integration) and found that 1) the perception of process-based trust will yield positively to the trust between the vendor and client and 2) trust acts as a moderator between CMMI capability and success perception. It is also important to note that client certification (such as CMM) supports vendor growth in outsourcing vendors (Gopalakrishnan & Zhang, 2019). Although the relationship may seem straight forward, it is important to consider that certification may hinder the vendor innovation capabilities and hence induce ambiguity into the relationship. The same study showed that the bigger the number of clients the more positive the correlation between certification and innovation.

In a related study of governance modes Jayaraman & Liu (2019) focused on Professional Services Outsourcing (PSO); some conclusions can be linked to the last point as well. The latter study resulted in the following findings: 1) a positive relationship between task connectivity and ITO capability, 2) a negative relationship between security and ITO capability, 3) contractual governance is best used with complex tasks, and 4) administrative governance is best used with security challenges.

2.5 The Four Main Factor-categories for ITO Decision Making

Based on the previous literature review and different meta-analyses, the researcher is able to conclude that the most robust analysis of factors was the one by Hanafizadeh & Zareravasan (2020). The elaborate study considered the different categorizations including ITO strategies, comparative studies, relational studies, and descriptive studies in an effort to answer, why, what and how. The conclusion of this specific study proposes that the items below were the most prevalent way of categorizing the top factors studied.

2.5.1 Technological Factors

Focus on the factors that are related to technology innovation and technical enablement (Hanafizadeh, Zareravasan, 2020). The following factors under this category and which are considered are defined as: **1)** "**perceived benefits"** which are tangible factors that impact financial results including ROIs, cost saving (intangibles refer to building capabilities, core competencies and improvement) (Pankowska, 2019); **2)** "**perceived risks"** refers to possible loss, damage, or degradation of service (Jayaraman, Liu, 2019); 3) "**performance assessment and control issues"** refers to how challenging performance measurement could be, as well as the relationship between effort and performance (Gantman, Fedorowicz, 2020); 4) "**perceived complexity",** the extent of challenge in standardization as well as the associated complexities involved (Akkermans et Al.,2021); 5) "**perceived security",** the ability to preserve the concepts of information security like CIA (confidentiality, integrity, and availability) (Słoniec et al., 2018); and 6) "**consistency",** the ability to adhere to values and strategies (Lee et al., 2019).

2.5.1.1 Technological factors - Perceived Benefits

With the biggest correlation to an IT offshoring decision, the Perceived benefits have a strong positive correlation with an ITO decision, several different factors as the access to expertise, operational efficiency improvements, flexibility improvements all indicate this positive correlation (Agrawal et Al., 2019). More benefits are evident in the study of Public Sector Networks (Gantman, Fedorowicz, 2020), in the named study it is noted that sharing knowledge especially when vendors are involved at early stages, as well as managing complexity were also noted to be of the great benefits of IT offshoring and would indicate a positive correlation between the named dimension (Perceived benefits) and IT offshoring decision. Könning et al. (2019) note that there is a higher degree of offshoring associated with higher perceived benefits, this is since external expertise may be able to leverage additional expertise to the organization, based on the above evidence the following hypothesis can be made. **HQ1: "Perceived benefits" have a positive effect on ITO (IT offshoring) decisions.**

2.5.1.2 Technological factors - Perceived Risks

Perceived risks are generally indicated to have a negative correlation with IT offshoring decisions due to multiple reasons (Agrawal et al., 2019) including potential losses, degrading employee morale, possible degradation in quality and

the uncertainty and fears associate with an unknown vendor. The same conclusion is also evident in other research for the public sector (Gantman, Fedorowicz, 2020) due to the associated complexities and uncertainty associated with the decision. This is once again confirmed if risks are shown to be high after a risk assessment has been conducted (Könning et al., 2019). With the above evidence it is clear that we can safely assume a negative correlation between perceived risks and IT offshoring decision.

HQ2: "Perceived risks" have a negative effect on ITO (IT offshoring) decisions.

2.5.1.3 Technological factors - Performance assessment & control Issues

It is important to note that the literature addresses this dimension from different perspectives, and the correlation may be positive or negative depending on the definition. In general, "Performance assessment & control Issues" are negatively correlated with IT offshoring decisions, while ""Performance assessment & control" are positively correlated with IT offshoring decisions, for the purpose of this paper, the researcher will focus on the dimension "Performance assessment & control Issues".

Eight out of thirteen studies have shown a negative correlation with IT offshoring due to the difficulty of managing vendors, accountability, control and ability to measure performance are all challenges that are related to reluctance to take an offshore decision (Hanafizadeh, Zareravasan, 2020). On the same note but viewing the dimension from a negotiated view, (Könning et al., 2019) note that good control with robust practices will result in a good level of control, consequently better control of the delivered services, strong performance metrics and control systems will result in a guarantee of performance, this is usually evident in SLAs and continuous improvement activities. This is confirmed further in more literature (Pisani, Ricart, 2016) again focusing on controls and performance metrics. The same conclusion is also reached for public sector (Gantman, Fedorowicz, 2020) focusing on effective assessment and applied control measures. With the above evidence the below hypothesis can be made.

HQ3: "Performance assessment & control Issues" has a negative effect on ITO (IT offshoring) decisions.

2.5.1.4 Technological factors – Perceived Complexity

There is consensus among scholars about the negative correlation between complexity and IT offshoring decision making, meaning that the more complexity the less the probability a host company will take a decision to offshore or outsource. Literature indicates that with higher complexity, managing different parts and stake holders becomes more challenging (Gantman, Fedorowicz, 2020), this becomes apparent in operational decision making and execution. In another research it is noted that cultural difference, barriers in communication can also add more complexity hence hindering success with decision making for ITO (Agrawal et al., 2019). This is supported in other literature as well where challenges with coordination, control and communicating negatively affect the ability to deliver the needed outcomes of offshoring (Könning et al., 2019). Other factors of complexity noted like innovation, the needed for specialized resources and governmental issues can add to the complexity and may in order also hinder the IT offshoring decision (Hanafizadeh, Zareravasan, 2020). With the above conclusions the researcher feels it is safe to make the following hypothesis.

HQ4: "Perceived complexity" has a negative effect on ITO (IT offshoring) decisions.

