



**DEPARTAMENTO DE CIÊNCIAS ECONÓMICAS E EMPRESARIAIS**

**MESTRADO EM GESTÃO DE EMPRESAS**

**UNIVERSIDADE AUTÓNOMA DE LISBOA**

**“LUÍS DE CAMÕES”**

**THE STRATEGIC MOTIVATION FACTORS FOR IT OUTSOURCING DECISIONS  
IN THE BANKING SECTOR**

Dissertação para a obtenção do grau de Mestre em Gestão de Empresas

Autor: Mamadou Gadiaga

Orientadores: Professor Doutor Bruno Henrique Prazeres de Melo e Maia e Professor Doutor Ricardo Filipe Carreira Ramos

Número do candidato: 0030003519

**Dezembro de 2020**

**Lisboa**

## **DEDICATION**

This is dedicated to all dear persons near or far. I carry you in my heart forever.  
Eternal recognition and may the Almighty protect you.

## **ACKNOWLEDGEMENTS**

I address real thanks to my teachers and particularly my supervisors during this work. They remarkably participate to the achievement of this result.

## **ABSTRACT**

Outsourcing is the fact of delegating the supply of a given service to an external organization. This phenomenon is a widespread strategy in the corporate business world.

The outsourcing of information technology in the banking sector has particularly called our attention. Banking activity is highly dependent on the information technology (IT) process. Banks opt for an Information Technology Outsourcing (ITO) strategy to enjoy expertise from a supplier without hiring experts. Therefore, ITO gives the bank access to technological skills. Meanwhile, it allows the bank to improve the quality of services, reduce cost, provide flexibility, and focus on core activity. Our aim is to study the main factors that motivate ITO strategic decisions in the banking sector.

To answer this inquiry, we develop a conceptual model consisting of four ITO factors corresponding to four hypotheses, which will be tested based on the data collected by a survey performed within a multinational bank. Inspiring by solid and contemporaneous scientific research, we apply a survey within our targeted sample and collect data through email.

Our result has shown that majority of responders preconize ITO. They recognize ITO strategic motivation factors as saving cost, allowing access to new technology, and focusing on core business and quality service improvement.

Besides those benefits, ITO strategy may arise some risks summarized in this paper.

We conclude that a successful ITO alliance enables the bank to achieve a competitive advantage over their competitors.

**Keywords:** Outsourcing; Information technology; strategy; banking sector.

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# 1 Introduction

In a globalization context, where the market is highly competitive, many enterprises pursue efficiency focus only on their core business and ensure profitably by making complementary alliances with other companies (Tushar & Tanwar, 2018).

Information technology is a crucial symbol of globalization. Thereby, its access could make a huge advantage (Branstetter *et al.*, 2019). However, IT is continuously changing, obliging individuals and companies to follow this tendency (World Economic Forum, 2012). Special human skills and considerable financial resources are in the origin of those mutations. Furthermore, to profit from IT services, companies can implement Outsourcing (Branstetter *et al.*, 2019).

In this scenario, ITO services are the primary strategy preconizing to realize cost reduction, improve business operations and processes, access to the newest technology, and focus on core competencies to achieve strategic goals and ensure profitability (Hamid & Mansor, 2016). Moreover, ITO is also used to enhance innovation and flexibility (Choi *et al.*, 2018).

Banking activities are intensively associated with IT business processes. Because most of the banking industry data are digitalized and handled by IT systems (Hon & Millard, 2018). With this level of needs and even dependency on IT system channels, outsourcing IT services is potentially a clear strategy for banks (González *et al.*, 2016).

Given that outsourcing is considered as one of the best solutions for corporations without expertise or skills for a specific type of work, banks are strongly prompted to choose the ITO option to conduct businesses (Gunasekaran *et al.*, 2015).

Depending on company dimension and necessities, IT services could be inshore, nearshore, or offshore outsourcing (Gerbl *et al.*, 2015). The form of ITO itself should not be an obstacle to control the service supplied. According to (Kang *et al.*, 2014), a success outsourcing project is based on control of efficiency and innovation. The loss of control could compromise IT outsourcing outcomes and eventually cause a *backshoring* (Delen *et al.*, 2019). *Backshoring* (or reshoring) refers to strategic decision to bringing it back home (Gylling *et al.*, 2015),

The reasons for a company to implement an ITO strategy are access to brand new technology, focus on core activities, save cost, and improve quality of services (Delen *et al.*, 2019). However, in practice, some risks might arise from this strategy (Liang *et al.*, 2016).

Decision-makers should keep up with those positive or negative consequences to ensure the company's business model success.

Banking activity is part of the complex financial network. Consequently, there is an obligation for banks to assume and ensure the best banking practices. For this reason, ITO is the strategic decision promoted to facilitate the banking flux. The question of what to outsource is pertinent. So likewise, how to choose an outsourcing partner. The decision to outsource one or another activity is not an easy task (Gunasekaran *et al.*, 2015). Decision-makers must identify what to outsource and which partner to collaborate with. Basing on this situation, taking outsourcing decision demands a good understanding of incurring risks and expecting profits.

## **1.1 Research questions**

The purpose of this work is to answer the following research questions:

- 1- What has the academic literature found about ITO strategy?
- 2- What is the perceived ITO motivating factors in the banking sector?

In the end, we would like this study to be a comprehensive guide for decision-makers in deciding to outsource. This study aims to remove any ambiguity (in ITO making decision) on at least the different points discussed.

## **1.2 Research project's objectives and significance**

This study englobes benefits plentifully. It could be beneficial for both academicians and professionals. It reinforces the vast existing knowledge of outsourcing strategy. It aims to explain outsourcing notion and the practice in professional context. In addition to this, the topic of this study, namely the ITO decision, arouses academia curiosity. Therefore, this study could be a support for those who lead research related to this field.

This study treats the decision of ITO accurately as a strategy in the banking sector. As it is explained, IT is highly linked to banking sector in that most banking information is computerized. To keep their business in tune with the business world, strategic decision-makers have at their disposal this research lead most seriously and exhaustively manner because it enlightens the main benefits expected in ITO strategy decisions. In the other hand, it

summarizes the potential risks associated with the ITO decision. This study has the vocation to be a guideline accompanying strategic decision-makers when it is about ITO decisions.

### **1.3 Study Motivation**

The best outsourcing destination has been for a long time in Asia countries (*Gylling et al.*, 2015). USA's most prominent outsourced many services from China, Singapore, South Korea, Taiwan, Hong Kong, and Mexico (Kotabe & Murray, 2004). The choice of Asian countries is also strategic. In those Asian countries, companies can realize cost reduction with cheaper wages, stay focused on core competencies, gain access to new technology, and have an excellent service quality (*Choi et al.*, 2018). European workforce is seen as more expensive (Radlo, 2017). But, nowadays, constate is that some outsourcing companies are installing in Europe Portugal, Greek, Ukraine, Spain, Italy, Turkey, etc.. Portugal for example, is chosen by its geographic location, available human resources, and attracting political and labour jurisdictions (Marques, 2016). Beside these favourable business environments, researchers as (*Costa & Costa*, 2018) underlines some disadvantages generated by outsourcing as low wage. By geographic location, Portugal also represents a nearshore outsourcing, helpful strategy in the control process (*Gerbl et al.*, 2015).

Adopting an ITO strategy is becoming a general practice of financial institutions everywhere (Gandy, 2014). As ITO is a worldwide phenomenon, we intend through this research to study ITO in a large dimension. For instance, the reality of ITO in different location will allow us to understand better the motives of ITO in banking sector.

Although collecting data in banking sector is not an easy task because those information are privacy, highly sensible (Otieno, 2013). We challenge to provide reliable data from this opaque banking sector then at the end produce a decision support for manager and at the same time contribute to enrich management literature.