2.5.1.5 Technological factors – Perceived Security

Similar to "Performance assessment and control issues", literature also identifies two difference dimensions for security, Security concerns / issues are negatively correlated to IT offshoring, while security only is positively correlated to IT off shoring decisions. The definition used by the researcher is the later one, since it is focused on the ability to observe and maintain concepts of Confidentiality, Integrity and Availability which are positively correlated. The perceived lack of security between the Host organization and vendor can hinder the IT offshoring decision due to possible data breaches or loss of control (Gantman, Fedorowicz, 2020). A very similar conclusion is reached for similar reasons especially for sensitive data (Agrawal et al., 2019; Könning et al., 2019), some research focused on the higher importance of improving the localized security than offshoring (Pisani, Ricart, 2016). Other reaches confirmed that strong security measures will indeed support the Organizations decision to go offshore and give the needed confidence in such a decision (Hanafizadeh, Zareravasan, 2020). With the above conclusions the researcher feels confident to make the following hypothesis based on this consistent literature findings.

HQ5: "Perceived security" has a positive effect on ITO (IT offshoring) decisions.

2.5.1.6 Technological factors – Consistency

From the perspective of healthy expectations management, consistency is very important and is positively correlated with IT offshoring decisions, this results in good quality of service delivery (Pisani, Ricart, 2016). The Consistency in strategies, value systems and Systems also results in a positive correlation, leading to a smoother integration of the existing systems and frameworks (Hanafizadeh, Zareravasan, 2020). Meeting performance expectations through trust and reliability are also factors contributing to rationalizing the positive mentioned correlation (Könning et al., 2019). It is to note that consistency is also related on the foundations of relationships built as well as mitigation of risks which are also factors strengthening the view of the positive correlation mentioned previously (Gantman, Fedorowicz, 2020). From the previous evidence the researcher is able to safely make the following hypothesis with regards to consistency dimension.

HQ6: "Consistency" has a positive effect on ITO (IT offshoring) decisions.

2.5.2 Organizational Factors

These relate to the different characteristics and nature of an organization (Hanafizadeh, Zareravasan, 2020). They include factors such as: **1)** "**availability of required skills and competencies",** the degree of ability of the client organization to extend the needed required skills, competencies, and finance to outsourcing services (Dutta et al., 2017); **2)** "**trust",** how fairly the client organization is treated and the associated perception from the client side (Dutta et al., 2017); **3)** "**client prior outsourcing experience",** how familiar and competent the client organization is based on previous and past experiences (Akkermans et Al.,2021); and **4)** "**top management support",** the support given by senior management based on their understanding of IT outsourcing (Jain et al., 2021).

2.5.2.1 Organizational Factors – Availability of required skills and competencies

The literature in general indicates a clear positive correlation with respect to the availability of required skills and competencies, some have emphasized the importance of skilled labor availability and readiness (Pisani, Ricart, 2016). Some research has focused on underlying factors like technical requirement understanding, alignment with Organizational needs and effective relationship management (Hanafizadeh, Zareravasan, 2020). Other research focused more on the crucial skills needed as well as the vendor having the required expertise and

capabilities (Könning et al., 2019). Finally, some research focused on specialized resources yielding the same understanding of the positive correlation (Agrawal et al., 2019). With the previous the researcher makes the following hypothesis.

HQ7: "Availability of required skills & competencies" has a positive effect on ITO (IT offshoring) decisions.

2.5.2.2 Organizational Factors – Trust

The positive correlation between Trust and IT offshoring is based on the underlying factors of risk mitigation, quality assurance, security health and effective communication who all are determinants of building trust (Pisani, Ricart, 2016). From another perspective trust helps mitigate performance concerns, performance and possible conflicts which yields the needed from an offshoring venture (Hanafizadeh, Zareravasan, 2020). The openness of communication was also emphasized further in other research especially with sharing sensitive information (Könning et al., 2019). In addition to the factors above, effective collaboration is also an important outcome for healthy trust built (Agrawal et al., 2019). With the previous conclusions the researcher is able to make the following hypothesis.

HQ8: "Trust" has a positive effect on ITO (IT offshoring) decisions.

2.5.2.3 Organizational Factors – Client prior outsourcing experience

Literature suggests the positive correlation between the "Client Prior outsourcing experience" and IT offshoring, is based on the client (Home Country based) having a better understanding of the associated challenges, can establish the needed level of communication and ability to build trust with the offshore partners (Pisani, Ricart, 2016). On the same line research shows that the organizations that have learned valuable lessons from previous offshoring activity are far more effective in managing communication, relationship management and mitigating risk, yielding the same conclusion (Gantman, Fedorowicz, 2020). A better understanding of benefits, processes and risk also yield the positive correlation observed and results in smoother transition to the offshore service (Agrawal et al., 2019). Adding to the above some research has indicated the better-informed decisions that could be taken based on previous offshoring use (Könning et al., 2019).

2.5.2.4 Organizational Factors – Top Management Support

Top management Support is crucial from the perspective of aligned strategy, making the needed resources available and the needed commitment to set up the offshoring for success which indicates a positive correlation (Agrawal et al., 2019). In addition to the previous factors some research has noted that the reduction of change resistance is also crucial and needs to be handled and managed by such a level of management (Hanafizadeh, Zareravasan, 2020). Employee commitment driven by Top management Support has shown to be important for success especially with the needed collaboration (Könning et al., 2019). Finally, literature also indicates that fostering a culture of innovation is another underlying factor of making offshoring decisions successful (Pisani, Ricart, 2016). With the above conclusions the research can make the following hypothesis.

HQ10: "Top management support" has a positive effect on ITO (IT offshoring) decisions.

2.5.3 Environmental Factors

These are all factors relating to the domain of conducting business. The following factors are considered: **1) "Competitive pressures",** the pressured ensued by other businesses in the same industry compelling the client organization to outsource (Agrawal et al., 2019) and **2)** "**Regulations and government policies",** the impact of regulation in encouraging or discouraging outsourcing decisions (Gantman, Fedorowicz, 2020).

2.5.3.1 Environmental Factors – Competitive pressures

Business literature indicates a positive correlation between Competitive pressures and offshoring decisions, research indicates that highly competitive environments pressure and drive organizations to reduce cost, be more agile and put a bigger focus on core competences in order to remain competitive (Pisani, Ricart, 2016). Improving efficiency is in addition noted to contribute to the same (Könning et al., 2019; Gantman, Fedorowicz, 2020). On a more proactive perspective it is noted that the factors and underlying reasons could also include service quality improvement through leveraging external expertise which in turn can help to respond more quickly to changing markets (Hanafizadeh, Zareravasan, 2020). With he above understanding the researcher can formulate the following hypothesis.