## **2 Literature review**

In this study, we have consulted the mainstream ITO literature. This exciting literature mainly focuses on banks' ITO motives, benefits, and risks.

### **2.1 Concepts' definitions**

#### **2.1.1 Information Technology Outsourcing**

Outsourcing idea has been conceptualized implicitly by Adam Smith in "The Wealth of Nations" (Smith, 1776) when he theorized the competitive advantage. Furthermore, Adam Smith (Smith, 1776) posits that the firm should be focused on producing goods that give a competitive advantage. Reporting Adam Smith's theory (Stiglitz, 2017) adds that "the gains from trade that arise when each country specializes so that it can get better and better at what it does". This theory implies that the non-core activities could be provisioned externally. Between the 1970s and 1980s, companies start outsourcing, and the first official contact of information technology outsourcing is between two American companies: The Eastman Kodak Company and IBM in 1989s. Avoiding developing internally new skills, IBM made a strategic alliance with Kodak, who provided his data centre (Ali & Khan, 2016).

According to (Briggs, 2005), the ITO strategy decision is older and goes back a decade before IBM and Kodak alliance. The American Ross Perot, founder of Electronic Data Systems (EDS) in 1962 (Wakeman, 2019), told a prospective client, "You are familiar with designing, manufacturing and selling furniture, but we are familiar with managing information technology. We can sell you the information technology you need, and you pay us monthly for the service with a minimum commitment of two to ten years".

Explicitly, the concept of outsourcing came from the American terminology "outside resourcing", meaning to be provided from outside. In economic language, outsourcing is defined as turning over all or part of an organizational activity to an outside vendor (Pahirathan, 2017). That implies a contractual agreement connecting at least two parties with responsibilities and commitments. The outsourcing phenomenon generally refers to the procurement of materials and services inputs by a firm from a source outside (Economics & Xix, 2012).

In the IT or information system outsourcing context, it is defined as a contract between two parties (client and vendor), including the delivery of services and charges that need to be performed in a predefined contracting period. An ITO contract should exclude the likelihood

of opportunistic behaviour, confusion, and ambiguity between two contracting parties (Hanafizadeh & Zare Ravasan, 2018).

ITO is an action taken by a client company to delegate or transfer to a third party, named vendor company, some or all IT tasks. Those tasks could be related to decision-making rights, business process projects, internal activities, data processing services, contract programmers, time-sharing, purchase of package software, and services. The vendor company assumes their realization according to specific quality and quantity and delivery based on a fixed time of those tasks (Alexandrova, 2015).

The expansion of the outsourcing phenomenon highlights outsourcing propagation is boosted in international trade by globalization (Pahirathan, 2017). It is characterized by the exponential growth in the rate of interaction and complementarity. Therefore, protagonist companies may gain access to the newest technology. The globalization context is a good vector of the rapid outsourcing spread.

Globalization facilitated market synchronization, and companies go overseas to be well provided (Branstetter *et al.*, 2019). This practice is known under the name of offshore outsourcing and is widespread nowadays. The ITO is preconized because it generally provides cheap cost and technology access. Handling IT in-house is a cost factor. Consequently, companies source IT through offshore ITO (Pahirathan, 2017).

### **2.1.2 Competitive advantage**

It is a subject on which authors have conducted several studies. Realize a competitive advantage is the most critical enterprise purpose. Managers work hard to achieve a sustainable competitive advantage above competitors and stay in this domination point long enough as their company life (R & Tanwar, 2018). Competitive advantage is a company's ability to produce goods or services of the same quality, more cheaply or desirably fashion. When there are two producers, the consumer choice is the cheaper goods or products in equal value. Thereby, it allows a company to realize more sales over its competitor. This phenomenon is called competitive advantage. It becomes sustainable when the company arrives to maintain its comparative edge in the long-term period. According to (Klein *et al.*, 2012), a corporation achieves a competitive advantage when implementing a value-creating strategy not simultaneously being implemented by any current or potential player. Michael Porter (Geoff Colvin, 2012), one of the most famous thinkers about the question, says that competitive advantage is a capacity gained through attributes and resources used by a firm to perform at a

higher level than others in the same industry or market (Porter & Porter, 1989). Precise strategy management is the most efficient vehicle to achieve sustainable competitive advantage. Cost leadership strategy, strategy focus, and differentiation are, among others, the main manners for a company to get sustainable competitive advantage according to (Porter, 1989). Additionally, nowadays, corporates should be innovative and technically advanced to gain a competitive advantage (Weerawardena & Mavondo, 2011).

### **2.1.3 Concept of Strategy**

We can explain strategy management, in general, the way to manage an organization's resources (finance, human resources, marketing, etc.) to realize its objectives, goals, and principles (Engert *et al.*, 2016). Successfully implemented strategies make a company performant by facilitating the firm with a competitive advantage to outperform current or potential players (Otieno, 2013). This fact shows how efficiency strategy management implementation leads a company to a competitive advantage. (Kotabe & Murray, 2004) posits that a corporate achieves sustained competitive advantage when it applies a unique strategy in essence or unknown in implementation formula and uncopiable by any current or potential competitors who are utterly unable to duplicate strategy's benefits. It means that a firm's strategy characteristics must be unique, internal secret, and confidence.

All corporates have a strategy development as a guideline to follow to achieve a competitive advantage. In this way of thinking, the implementation of an efficiency strategy results a cost leadership what could be given by outsourcing. There is a cause-and-effect relationship between outsourcing and competitive advantage that we schematize as following:

- a) Outsourcing provides cost leadership, strategy focus, innovation, technology access.
- b) Cost leadership, strategy focus, innovation, technology access gives a competitive advantage.

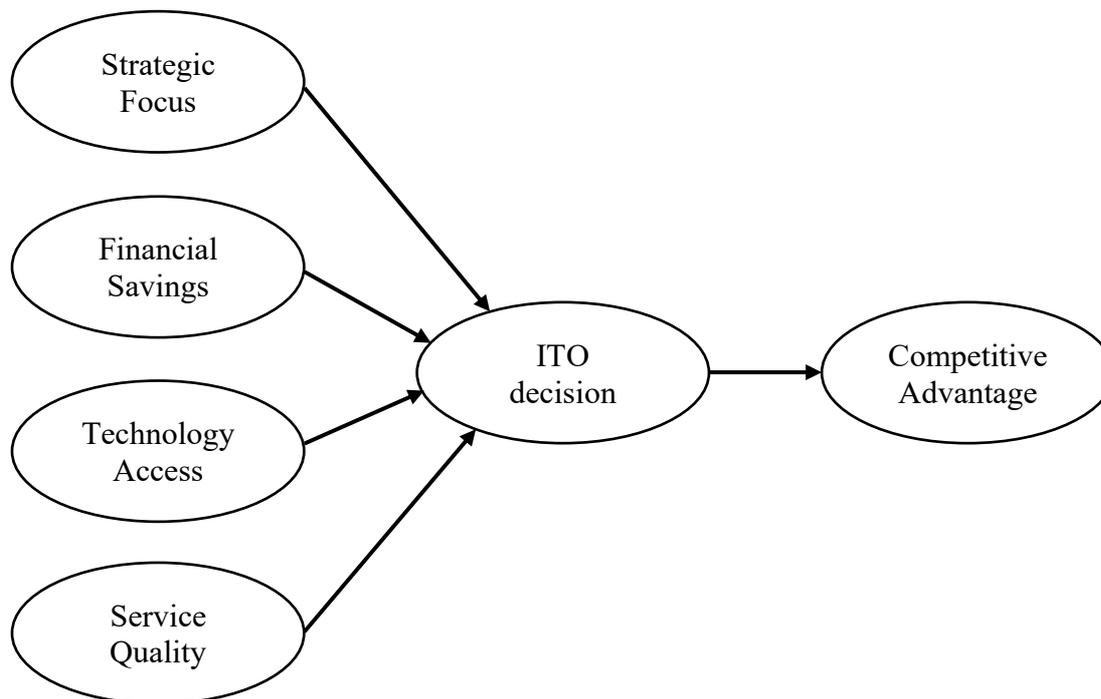


Figure 1 - Link between outsourcing motivations and competitive advantage

Source: own research

#### 2.1.4 Banking activity

Bank institution organizes intermediation between savers and borrowers. Banking activity principle is to generate revenues by applying rates to finance services (loans and mortgages) supplied to individuals, entities, and governments (Bhattacharya *et al.*, 2015).