HQ11: "Competitive pressures" have a positive effect on ITO (IT offshoring) decisions.

2.5.3.2 Environmental Factors – Regulations and government policies

Most research indicate a complex correlation that may be positive or negative depending on the nature of the regulations, supportive regulations make the host country more attractive which would indicate a positive correlation, while restrictive and stringent regulations would indicate a negative correlation (Pisani, Ricart, 2016). Positive correlation may develop due to tax exemption, trade promotion, reduced tariffs, investment in infrastructure and favorable employment legislation (Könning et al., 2019; Hanafizadeh, Zareravasan, 2020), negative correlation may come from data protection and foreign investment laws (Könning et al., 2019). Based on the above the researcher makes the following hypothesis.

HQ12: "Regulations & government policies" have a positive effect on ITO (IT offshoring) decisions.

2.5.4 User Factors

These factors relate to the adoption of different technological innovations. The focus of this study will be on **"perceived ease of use**", the perception of the client organization on how simple it is to use IT outsourcing (Jayaraman, Liu, 2019).

2.5.4.1 User Factors – Perceived ease of use

Literature indicates that the easier the understanding of the services the more likely for organizations to adopt offshoring services and strategies, especially if it is perceived is manageable and straightforward which indicates a positive correlation (Hanafizadeh, Zareravasan, 2020), other research focuses more on the reduced perceived risk and complexity yielding to the same conclusion, especially with transition and manageability (Könning et al., 2019). This is supported by the analysis of reduced resistance and the facilitating of initiative implementation (Gantman, Fedorowicz, 2020). Finally, the availability of tools as well as resources may also indicate the positive correlation (Agrawal et al., 2019).

HQ13: "Perceived ease of use" has a positive effect on ITO (IT offshoring) decisions.

2.6 ITO & Public Sector

In studying ITO decisions made in the public sector compared to the private sector while noting the inherit lack of trust, the following considerations were noted (Gantman & Fedorowicz, 2020). Although PSNs report that cost cutting is a driver for ITO decisions, cost is never the sole factor. Many PSNs report the need for expertise as a prevalent factor. Some PSNs report ITO decision motivated by change in regulation, however it is important to note that such a motive usually results in failure to meet ITO goals, as it is basically motivated by coercion. PSNs with higher complexity tend to have a higher occurrence of ITO decisions due to lack of technical expertise. PSN ITO strategies seem to involve several vendors. Successful ITO initiatives seem to usually include outsourcing technical support, system design, project management, system analysis and coding. The instances where vendors shared their expertise with clients seem to yield more successful ITO projects.

Another interesting study focused on the relationship between public agencies and private ITO clients and made the following conclusions (Rannard, 2022). 1) The most significant positive effects were related to trust, flexibility, consensus, and commitment factors. 2) Following in positive effect but with lesser impact are interdependence and culture. 3) Larger organizations are observed to be more bureaucratic impeding the success of outsourcing ventures in general. 4) Some other factors were studied but show little consistency in making a conclusion.

2.7 ITO in Egypt

There is now doubt that Egypt has taken some serious strides towards digital transformation that are expected to continue in the future (Badr ElDin et al., 2020). For the last 15 years, Egypt has been identified as an attractive location for IT outsourcing and offshoring with emphasis on centralized location, foreign language skills and proximity to Europe, Asia, and the Middle east (Marathe, 2010).

With a focus on the outsourcing business in Egypt, Montaseb (2018) investigated the outsourcing drivers in SME ISP (Internet Service Provider) in Egypt, looking at a significant sample across 12 different ISPs and 4 geographical areas, namely Greater Cairo, Delta & Alexandria, Upper-Egypt, and the Canal cities. Montaseb (2018) reached the conclusion that the most important driver was the cost benefit and that it remains the main driver for outsourcing decisions. However, it is noted that other factors have also been growing in impact and

could carry an important potential to such outsourcing decisions in the future. Although classically the focus has been more on the short-term benefits of cost drivers that are considered mainly secured in such an outsourcing venture, it is noted that the long-term could carry far more potential for the client organization from a performance point of view. This is specifically clear if the client organization can outsource none-core functions and concentrate more on their core competences giving the client organization the ability to free up resources and consequently concentrate in sales and winning new business. This affirms how important IT outsourcing is as a strategic tool for the client organization.

Although requiring labor skilling and upskilling, Egypt has shown significant progress over the past few decades (Kamel, 2021). The study goes further to suggest that digital services and outsourcing services must play an important role in Egypt's digital transformation journey, especially towards its targets for 2030. Working to position Egypt as an attractive IT outsourcing destination could yield positive outcomes to Egypt and the mother companies (clients) with a diversified economic base and nearly 200,000 people employed in Business Process Outsourcing (BPO).

In an exploratory case study Motawi et al. (2018) investigated the knowledge types and impact of interactions on an international software company and its offshore in Egypt, resulting in the following conclusions. 1) The better the understanding of the domain reduced rework which could relate to the **organizational factor "availability of required skills and competencies"**. 2) Periodical trainings affected the domain knowledge as well as the software development cycle which could relate to the same previous factor as well as the **organizational factor "top management support"**. 3) The importance of documentation was noted, and could relate this finding to the **technological factors "perceived benefits"** and **"control issues".**

2.8 Conclusion

The previous review indicates very few studies focusing on Egypt, although Egypt is deemed as an attractive location for ITO and IT offshoring. Although some studies have investigated the effects of digital transformation in Egypt, the factors affecting ITO decisions with Egypt as an offshoring decision are lacking. Hence, the research aim is to investigate the 13 most important factors for ITO decision making considering Egypt as an offshoring destination. The researcher hopes to investigate both the importance of the factors and their order of importance.

For the sake of efficiency and more specifically the study performed by Hanafizadeh & Zareravasan (2020), the researcher will only use the factors with top correlation (whether positive or negative) since the current study focuses on studying the relevance of these factors in outsourcing to the Egyptian market rather than a full study of the distinct factors. Hence the following factors are considered from the previous study: 1) technological factors: perceived benefits, perceived risks, performance assessment and control issues, perceived complexity, perceived security & consistency; 2) organizational factors: availability of required skills and competencies, trust, top management support, client prior outsourcing experience; 3) environmental factors: competitive pressure, regulations, and government policies; and 4) user factors: perceived ease of use.