The strength of the banking sector translates the economy healthy. Banks' stability has a direct repercussion on the economy. That means an ITO project could posteriori affect positively or negatively the economic situation.

## 2.2 Perceived ITO motives in the banking sector

Today ITO occupies a vital position in management strategy for banks. ITO participates in improving internal and external operations and their entire business performance (Fusiripong *et al.*, 2017). The necessity of IT is real in all organization business processes, particularly for banks. Accordingly, banks bind onshore, nearshore, or offshore ITO contracts to provide the

right needs of IT services (Fusiripong *et al.*, 2017). Information Technology is itself a vast and complex universe of science, so its development and implementation demand massive human and finance resources. For banks who mainly use IT as essential support to run their business, outsourcing is the best way to get access to high quality IT services. Company vendors are generally specialized to the IT activities. IT services is cheaper for client companies since they do not necessarily need to develop competencies or hire people for IT job (Vugec *et al.*, 2017). Bank strategy decision is always oriented towards ITO because even though IT is indispensable for banks, it still is an accessory for its activity (Ravasan *et al.*, 2017). Some advantages can be observed:

1. ITO helps banks to be more focused on core activity (Mungai & Moturi, 2015);
2. Access to new technology is more accessible and evident (Tayauova, 2012);
3. All these services are acquired with less cost in high service (Gorla & Somers, 2014).

### **2.2.1 Strategical motives**

ITO is also motivated by strategic goal (Su *et al.*, 2017). Bank decision-makers are familiar with ITO and its benefits in strategy (Su *et al.*, 2017). However, taking an ITO decision is crucial that the strategy motivation should be unequivocally specified (Hanafizadeh & Zare Ravasan, 2018). ITO is a potential opportunity that allows banks a better focus on core competency and enables them to be more innovative through value networks (Rajaeian *et al.*, 2017). Also, ITO demands less effort to coordinate internal processes (Handley & Benton, 2013). That gives more flexibility and time to focus on principal activity. Through ITO, a confidential relationship is made between stakeholders, which establish business networking capabilities (Spithoven & Teirlinck, 2015). Strategically a link is created. Client and vendor companies are in full cooperation for solving their business needs. It is essential to underline that ITO is associated with only none core businesses such as call centres, back-office activities, information technology (IT) support, accounting, legal, logistics, and others (Rhodes *et al.*, 2016).

### **2.2.2 Financial savings motives**

(Handley & Benton, 2013) are persuaded that outsourcing procures cost reduction. The financial motivation is defended by coordination and control of cost. Many authors have supported ITO financial benefits through Transaction Cost Theory (TCT) (Williamson, 2012). Transaction costs are related to the effort, time, and costs associated with searching, creating, negotiating, monitoring, and enforcing a service contract between buyers and suppliers. The control of costs in production and transaction phases could involve cost reduction achievement in ITO (Gunasekaran *et al.*, 2015). With that in mind, (Vaxevanou & Konstantopoulos, 2015) are optimistic about the possibility of achieving cost reduction through the application of TCT tools in outsourcing strategy. As per (Yuan *et al.*, 2020), financial performance could be achieved by using TCT as a measuring instrument in the strategic decision. Following its understanding of TCT theory, (Dhar & Balakrishnan, 2006) posit that outsourcing generates high transaction cost because vendors need to be managed, controlled, and monitored internally throughout the contract. Meanwhile, the production cost is low due to the economies of scale. To achieve cost reduction in outsourcing strategy, decision-makers should know, by using TCT, which operations should be outsourced (Vaxevanou & Konstantopoulos, 2015).

The main objective of a bank's ITO is to ensure its IT business processes externally supplied through a reliable, efficient third party at the lowest cost (Vugec *et al.*, 2017). The cost reduction is a direct consequence of outsourcing strategy decision (Handley & Benton, 2013). Furthermore, cutting costs is seen as a goal through outsourcing, and for banks in roughly all cases, cost reduction is the primary influence of ITO decision (Kaipia & Turkulainen, 2017). Financial reasons are the immediate objectives of banks within ITO (Gandy, 2014). In the dynamic of efficiency strategy management, outsourcing decisions help banks achieve cost reduction by avoiding financial charges, IT services costs could be higher if the services were supplied internally (Gandy, 2014).

### **2.2.3 Technology access motives**

The technology access is provided through an ITO contract. As banking information is positively associated with computer science, outsourcing becomes the strategy for managers to access those external competencies (Hon & Millard, 2018). This fact gives a rapid and special growth of outsourcing in the technological area (Alipour *et al.*, 2011). Because ITO provides a

positive performance with accuracy, efficiency, and fast information sharing for financial activities (Munjal *et al.*, 2019). In this situation, banks make use of an external supplier for IT services (Gewald, 2010). According to (González *et al.*, 2016), ITO expectation is associated with access to new technologies for new products and processes. ITO facilitates technology access to client's company. Therefore, ITO helps to update the technology practice level. Within ITO, banks may frequently access to the newest technology (Hanafizadeh & Zare Ravasan, 2018). According to (Kang *et al.*, 2014), the technological market is in constant innovation. For easy access to that novelty, banks use external competencies via outsourcing (Hanafizadeh & Zare Ravasan, 2018).

## 2.2.4 Improved quality service motives

Service quality improvement is among the real bank preoccupations while deciding to outsource (Hanafizadeh & Zare Ravasan, 2018). As defined in the outsourcing contract, some service specifications and qualities are fixed, and the fulfilment of those contract clauses is required from the vendor (Pascual *et al.*, 2016). An exponential increment of quality services is a challenge for bank decision-makers (Mungai & Moturi, 2015).

*Table 1 - Perceived banks ITO benefits*

Main motives identified	Main benefits	Main references
Strategical	To focus on core competencies, To regain control over internal departments	(Su, Levina, & Ross, 2017) (Su <i>et al.</i> , 2017). (Hanafizadeh & Zare Ravasan, 2018). (Rajaeian <i>et al.</i> , 2017). (Handley & Benton, 2013). (Spithoven & Teirlinck, 2015). (Rhodes <i>et al.</i> , 2016).
Financial	To reduce operational costs, To improve measurability of costs. To transform fixed costs into variable costs.	(Handley & Benton, 2013), (Williamson, 2012). (Gunasekaran <i>et al.</i> , 2015) (Vaxevanou & Konstantopoulos, 2015) (Yuan <i>et al.</i> , 2020), (Dhar & Balakrishnan, 2006), (Vaxevanou & Konstantopoulos, 2015). (Vugec <i>et al.</i> , 2017), (Handley & Benton, 2013), (Kaipia & Turkulainen, 2017). (Gandy, 2014).
Technological Access	To gain access to external competencies	(González <i>et al.</i> , 2016), (Hanafizadeh & Zare Ravasan, 2018).
Quality services	To improve Service quality	(Hanafizadeh & Zare Ravasan, 2018), (Pascual <i>et al.</i> , 2016).

*Source: own research*

## 2.3 Risks of Bank ITO

ITO is not only benefits. Companies face some risks resulting from outsourcing alliances (Varajão *et al.*, 2017). According to (González *et al.*, 2016), a risk is an unpredictable event that can arise suddenly and affects a running project negatively. Some main risks in ITO are associated with the possible dependency on the supplier, supplier reliability, hidden cost, loss of know-how, service provider's lack of necessary capabilities, and social risk (Atkinson *et al.*, 2015).