The previous literature review gives a strong foundation to this research. Clear correlation of the different factors affecting the ITO decision making is noted (Hanafizadeh & Zareravasan, 2020). The number of studies is solid enough and confirmed by many to conclude the specific factors that the researcher attempts to study. Hence, the researcher can make the assumptions that the top correlated factors mentioned above are the factors that should be used in this study. It is also notable that up to the researcher's best knowledge, no such study was conducted in Egypt, which is the focus of this study. The socioeconomic environment in Egypt is showing a very rapid growth with no corresponding studies to explain and support such growth. ITIDA shows that the IT sector is the fastest growing sector in Egypt as of today (ITIDA, 2022).

From the above, the researcher concludes that there is a research gap in meticulously studying the different factors affecting the ITO decision making and hence supporting the IT offshoring industry growth in Egypt. This gap is deemed important from the researcher's point of view due to the rapid growth in this sector and the potential for the future.

3.1 Research Framework

The research framework explains the relationship between the 13 selected independent variables and the dependent variable (ITO). The independent variables are divided into 4 groups of factors: technological factors, organizational factors, environmental factors, and user factors. The researcher has based his selection on the work of Hanafizadeh & Zareravasan (2020), who in the course of their work have created an SLR (Systematic Literature Review) of 12 previous similar papers (meta-analysis) that encompass a total of around 2,304 previous papers.

The researcher has selected the top 13 variables with the highest correlation from the 62 different variables studied by Hanafizadeh & Zareravasan (2020). With the significant number of papers and variables studied previously, the researcher takes the view that the confidence in the importance of these 13 variables is very high and yields the needed focus to study the factor correlation with respect to the dependent variables (ITO), whether positively or negatively.

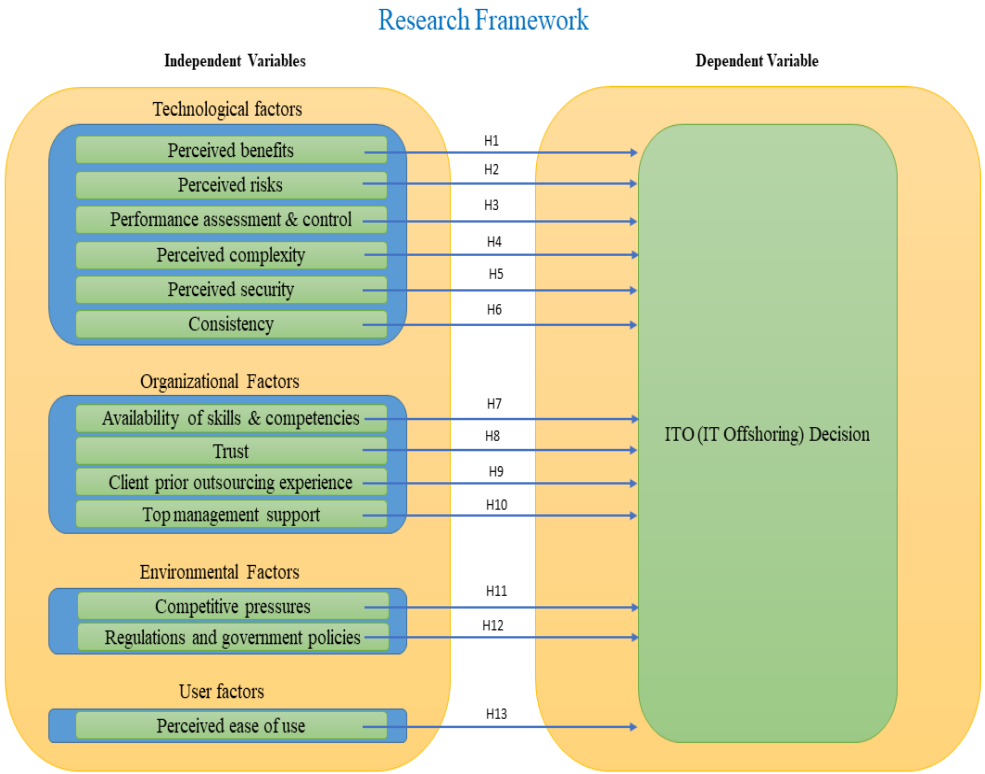

Fig. 1

3.2 Definition of Variables (Dimensions)

The following section explores the various definitions of the 13 variables used in the research framework of this study.

The variables can be defined as follows:

i. Technological factors: a) perceived benefits: relate to both the tangible and intangible benefits, tangible relate to the benefits with a direct economic value like cost saving; while intangible relate to benefits that are more challenging to measure like core competencies or quality measures; b) perceived risks: relate to the extent a client (home country) is exposed to chances of damage or losses; c) performance assessment and control issues relate to the general relationship between effort and performance and the degree of challenge to measure the exchange of performance in joint efforts; d) perceived complexity: relates to the degree of complexity needed to standardize and the need for specific knowledge in the field; e) perceived security: relates to the degree of embracing the three main concepts of information security (known as CIA, confidentiality, integrity and availability); and f) consistency: relates to the consistency with values, strategies and legacy systems.

ii. Organizational Factors: a) availability of required skills and competencies: relates to the availability of skills in the client organization like managerial, technical and contractual skills; b) trust: relates to the service providers ability to perform as expected and deliver the what is needed to the client firm with fairness; c) client prior outsourcing experience: relates to the familiarity of client organization with outsourcing strategies; and d) top management support: relates to the support given to the ITO business based on their understanding of it.

iii. Environmental Factors: a) competitive pressures: relate to the pressure from other competitors forcing the client organization to ITO options and b) regulations and government policies relate, to the limitation or motivation of ITO activities as an effect of governmental and other regulations.

iv. User factors: a) perceived ease of use relates to the easiness of adopting and using ITO services.

3.3 Research Question / Hypothesis

For this research to achieve its objective, the researcher proposes the following 13 hypotheses. The proof or disproof of these hypotheses is meant to yield the conclusion of this research in studying the effect of these 13 factors on ITO decision-making in the Egyptian ICT market.

As previously researched in several SLRs (Systematic Literature Reviews), around 65 factors have been identified by Hanafizadeh, Zareravasan (2020) and Pisani & Ricart (2018). Looking from a classification perspective, some others have studied these factors to study their impact (Agrawal et al., 2019; Gantman, Fedorowicz, 2020; Könninga, et al., 2019). Our 13 hypotheses are based on the studies considered in our literature review to establish the same sense of prioritization with a specific focus on the IT industry in Egypt.

RQ1: What effect do "perceived benefits" have on ITO (IT offshoring) decisions?