Despite numerous advantages for companies by contracting an external vendor, bank ITO decisions may entail some potential pitfalls (Mungai & Moturi, 2015). ITO may also be a risky decision, given that it could affect a bank's activity negatively. To avoid it, (Gulla & Gupta, 2012) preconizes selective outsourcing. It could amortize future unpredictable events by helping in the best selection vendor and assessment performance.

(Lacity & Hirschheim, 1995) are persuaded about some undesirable outcomes of ITO. For them, hidden costs (setup costs, redeployment costs, relocation costs, parallel-running costs, and so on) are the most frequent ITO contract issue. As contractual amendments, some precautions are often necessary in case of contractual difficulties to readjust with the clients changing needs. Most of the outsourcing contracts are indeed incomplete. Service quality and service costs are two major issues in ITO (Lacity & Hirschheim, 1995).

The control of IT services is even problematic. Moreover, many risks are linking to IT bank activities. The dependence of bank activities on IT is very high. Unfortunately, IT is not always infallible. The fact of ITO represents the strategy resort within bank function is very hazardous. Bank's clients are continuously facing hacking, fishing email, and credit cards duplicated when using IT services most the time managed by the vendor company (Mushtaque *et al.*, 2014).

*Table 2 - Perceived banks ITO Risks*

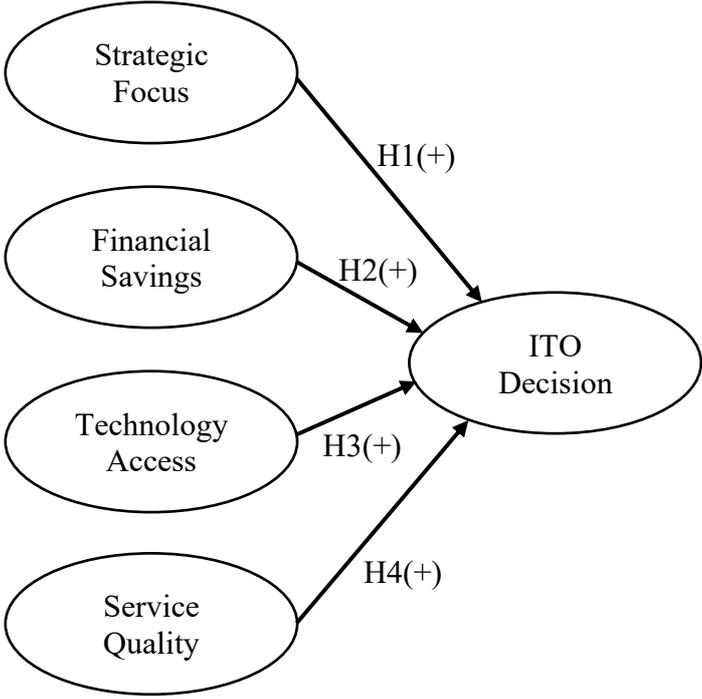
Main factors identified	Main negative outcomes	Main references
Strategic	Dependence on the supplier, supplier reliability	(Atkinson <i>et al.</i> , 2015), (Mungai & Moturi, 2015), (Mushtaque <i>et al.</i> , 2014)
Financial	Hidden costs	(Atkinson <i>et al.</i> , 2015), (Mungai & Moturi, 2015), (Lacity & Hirschheim, 1995)
Technological Access	Loss of know-how	(Atkinson <i>et al.</i> , 2015), (Mungai & Moturi, 2015), (Mushtaque <i>et al.</i> , 2014)
Quality services	Social risk, Service provider's lack of necessary capabilities	(Atkinson <i>et al.</i> , 2015), (Mungai & Moturi, 2015), (Mushtaque <i>et al.</i> , 2014)

*Source: own research*

**2.4 What not to outsource**

Never outsource the management of strategic planning, management of finances, management of management consultancy, control of supplies, quality, and environment management, supervision of the meeting of regulatory requirement such as product liability, misleading advertising, quality environmental regulations, staff health and safety, public safety, product/service safety. For (Pahirathan, 2017) outsourcing these key functions is a potential and evident business destabilization, affecting the company negatively. On the other hand, these competencies touch upon the company’s management strategy.

**2.5 Conceptual model and hypothesis**



*Figure 2 - Conceptual model*  
*Source: own research*

We set four significant benefits of banks ITO from major research papers studies on ITO:

To be a leader in its sector, banks stay focused on their core competency. The real source of competitive advantage is provided by core competence, which creates value. Even though IT supports a bank's business processes effectively, those skills are more often outsourced from an external vendor for efficiency focus on core competency.

H1 - Strategy focus:

Outsourcing allows banks to focus on core activities.

Financial advantages are among the main bank ITO motives and suppose that ITO tasks can be supply by the external vendor at lower costs (Hanafizadeh & Zare Ravasan, 2018).

H2 - Financial savings:

Banks' decision to outsource is directly associated with financial protection.

Banks ITO gives access to the newest technology. Given that the company vendor is specialized in its area, it provides recent technology to banks facilitating daily business operations in a more securely and innovatively.

H3 - Access to advanced technology:

Outsourcing decision gives banks access to cutting-edge technology.

Best quality is frequently posited as an advantage of outsourcing. In fact, in the outsourcing contract, the client company insists on this point. Naturally, Banks are demanding on quality services because it is an important point to gain client satisfaction. The achievement is plausible because most of the company vendors are specialized in the area in which they are operating. Therefore, it is a challenge for improving service to continue to keep clients and gain a good reputation mutually.

H4 - Improved service levels:

Bank ITO is associated with enhancing the quality service levels.

### **3 Methodology**

This chapter explains how data was collected from our target bank and describes the data collection procedures used in this research. We also describe how the pre-test was implemented, as well as the definite survey. Finally, we present the socio-demographic characterization of the sample.

#### **3.1 Population and sample**

We had privileged access to one European multinational bank with worldwide branches and a suitable size for our research problem. This privileged access made it easier to implement the survey and to collect reliable information.

This study's target population was strategic and IT managers in different countries where the bank is present. We targeted these managers because they are involved with in ITO decisions. Therefore, they are a suitable population for reliable and valid data collection.

Our sample consisted of a random selection of 445 IT strategic managers, automatically reached through an online internal survey platform, but effectively we only received 22 valid answers.

To comply with the bank's privacy and data protection regulations, a mandatory requirement was to keep the anonymity of responders, and the bank's name.

#### **3.2 Measuring Instrument**

Given the hypothesis from our conceptual model, we have adapted survey questions from (Dahlberg & Nyrhinen, 2006) and (Gewald, 2010) to design our survey.

Our survey consisted of an introductory text (see appendix A), followed by a socio-demographic characterization section with six questions. The final section consisted of 5 groups of Likert item questions, corresponding to the five constructs in our conceptual model (4 constructs concerning the different ITO benefits and another construct concerning the ITO decision). These Likert items were answered in an agreement Likert scale from 1 to 5, as shown in Table 3. The Likert item survey questions for each construct (see 7.1 Appendix A).

*Table 3- Likert scale*

1	2	3	4	5
strongly disagree	Disagree	undecided	agree	strongly agree

*Source: Research methodology: Methods and techniques (second revised edition)  
(C.R. Kothari, 316 C.E.)*

To validate the survey regarding construct validity and item readability, we have conducted a qualitative pre-test, asking five managers to critically read each question and give us feedback concerning its clarity or whether they suggested a better reformulation of the questions. We also asked these managers' opinions about whether the questions seemed to make sense regarding measuring the corresponding constructs and whether they could think of any additional questions relevant to any of the constructs.

The pre-test was sent to managers on 23/05/2020, and the answers were collected on 05/07/2020. They all agreed that the questions were clear and gave no further suggestions. Therefore, we adopted the pre-test as the definite survey.

The definite survey was then sent on 28/07/2020. The survey was considered complete with the responses received until 24/08/2020, with a total of N=22 valid responses. Even though the mailing questionnaire has the benefits to be cheaper and allows it to collect large samples in a short period, the responsiveness is minimal and sometimes improbable (Filipe & Ramos, 2015).

### **3.3 Socio-demographic characterization of the sample**

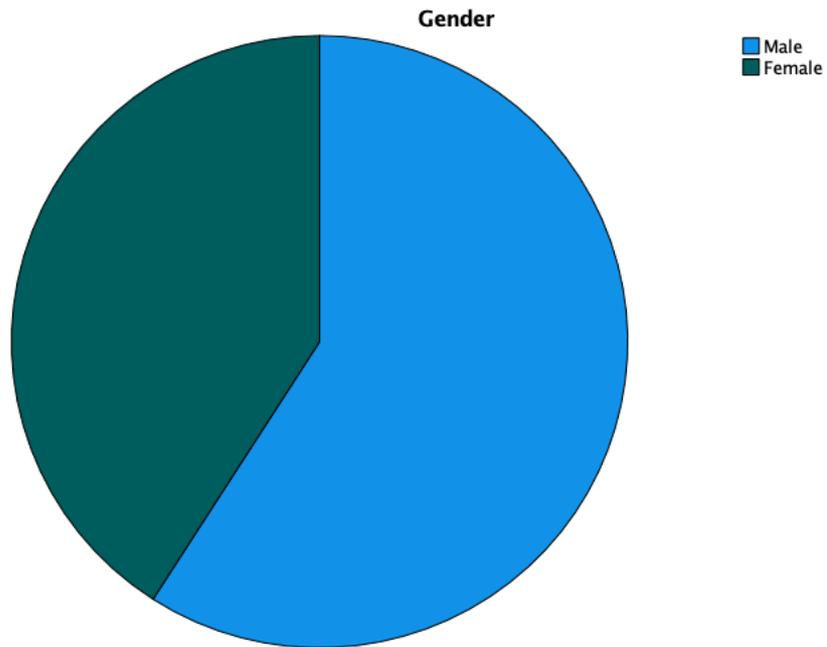
We will present the socio-demographic characterization of our sample.

As far as gender is concerned, we had thirteen male respondents (59,1%) and nine females (40,9%).

*Table 4- Gender*

	Frequency	Percent
Male	13	59,1
Female	9	40,9
Total	22	100,0

*Source: SPSS output*



*Figure 3 - Gender distribution of the respondents*

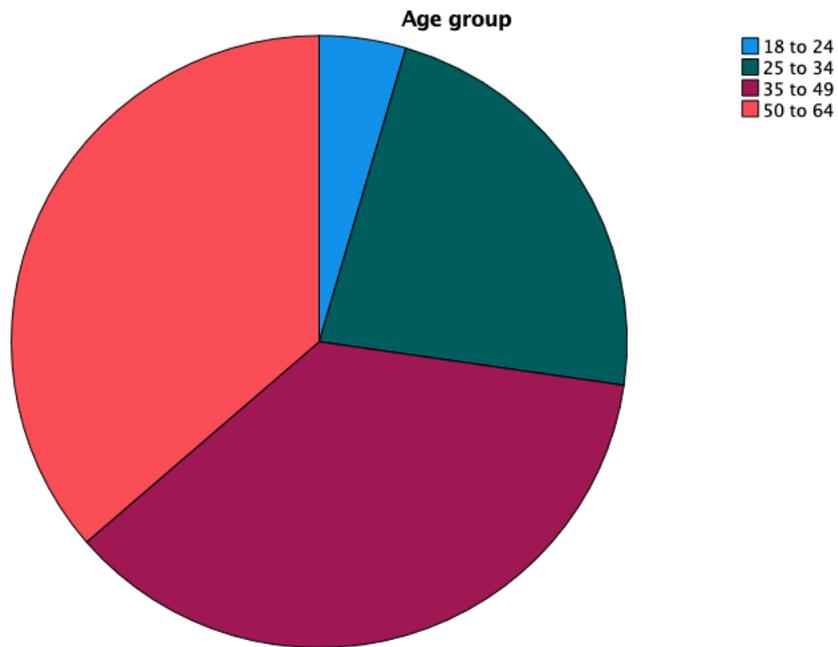
*Source: SPSS output*

In Table 5, we can see the frequency distribution of the age group variable. We observe that 72,7% of the responders are in the two top age groups (35 or more years old), which can be considered managers with large professional experience (mature careers).

*Table 5- Age group*

	Frequency	Percent
18 to 24	1	4,5
25 to 34	5	22,7
35 to 49	8	36,4
50 to 64	8	36,4
Total	22	100,0

*Source: SPSS output*



*Figure 4 - Age group*

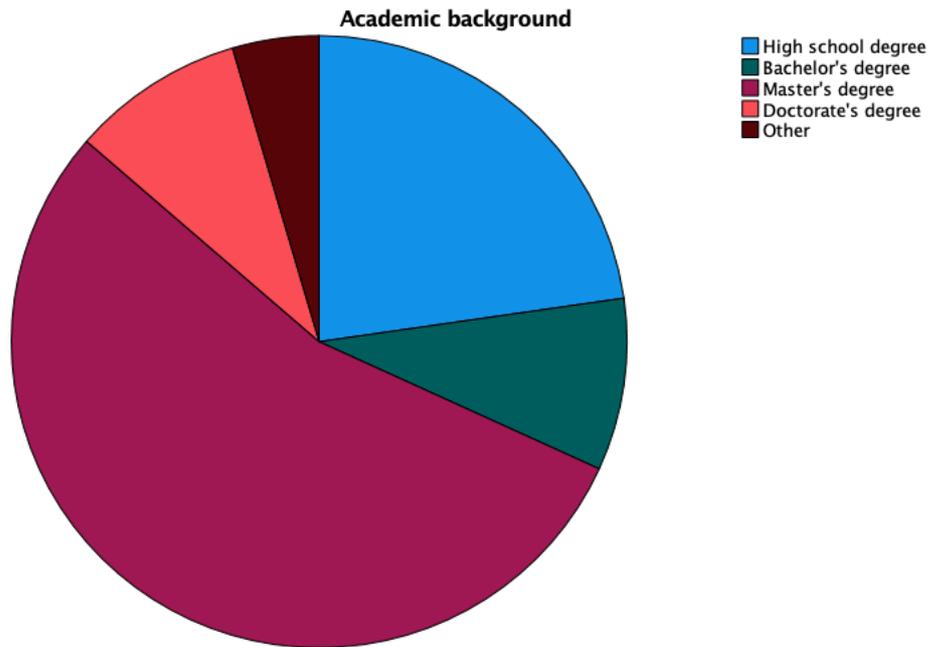
*Source: SPSS output*

In Table 6, we can read the frequency distribution of our sample according to education. It stands out that 54,5% of the respondents declared to have a master's degree.

*Table 6 - Academic background*

	Frequency	Percent
High school degree	5	22,7
Bachelor's degree	2	9,1
Master's degree	12	54,5
Doctorate's degree	2	9,1
Other	1	4,5
Total	22	100,0

*Source: SPSS output*



*Figure 5 - Academic background*

*Source: SPSS output*

Our sample reached respondents in bank branches located in different countries, as shown in Table 7. Portugal and France accounted for 54,6% of the respondents. Only 2 out of the 22 responses were from outside Europe (the USA and Canada).