HQ1: "Perceived benefits" have a positive effect on ITO (IT offshoring) decisions.

RQ2: What effect do "perceived risks" have on ITO (IT offshoring) decisions?

HQ2: "Perceived risks" have a negative effect on ITO (IT offshoring) decisions.

RQ3: What effect does "performance assessment & control" have on ITO (IT offshoring) decisions?

HQ3: "Performance assessment & control Issues" has a negative effect on ITO (IT offshoring) decisions.

RQ4: What effect does "perceived complexity" have on ITO (IT offshoring) decisions?

HQ4: "Perceived complexity" has a negative effect on ITO (IT offshoring) decisions.

RQ5: What effect does "perceived security" have on ITO (IT offshoring) decisions?

HQ5: "Perceived security" has a positive effect on ITO (IT offshoring) decisions.

RQ6: What effect does "consistency" have on ITO (IT offshoring) decisions?

HQ6: "Consistency" has a positive effect on ITO (IT offshoring) decisions.

RQ7: What effect does "availability of required skills & competencies" have on ITO (IT offshoring) decisions?

HQ7: "Availability of required skills & competencies" has a positive effect on ITO (IT offshoring) decisions.

RQ8: What effect does "trust" have on ITO (IT offshoring) decisions?

HQ8: "Trust" has a positive effect on ITO (IT offshoring) decisions.

RQ9: What effect does "client prior outsourcing experience" have on ITO (IT offshoring) decisions?

HQ9: "Client prior outsourcing experience" has a positive effect on ITO (IT offshoring) decisions.

RQ10: What effect does "top management support" have on ITO (IT offshoring) decisions?

HQ10: "Top management support" has a positive effect on ITO (IT offshoring) decisions.

RQ11: What effect do "competitive pressures" have on ITO (IT offshoring) decisions?

HQ11: "Competitive pressures" have a positive effect on ITO (IT offshoring) decisions.

RQ12: What effect do "regulations and government policies" have on ITO (IT offshoring) decisions?

HQ12: "Regulations & government policies" have a positive effect on ITO (IT offshoring) decisions.

RQ13: What effect does "perceived ease of use" have on ITO (IT offshoring) decisions?

HQ13: "Perceived ease of use" has a positive effect on ITO (IT offshoring) decisions.

3.4 Type of Research (Qual / Quan)

Due to the expert and strategic nature of an ITO decision, such decisions are usually taken by senior managers, senior directors, head of business units and sometimes CEOs. From this fact, the researcher argues that the quality of the decision and a focus on the few managers taking such decisions is more important than a mere number of respondents. Outsourcing & the special case of offshoring are also considered a new trend in strategic management, with a big focus in management literature in the past 2 decades only. With the above in mind the researcher takes a "qualitative approach" in this study which is viewed to be more suited to the topic as well as the purpose of this research which focuses more on the quality of the ITO decisions to be made.

3.5 Population / Sample Size / Type of Sample

3.5.1 Population

As per the report from ITIDA, there are about 400+ offshoring players in Egypt, out of which 10+ are ranked as Fortune500 companies like Microsoft, IBM and Uber. However, due to the fact that ITO decisions are made at senior management levels within organizations, the researcher proposes that the population of respondents be confined to senior management positions, which have previously been a part of successful ITO decision processes. Whether on the client side or the service provider side, it is important to note that since this research focuses on the special case of offshoring (versus outsourcing), both types of managers mentioned above will be belonging to the same organization.

3.5.2 Sample Size

The researcher proposes 20 respondents with offshoring decision-making experience which are deemed sufficient to study offshoring decisions made concerning the ITO business in Egypt. The respondents will be chosen from a variety of multinational ICT organizations including Microsoft, Dell Technologies, Orange Business Services, RSA and VMware Inc. The 20 respondents are all from senior management positions (senior manager and above, namely managers of managers). They have all also participated in successful decision-making processes while growing IT businesses in Egypt as a part of off shoring. This may include either supporting the decision-making processes locally from the host country's perspective or service provider (Egypt) or from the home country / client (like USA and European based companies).

It is important to note that the business literature agrees that so far there is no specific sample size that is agreed upon for qualitative research (Blaikie, 2018; Sim et al., 2018). Some researchers note that the case numbers are not as important as what is done with them (Sim et al., 2018); while others also note that the sample size for theory testing (our case) can be very different from theory formulation (Blaikie, 2018).

3.5.3 Type of Sample

The unit of analysis is an individual sample type, since this research focuses on the individuals making ITO decisions in the organization. Although outsourcing is a common practice now in IT business globally, the fact that senior management supports ITO decisions is one of the dimensions used in this research. It is deemed appropriate for the same type to be the individual managers making such ITO decisions.

For this qualitative study, the interviewees will be selected based on a purposive sample. This is due to the fact that the sampling is based on specific individuals that have both specific management experience as well as specific experience with ITO decision making. The researcher does not necessarily have the convenience of one or more sources for sampling, hence a purposive sampling is considered.

3.5.4 Data Collection Tool

The data collection tool will be designed as semi-structured interviews with the 20 respondents. A semi-structured interview is chosen for two reasons, 1) to ensure addressing the 13 main factors addressed in this research and 2) to ensure that any other factors not considered in this research are also considered. The interview be conducted through a Zoom meeting invitation and recorded for research purposes and later content analysis. The researcher proposes the following structure for the semi-structured interview: a) welcome and introduction to the meeting; b) explaining of the purpose of the interview, while ensuring no leading indication for any questions are used and explaining that the interview is being recorded for research purposes; c) asking the interviewee to confirm their position and relevant experience as well their past experience with ITO decision making; d) ask the structured questions of the interview to confirm the already known 13 factors needing verification; e) asking the unstructured part of the interview composed of questions to confirm any unconsidered or any unaddressed factors; and f) ending the interview.

3.5.5 Data Analysis

Data analysis of the semi-structured interviews will be performed through content analysis. The interview will be scripted into a text version based on the recording of the Zoom video interviews and the output script will be fed into the targeted content analysis tool Atlas.ti.

3.6 Study Implications

3.6.1 Managerial Implications:

Most IT organizations and MNCs with significant IT departments are faced with ITO decisions. Many MNCs today take this one more step in considering multiple offshoring locations, which gives MNCs better redundancy for ensuring business continuity, access to different global markets as well as diversity in workforce and talent.