*Table 7 - Job location*

	Frequency	Percent
Canada	1	4,5
France	6	27,3
Italy	3	13,6
Luxembourg	3	13,6
Portugal	6	27,3
Spain	2	9,1
USA	1	4,5
Total	22	100,0

*Source: SPSS output*

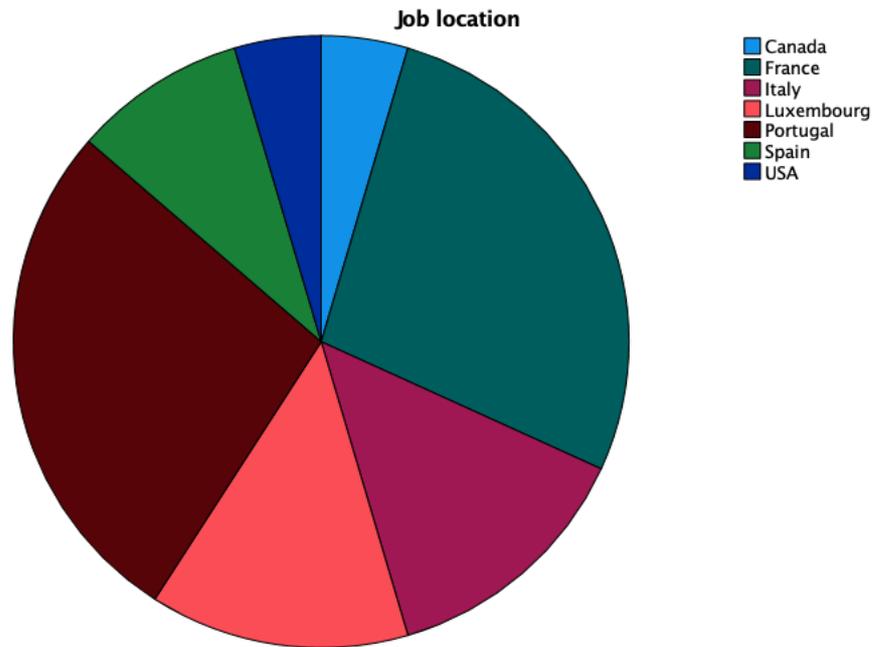


Figure 6 - Job location

Source: SPSS output

Another relevant characterization of our respondents concerns the manager category within the bank. In Table 8, we can read the frequency distribution according to such categories, and we can point out that 50% of the respondents were senior managers, and 27,3% were top managers, which is a good indicator that our sample contains experienced managers.

Table 8 - Manager category

	Frequency	Percent
Junior	3	13,6
Senior	11	50,0
Top manager	6	27,3
Other	2	9,1
Total	22	100,0

Source: SPSS output

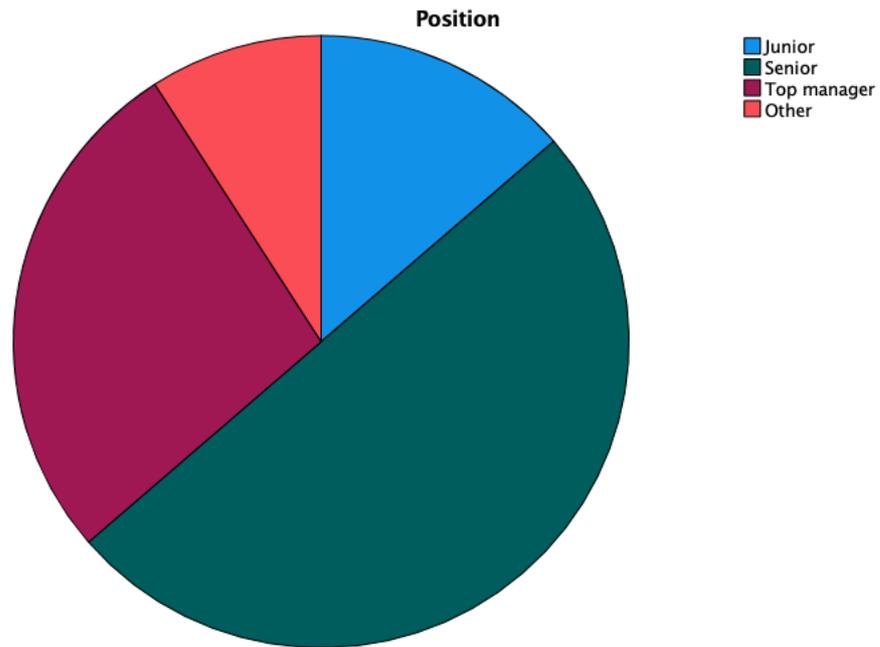


Figure 7 - Manager category

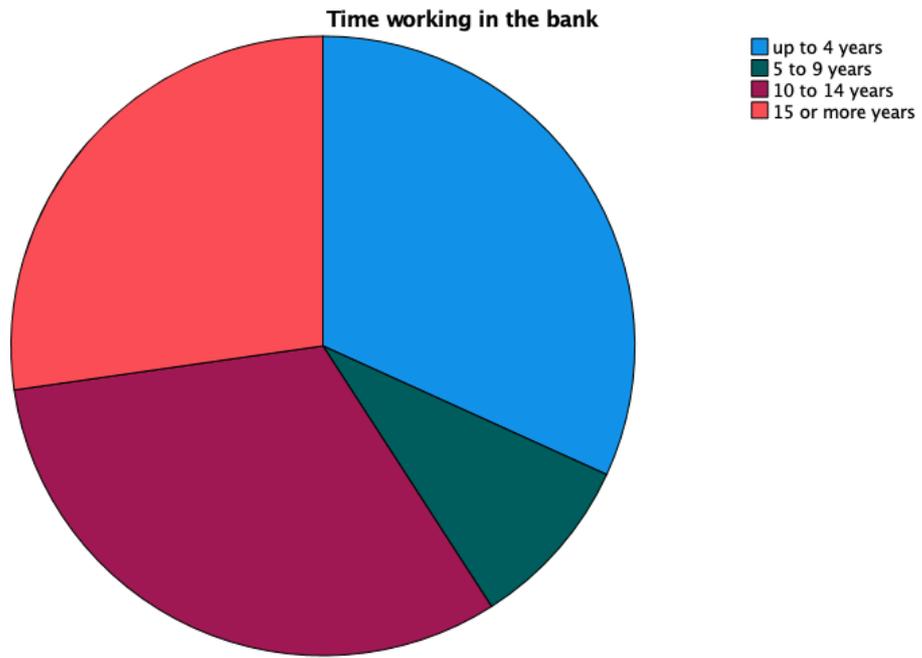
Source: SPSS output

Finally, we present the frequency description of the variable “time working in the bank” in Table 9. We can see that about one third (31,8%) of the respondents worked in the bank for less than five years. More than half of our sample (59,1%) worked in the bank for ten or more years, which means a considerable familiarity with the bank and its managing areas.

Table 9 - Time working in the bank

	Frequency	Percent
up to 4 years	7	31,8
5 to 9 years	2	9,1
10 to 14 years	7	31,8
15 or more years	6	27,3
Total	22	100,0

Source: SPSS output



*Figure 8 - Time working in the bank*  
*Source: SPSS output*

## 4 Data analysis

The statistical treatment of the collected data and the conceptual model's hypothesis tests were performed using IBM SPSS version 26.

We have started by performing the reliability analysis of the questions in our survey. After confirming that suitable reliability parameters were found, we have calculated the values for each construct of our model. Once these variables were calculated, we performed normality analysis tests to proceed with multiple linear regression analysis to test the conceptual model's hypothesis.

### 4.1 Reliability analysis

The frequency tables for the Likert items grouped according to each construct are shown in 7.2 Appendix B.

Before calculating the new variables, which will be the constructs in our conceptual model, we shall perform reliability analysis of each Likert item set. We will follow the generally accepted recommendation (Marôco & Garcia, 2006) considering  $\alpha=,7$  as the minimum Cronbach's Alpha value indicating an acceptable internal consistency. We will consider excluding a given question if that will significantly increase Cronbach's Alpha value (possibly needed to surpass the minimum  $\alpha=,7$ , or to reach an even better value).

The Cronbach's Alfa for the Likert items measuring the **Strategic benefits** latent variable is  $\alpha=,757$ , which shows an acceptable internal consistency. Nevertheless, we will also analyse the modified Cronbach's Alfa values to remove any single question, as shown in Table 10.

Table 10 - Cronbach's Alpha for the Strategical benefits

	Cronbach's Alpha if Item Deleted
Q1-1 The bank can concentrate better in implementing its strategies	,649
Q1-2 Allows the bank to focus on its core competencies	,656
Q1-3 Enhancing individual capabilities that distinguish our bank from our competitors	,665
Q1-4 Provides the capability of IT to support the needs of business operations	,791
Q1-5 Allows to improve the management of technology and human resources	,712
Q1-6 Reduction of the number of IT staff	<b>,811</b>

Source: SPSS output

We notice that if we remove Q1-6, then Cronbach's Alpha will increase from  $\alpha=,757$  to  $\alpha=,811$ , which is an even better reliability indicator for the Strategical benefits' items. Therefore, we have decided to delete Q1-6 from the preceding analysis. If we critically analyse this item, we notice that it qualifies IT staff reduction as a strategical benefit, which is a claim subject to ambiguous interpretations. Therefore, it seems reasonable to exclude it from this set of items.

The Cronbach's Alpha for the Likert items associated with the latent variable **Financial benefits** is  $\alpha=,826$ , which shows good internal consistency. Let us analyse the new values for Cronbach's alfa if we remove a single question, as shown in Table 11.

Table 11 - Cronbach's Alpha for the Financial benefits

	Cronbach's Alpha if Item Deleted
Q2-1 Permits to reduce IT expenditure	,820
Q2-2 To gain financial freedom and flexibility (releasing capital, flexibility in budgeting and investments)	,770
Q2-3 To ensure control over IT expenditure	,822
Q2-4 Release fixed capital from IT for the benefit of other economic activities	,774
Q2-5 Outsourcing and IT service is cheaper than sourcing it internally	,810
Q2-6 Ensure more profits	,791

Source: SPSS output

Given that there is no increase in Cronbach's Alpha when removing any of the items, we consider all of them to measure the Financial benefits.

The Cronbach's Alpha for the Likert items measuring the **Technological benefits** latent variable is  $\alpha=,885$ , which again shows good internal consistency. Looking at the new Cronbach's Alpha values, if we were to remove any single item in Table 12, we note no increase when removing any of the items. Therefore, we keep all items.

*Table 12 - Cronbach's Alpha for the Technological benefits*

	Cronbach's Alpha if Item Deleted
Q3-1 Ensures the availability of necessary or new technology	,844
Q3-2 Access to rare, effective, accurate technology skills and needs	,878
Q3-3 Reduces the risk of technology obsolescence	,847
Q3-4 Allows the standardization of IT environment (hardware, software, processes)	,880
Q3-5 Establish a well-functioning IT environment	,849

*Source: SPSS output*

The Cronbach's Alpha for the items measuring the **Service Quality benefits** latent variable is  $\alpha=,914$ . This is a very good internal consistency indicator, but just like we did before, we will look at the new values if we were to remove any single item in Table 13.

*Table 13 - Cronbach's Alpha for the Service Quality benefits*

	Cronbach's Alpha if Item Deleted
Q4-1 Performing the process at a higher quality than our bank (a safe, reliable service that corresponds to our needs, and capable of adapting to individual requirements)	,889
Q4-2 Allows the permanent availability of service (e.g., more services 7d/24h)	,947
Q4-3 Allows our bank to assure user satisfaction	,856
Q4-4 Performing the process faster and/or at a higher accuracy than our bank	,850

*Source: SPSS output*

We note that the Cronbach's Alpha would increase slightly if we were to remove Q4-2. However, the value  $\alpha=,914$  already is very good, and if we increase it too much, we may have collinearity problems between the questions (some of the questions might be essentially the same). Therefore, it seems wiser keeping all four items.

Finally, let us consider the last set of items. The Cronbach's Alpha for the items measuring the **ITO** decision latent variable is  $\alpha=,889$ . This is a good internal consistency indicator. We may still analyse in Table 14, the new Cronbach's Alpha values if we were to remove any single item.

*Table 14 - Cronbach's Alpha for ITO decision*

	Cronbach's Alpha if Item Deleted
Q5-1 ITO is indispensable for the banking sector	,895
Q5-2 I am fully satisfied with the outsourcing of IT services	,847
Q5-3 ITO is appropriate for the banking sector	,870
Q5-4 has fulfilled my expectations	,854
Q5-5 I support further outsourcing of business process	,854
Q5-6 If there is a better offer (cheaper and more technological), the process I am in charge should be outsourced	,894

*Source: SPSS output*

We notice that deleting Q5-1 would have a small increase in the value of  $\alpha$ , but the difference is so small that it is negligible, and therefore we keep all items.

## **4.2 Latent variable analysis**

Having performed the reliability analysis of our sets of items, we are ready to calculate the five quantitative latent variables in our conceptual model: Strategic benefits; Financial benefits; Technological benefits; Service Quality benefits; ITO decision. Each of these variables will be calculated as the arithmetic average of the corresponding set of items, as we have considered in the reliability analysis. The descriptive statistics for the variables are shown in Table 15.

Table 15 - Descriptive statistics of the calculated latent variables

	Minimum	Maximum	Mean	Std. Deviation
Strategic benefits	1,60	4,40	3,37	,73
Financial benefits	1,67	4,83	3,37	,81
Technological benefits	1,00	5,00	3,37	,93
Service Quality	1,50	4,50	3,09	,99
ITO decision	1,50	4,83	3,30	,82

Source: SPSS output

We can also visualize the five variables' distribution in the box plot (minimum, first, second and third quartile, and maximum) in Figure 9.

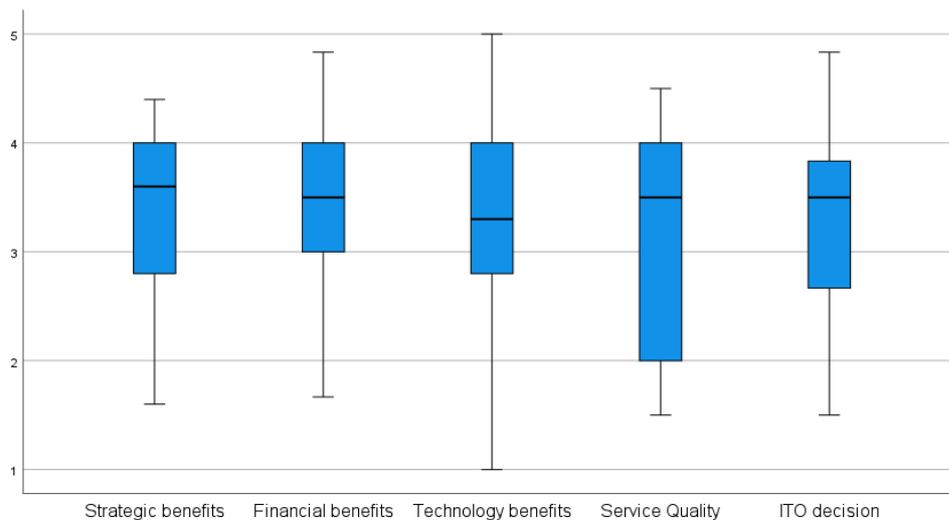


Figure 9 - Box-plot

Source: SPSS output

We will now test the normality hypothesis of each latent variable. The tests are formalized as:

- $H_0$  (null hypothesis): the variable is normally distributed
- $H_1$  (alternative hypothesis): the variable is not normally distributed

We will perform Kolmogorov-Smirnov's normality tests for each latent variable, considering a significance level of 5% (rejecting the null hypothesis if and only if Sig < ,05).