This research will be able to help decision makers in senior management positions and heads of business units know if Egypt is the best destination of an outsourcing decision or may be even one of the diverse global locations they are seeking. The existing businesses in Egypt already have a strong relationship with outsourcing and offshoring business in India, which is one of the factors considered in this study and may give Egypt a competitive edge in such decisions.

3.6.2 Policy Makers Implications:

Entities like ITIDA and NTRA have an objective to encourage and regulate the information and communication technology business in Egypt. In the particular case of ITIDA, whose primary objective is to encourage IT offshoring and outsourcing, the researcher hopes to bring the most important factors to the attention of policy makers in order to facilitate and help market such an industry in Egypt.

Both entities being governmental have a certain influence on policy making especially in the areas of entry and exit barriers to the Egyptian market, a matter that most MNCs will consider carefully before making such a decision of ITO. The importing of equipment to be used in business operations for example is a significant challenge, especially since it is not used for commercial purposes and may be subject to scrutiny of taxation and other commercial financing.

4.1 Data Presentation:

Twenty-one interviews were scheduled, meeting invites were sent using MS Outlook email client, the invites were all scheduled, most invites were sent more than one month before the interview time, the video interviews were conducted online over MS teams video meeting capabilities, the recording for the interviews and transcription was done through the features and capabilities of MS teams' collaborative tool. The meeting video recording and transcription were downloaded from the cloud on the same day or the next.

One interview was disregarded as the interviewee had to drop the meeting for a business emergency, which resulted in a incomplete video and transcription, the researcher decided to exclude the interview completely to ensure that the data presented is not skewed in any direction, especially since the interview question results are summed up and accumulated over the total number of interviews, the resulting sample was composed of 20 complete interviews.

The twenty interview transcriptions are available in Appendix B for reference, the names of the interviewees were only used during the content Analysis phase on the tool Atlas.ti , the remaining calculation referenced the interviews as Interview 1 to Interview 20 to eliminate any possible bias or correlation.

During the content analysis phase, codes were created to identify the direction of the impact (Positive, Negative and Neutral), as well as the extend of the Impact (0-Absent, 1-Rare or Little, 2-Present, 3-Very Important or Big, 4-Essential or Huge). The reports for the first 4 questions (Demographics and the top 3 factors affecting) were generated from Atlas.ti directly, as well as the question before last (Any other affecting factors). The core 13 questions were calculated on an Excel spreadsheet since the capabilities of Atlas.ti were limited in creating the needed filters.

The calculation for the 13 core factors were listed both in direction (Positive, Negative and Neutral), and multiplied by the extent of the impact (0-Absent, 1-Rare or Little, 2-Present, 3-Very Important or Big, 4-Essential or Huge), the resulting value (an integer between -4 and 4, signifies both the direction of the impact and the extend of the impact of the different factors on the dependent Variable – ITO decision).

The Absolute value of the factors was also calculated, and the result was ranked to measure the extent of impact alone, which enables the ranking and order of these 13 factors under study.

Demographics

On question 1, all 20 interviewees consented to the recording of the interview video and transcription. On question 2, 18 of the 20 candidates (90% of the population) were managing managers, although this doesn't directly correlate to the involvement of decision making however it supports the need for seniority of profile and the wisdom needed for the decision making and business acumen associated, out of the 20 candidates, 10 (50% of the population) also held positions were they were managing individual contributors. The 2 candidates who were individual contributors were in senior enough positions to be involved in ITO decision making. On question 3, all 20 candidates (100% of the population) confirmed that they either took ITO decisions or were involved in the decision-making process.

The Top 3 Factors

Question 4 was intentionally asked before the 13 different factors were revealed and asked, with the purpose of not influencing the interviewees and avoid any distortion to the importance, or ranking of the factors, table 1 outlines the factors mentioned and the percentage of occurrence compared to the total 20 interviews, unmentioned factors were omitted from this table.

Factor	Q4: Top 3 factors for ITO	% of Mention
AF2: Local Talent	19	95.00%
AF1: Cost	17	85.00%
AF4: OperatingHours	9	45.00%
AF8: Corporate-Culture-Match	8	40.00%
AF10: Language_Skills	6	30.00%
AF5: Revenue/Cost	3	15.00%
AF22: Location & Proximety	3	15.00%
AF7: Political-Stability	2	10.00%
AF12: Economic_Stability	2	10.00%
AF18: Customer Focus	2	10.00%
AF6: Internet-Infrastucture	1	5.00%
AF11: Location_Diversity	1	5.00%
AF17: Communication Skills	1	5.00%
AF20: Prior_Offshore_Success	1	5.00%
AF25: Value_Creation	1	5.00%
AF26: Mindset	1	5.00%

Table 1: The number of occurrences of the top 3 factors (Prepared by researcher).

The Core 13 factors of the Study

Due to the limited reporting capabilities of Atlas.ti the researcher used excel sheet to note the impact and direction of each factor of the 13 factors studied, Table 2 shows the outcome of each question per interview, Table 3 shows the Summation of values, absolute value, and the ranking of the factors.

	Question	Factor / Code	Interview 1	Interview 2	Interview 3	Interview 4	Interview 5	Interview 6	Interview 7	Interview 8	Interview 9	Interview 10	Interview 11	Interview 12	Interview 13	Interview 14	Interview 15	Interview 16	Interview 17	Interview 18	Interview 19	Interview 20
1	Q 5	Perceived Benefits	2	2	3	3	4	2	3	3	3	3	3	3	3	3	3	2	3	3	3	4
2	Q 6	Perceived Risks	-2	-4	-4	3	-3	-2	-1	-3	-2	-3	-1	-1	-3	-1	-3	-3	-1	-2	-3	-3
3	Q 7	Performance Assessment and Control Issues	-2	0	-3	0	2	0	3	0	-2	0	-1	-1	0	-1	-2	-2	-3	-2	-2	-3
4	Q 8	Perceived Complexity	-2	-3	-1	-2	3	-3	-1	-3	-3	0	-1	-1	0	1	-3	-1	-3	-2	-2	-2
5	Q 9	Perceived Security	-3	3	3	-3	3	0	1	3	0	0	2	1	3	0	3	3	2	-2	-3	4
6	Q 10	Consistency	3	3	1	0	2	4	3	3	-2	2	3	1	3	0	3	1	3	2	2	2
7	Q 11	Availability of Required Skills and Competencies	4	4	4	0	2	3	3	4	-2	3	3	3	1	2	3	3	3	3	-3	3
8	Q 12	Trust	3	4	2	1	3	3	3	2	-2	2	3	3	3	3	3	3	2	2	-3	3
9	Q 13	Client Prior Outsourcing experience	3	2	3	1	4	2	3	3	3	3	3	-1	3	3	2	3	3	3	2	2
10	Q 14	Top Management Support	0	2	4	4	2	2	3	3	3	3	3	4	3	3	3	3	-2	2	-3	4
11	Q 15	Competitive Pressures	0	1	2	2	0	2	3	2	3	3	2	1	1	2	2	2	2	3	1	2
12	Q 16	Regulations and government Policies	2	2	3	3	1	1	3	3	3	3	-1	3	1	2	0	2	2	3	-3	2
13	Q 17	Perceived Ease of use	0	3	4	3	3	2	3	2	3	3	3	3	0	3	3	3	2	2	2	2

Table 2: The Impact & direction of each of the 13 factors (prepared by researcher)

	Question	Factor / Code	Global Sum	Global Sum (Absolute Value)	Summation Rank
1	Q5	Perceived Benefits	58	58	1
2	Q6	Perceived Risks	-42	42	7
3	Q7	Performance Assessment and Control Issues	-19	19	13
4	Q8	Perceived Complexity	-29	29	11
5	Q9	Perceived Security	20	20	12
6	Q10	Consistency	39	39	8
7	Q11	Availability of Required Skills and Competencies	46	46	4
8	Q12	Trust	43	43	6
9	Q13	Client Prior Outsourcing experience	50	50	2
10	Q14	Top Management Support	46	46	4
11	Q15	Competitive Pressures	36	36	9
12	Q16	Regulations and government Policies	35	35	10
13	Q17	Perceived Ease of use	49	49	3

Table 3: The final result of summation & ranking of the 13 factors (Prepared by researcher)

Additional Factors

The question: before the last, the candidates were asked if any other factors need to be considered for future purposes, table 4 outlines the listed factors as well as the percentage of occurrence from the total number of interviews.

Factors	Q18: Other Factors	% of Mention
AF1: Cost	4	20.00%
AF2: Local Talent	4	20.00%
AF7: Political-Stability	4	20.00%
AF8: Corporate-Culture-Match	4	20.00%
AF12: Economic_Stability	3	15.00%
AF4: OperatingHours	2	10.00%
AF19: Employee_Attrition	2	10.00%
AF28: Technology	2	10.00%
AF30: Local_Management	2	10.00%
AF3: On-Demand Service	1	5.00%
AF6: Internet-Infrastucture	1	5.00%
AF9: Inflation_And_Currency	1	5.00%
AF10: Language_Skills	1	5.00%
AF13: Trust	1	5.00%
AF14: DEI	1	5.00%
AF15: Opportunity_Timing	1	5.00%
AF16: Attitude	1	5.00%
AF21: Goverment_Reg_Taxation	1	5.00%
AF22: Location & Proximety	1	5.00%
AF23: Contractor_Worker_Availability	1	5.00%
AF24: Ability_to_Acquire_Travel_Visa	1	5.00%
AF25: Value_Creation	1	5.00%
AF27: Productivity	1	5.00%
AF29: Flexibility	1	5.00%

Table 4: Additional Factors (Prepared by the researcher)

4.2 Analysis:

The researcher compares the outcome of the previous analysis with the Systematic Literature Review on IT Outsourcing Decision and Future Research Directions of Hanafizadeh & Zareravasan (2020), the research mentioned provides the most recent SLR with a similar approach to the factor classification. The general outcomes are consistent with outcomes of Hanafizadeh & Zareravasan (2020) in the direction of the factors, the factors "Perceived Risks", "Performance Assessment and Control Issues" and "Perceived Complexity" have a negative correlation with the ITO decision making, while all other studied factors show a positive correlation as expected, the order of the factors vary from the 2020 study – which is expected due to the different nature of the location studied which is the IT sector in Egypt. For the purpose of this section the researcher will refer to study by Hanafizadeh & Zareravasan (2020) as the previous study, Original study or previous research as an anchor point and benchmark.

4.2.1 Technological Factors

The "Perceived Benefit" factor soars as the top factor both in the original study as well as the one done by the researcher in this study bot ranked at the number 1 factor, all interviewed experts agree that the benefits of outsourcing out way the risks, the financial benefit has been a clear outcome when it comes to this factor, some others noted the diversity of location also provides resiliency which is much needed in today's VUCA world nature. Cost savings, ROI (tangible benefits), Competency building and Customer relationship management (intangible benefits) were all noted.

The" Perceived Risks" was also consistent with the original study at the second rank (7th compared to all 13 factors), several factors including the improved IT infrastructure in Egypt compared to other countries like India which was very apparent during the COVID-19 crisis, the political instability was also an area of concern, however the resiliency shown in the sector especially during the Arab Spring has counter-proved that the services delivered from offshore sites were continued to be delivered with quality and consistency.

"Performance Assessment & Control Issues" ranked at the 3rd place in the previous study was not ranked at the 6th place with the Technological factors and the 13th on the overall factors, interviewed candidates emphasized that most multinationals who operate successfully today have a pre-determined and predesigned performance management systems and practices that make it hard for offshore operations to deviate as long as other factors are satisfied, the local

talent, local leadership and ability to transfer knowledge all superseded the risk with this specific factor. Most candidates agreed that this was a management issue rather than an offshoring concern, most also agreed that it was a manageable risk especially with the previous experience to offshoring in Egypt.

"Perceived Complexity" was ranked 6th in the previous research, and 4th rank in the current study, although the interviewed candidates expressed the importance of this factor, most have agreed that it has been managed well within the offshoring business to Egypt, the interviewees noted the need in expertise has been supported well with he advancement of technical education in Egypt as well as the solid talent pool, local management was noted on how well they handled complexity, the cultural sensitivity available to support across cultural and geographical boundaries, flexibility was also noted several times and shown to have overcome challenges with complexity.

"Perceived Security" moved from the 4th rank in the previous study to the 5th rank with the current study with an overall rank of 12th out of 13, most candidates agreed that although this is a very important factor and has huge relationship with IP (Intellectual property) and know-how of the business, most seemed to agree that with the advancements in information security this was not a concern to the offshoring business in specific, the factor is looked upon in a general sense and not particular to offshoring, most of the notable security breaches usually happened in the headquarters or data centers and not many have been noted to happened due to offshoring reasons. Most organizations today are security aware; several have linked to the "Trust" factor especially in local talent and local management.

"Consistency" moved up from the 5th rank in the previous study to the 3rd rank in the current study. Interviewees noted that the worry due to geopolitical situation may be an issue, the global perception of a middle east country may not be great especially for American and European based companies, the ranking was enhanced to the previous history which has shown consistency in delivery during political instabilities and COVID-19 lock downs, the ethical commitment of talent was also noted and linked to the consistency of delivery. Several have mentioned that a long-term relationship is needed for the factor of consistency to be meaningful, the initial decision making for ITO may be affected negatively for lack of history to study, however on the long term most agreed that it was positively impacting the ITO decision making.

4.2.2 Organizational Factors

"Availability of Skills & competencies" was ranked the 1st in the previous research and 2nd in the current study (equally like top management support factor), the factor ranked the 4th on the overall rank of the 13 factors studied. There is no clear reason noted that this factor was of lesser importance and impact, however other factors in the same category seemed to over way it, the general consensus was towards the very positive impact of the Egyptian talent pool and availability of resources and advancements in technical Education.

"Trust" moved from the 2nd place on the previous study to the 4th place in the current, similar to the previous factor there was no reasons stated why it was less thought off, but other factors seemed to precede in importance when it comes to the Study in Egypt, interviewees seemed to think highly of the local management skills and there ability to built trust over a long-term relationship, one possible regression of this factor is that it needs time and long-term relationship to be proven and deemed a part of the decision making in some of the cases only.

The factor "Client Prior Outsourcing experience" was ranked the 3rd in the previous studies and up to the 1st rank in the current study, it is the 2nd highest rank in the 13 factors as a whole. Interviewees emphasized that due to the political instabilities as well as the lack of awareness of the region and the IT business in Egypt – the prior experience and knowledge was essential and highly impactful (take precedence on other factors in the same category), several of the Home country leaders interviewed noted that they have been very pleasantly surprised when they offshored to Egypt and were impressed with the talent, skills, availability of skills, flexibility and work ethic of the local talent.

"Top Management Support" was ranked the 4th in the previous study and the 3rd (2nd repeated) in the current study, the factor was also ranked the 4th repeated (5th), in the overall ranking, most interviewed candidates stated that this was essential for the offshoring decision to be taken from the very start, most stated that if the top management didn't support the decision to offshore, even from before exploring the options, the decision is usually not taken, several emphasis were made on the top management being already aware from previous experiences and historic knowledge of the offshoring business in Egypt. Some have also noted that this can be both positive or negative to the ITO decision based on the perception of the top management, several have linked this to Trust factor and cultural awareness and sensitivity.

4.2.3 Environmental Factors

Both factors "Competitive Pressures" and "Regulations and Governmental Policies" gave retained their ranking compared to the previous study, with the competitive pressures preceding, the overall ranking was 9th and 10th consecutively – most interviewed candidates seemed to agree that competitive pressures were not a major factor in decision making anymore, although it might have been before, today's IT industry is a very far road from Kodak's initiative to take on offshoring, today IT offshoring is a must more than an option, however although of the emphasis on how important offshoring was, several agreed that it was not the most impactful in the decision making compared to the perceived benefits and perceived costs.

4.2.4 User Factors

Since the "Perceived ease of Use" was studied alone in this category, it will not be relevant to compare its ranking within the group, however it is notable that the overall ranking sits at rank 3 (after Perceived Benefits and Perceived Risks), most of the interviewed candidates agreed that it pivotal for the offshoring to remove the complexity of the business and this is supported by a perceived ease of use, it is expected of the local management on the offshore site to manage the arising issues especially local ones like inflation and currency devaluation, flexibility was noted to affect the perceived ease of use, as well as being able to manage cultural diversity.

The table below outlines the previous analysis while comparing the researchers' outputs compared to the previous study by Hanafizadeh & Zareravasan (2020), showing the ranking of the current study, the rank in the previous study and change in ranks of each factor.

Dimension	Variable	Previous Rank within Group	Current Rank within Group	Overall Rank (Comparing the 13 factors)	Change in Ranking Relevance	Dimension
Technological factors	Perceived Benefits	1	1	1	0	Factor Group 1
	Perceived Risks	2	2	7	0	
	Performance assessment and control	3	6	13	+3	
	Perceived Complexity	6	4	11	-2	
	Perceived Security	4	5	12	+1	
	Consistency	5	3	8	-2	
Organizational Factors	Availability of skills and competencies	1	2	4	+1	Factor Group 2
	Trust	2	4	6	+2	
	Client Prior Outsourcing Experience	3	1	2	-2	
	Top Management Support	4	3	4 (5th Repeated)	-1	
Environmental Factors	Competitive Pressures	1	1	9	0	Factor Group 3
	Regulations and Government Policies	2	1	10	0	
User factors	Perceived Ease of use	1	1	3	0	Factor Group 4

Table 6: Compared factor ranks between current and previous study (Prepared by the researcher)

5.1 General Observations

The researcher intentionally inquired about the top 3 factors affecting the IOT decision making before the inquiry into the 13 factors studied, to ensure that the interview questions didn't influence the answers of the inquiry at the early stage of the survey. It is notable that the top 3 factors in order were: Local talent, Cost and operating hours. By looking into these stated factors, we can match a) Local talent to the studied factor "Availability of required skills & competencies" ranked as number 4, b) Cost to "Perceived Benefits" ranked as number 1 factor, c) Operating hours to "Perceived ease of use" ranked number 3 and "Perceived Benefits" ranked number 1. The top 3 factors suggested by the interview candidates corresponded to 3 of the top 4 factors studied in this research giving evidence of the validity of the research.

5.2 Conclusion

The research outcome has shown consistency with the outcomes of previous research on the ITO decision making when it comes to offshoring to Egypt. There is a slight change in the rank of factors within the same group. The difference in factor ranks is influenced by clear factors that have been identified during the interviews with the different leaders who took part in ITO decisions whether from the Home-Country side of the Host-Country side. The geopolitical situation in the region as well as the lack of awareness of the IT capabilities in Egypt are both deterrents to the growth of the offshoring business, however the talent pool, cost, IT infrastructure, cultural sensitivity and flexibility are all factors which support the growth of the industry. It is evident from the research that the previous experience once offshoring decision is taken greatly benefits further growth and potential to support similar businesses and initiatives. The researcher has shown that the outcome is consistent with the recent global studies of the topic as well as the latest Systematic literature reviews. The research was able to show the global ranking of these factors as well even outside the 4 grouping of the factors putting emphasis on what would be recommended to support further growth of the offshoring business in Egypt in future years.

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