Table 16 - One-Sample Kolmogorov-Smirnov Tests' results

Null Hypothesis H <sub>0</sub>	Sig.	Decision
The distribution of Strategic benefits is normal with mean 3.37 and standard deviation ,731.	,104	Accept H <sub>0</sub>
The distribution of Financial benefits is normal with mean 3.37 and standard deviation ,807.	,702	Accept H <sub>0</sub>
The distribution of Technology benefits is normal with mean 3.37 and standard deviation ,935.	,155	Accept H <sub>0</sub>
The distribution of Service Quality is normal with mean 3.09 and standard deviation ,993.	<b>,016</b>	<b>Reject H<sub>0</sub></b>
The distribution of ITO decision is normal with mean 3.30 and standard deviation ,816.	,295	Accept H <sub>0</sub>

Source: SPSS output

As shown in Table 16, all Sig. > ,05 except for Service Quality, with sig. = ,016 < ,05, which means that we should reject the normality hypothesis for Service Quality and accept the normality hypothesis for all other variables. If we look at the histogram of Service Quality benefits in Figure 9, we notice that the values do not fit the normal curve.

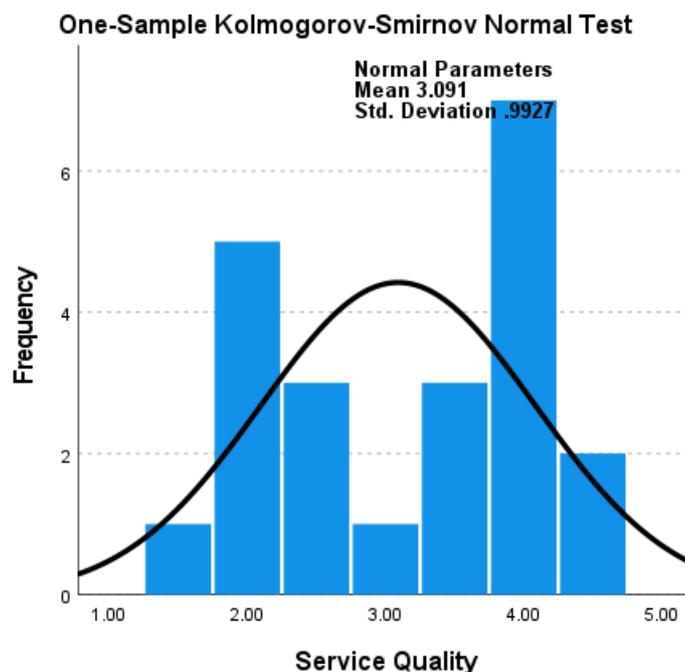


Figure 10 - Histogram of service quality, with a normal curve superposed

Source: SPSS output

### 4.3 Hypotheses' tests

As we have seen, all latent variables in our conceptual model, except Service Quality, were accepted as being normally distributed. Therefore, we will perform a multiple linear regression analysis of the dependent variable ITO decision, with the independent variables (or predictors): Strategic benefits; Financial benefits; Technological benefits. We exclude Service Quality from this multiple linear regression analysis, given that it failed the normality hypothesis test.

Table 17 - Multiple Linear Regression Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	,834	,695	,644	,487

Source: SPSS output

As we can see from Table 17, the coefficient of determination  $R^2 = ,695$ , means that approximately 70% of the variance of the dependent variable ITO decision is explained by the three independent variables that we have considered. This is a reasonably good fit for the multiple linear regression. Furthermore, this multiple linear regression model is a statistically significant good fit to the data under a significance level of 5%, given that  $F(3,18)=13,678$  and  $Sig. < ,05$  as it can be read in Table 18. This means that the three independent variables successfully predict the dependent variable.

Table 18 - ANOVA

	Sum of Squares	df	Mean Square	F	Sig.
Regression	9,717	3	3,239	13,678	,000
Residual	4,263	18	,237		
Total	13,980	21			

Source: SPSS output

Table 19 - Multiple Linear Regression's coefficients

	Unstandardized		Standardized		Sig.
	Coefficients B	Std. Error	Beta	t	
(Constant)	,525	,518		1,012	,325
Strategic benefits	-,044	,226	-,040	-,197	,846
Financial benefits	,369	,203	,365	1,815	,086
Technological benefits	,499	,169	,572	2,948	,009

Source: SPSS output

The multiple linear regression's coefficients can be read from Table 19. However, not all of them are significant (considering a significance level of 10%). The constant-coefficient is not significant, given that  $\text{Sig.} = ,325 > ,10$  , as well as the Strategic benefits' coefficient, given that  $\text{Sig.} = ,846 > ,10$  . We should, therefore, assume that these two coefficients are zero.

The statistically significant coefficients are only the ones corresponding to the Financial benefits and the Technological benefits, given that in these cases,  $\text{Sig.} = ,086 < ,10$  and  $\text{Sig.} = ,009 < ,10$  , respectively.

According to what was exposed, the multiple linear regression model has the following equation:

$$ITO = ,369 \times \text{Financial benefits} + ,499 \times \text{Technological benefits}$$

This equation means that the ITO decision is positively correlated with Financial benefits and technological benefits. The dependent variable ITO approximately increases ,369 for each unit increase in Financial benefits, and approximately increases ,499 for each unit increase in Technological benefits.

The multiple linear regression model could not prove a statistically significant correlation between Strategic benefits and the ITO decision.

Given that we did not consider Service Quality as a predictor in our multiple linear regression model, we will perform a separate analysis of its correlation with ITO. To do it, we will perform Spearman's rho non-parametric correlation test, which does not require the variables to be normally distributed. We have obtained a statistically significant ( $\text{sig.} = 0 < ,05$ ) value of  $\rho = ,732$  , which means the existence of some correlation between Service Quality and ITO.

## 5 Discussion and conclusions

### 5.1 Discussion of theoretical and empirical implications

This research aimed to study the motives of ITO in the banking sector. The most important reason why banks practice ITO consists of the benefits they could obtain (Gonzalez *et al.*, 2015). Decision-makers expect to take benefits from ITO as cost savings, focus on core competencies, technology access, and service quality. As illustrated by scholar papers reviewed (Alexandrova, 2015; Pahirathan, 2017), outsourcing is the fact of delegating the implementation of a service to an external vendor. The critical bank's activity is supported by a high information technology process flux (Hon & Millard, 2018). To insure this well running operation, bank decision-makers opt so often for ITO strategy (Tayauova, 2012). Through our hypothesis, we assumed that these strategic orientations are motivated in general by several factors, namely access to specific skills, expenditure saved, better core activity concentration, and improvement of quality services.

Our survey allows for collecting reliable data due to the professional position and experience of responder's subject. Statistical treatment of this information shows a view from two different perspectives. The statistical treatment also enables to measure the validity and quality of the result obtained.

Analysing the obtained results, we see two strong motives viz financial and technological. These results corroborate the studies of authors emphasizing technological and financial benefits through ITO (Gunasekaran *et al.*, 2015; Tayauova, 2012; Vugec *et al.*, 2017; Williamson, 2012; Yuan *et al.*, 2020). Nowadays, banking business processes are dependent on technological services (Tayauova, 2012) since developing a technological service in the house would be expensive for the bank. The dependency on technological services creates the need to outsource technological services. Behind the intention of having access to technological services is another intention of saving cost because a bank will increase expenses considerably if it develops internally technological services. In this view, saving costs becomes a consequence of outsourcing IT services. Our responders react in this perspective. There is a high link between financial and technological motives in banking ITO, and according to (Stefanov *et al.*, 2015), a bank could achieve financial and technological benefits in a complete ITO. The efficiency strategy for saving expenditure in a bank might be so far outsourcing the technological services. Then this strategy resolves two main preoccupations: Financial and

technological. In a certain way, there is a logical follow-up, and the link between financial and technological benefits translate exactly by our results.

On the other hand, strategical benefits and service quality improvement have a lower impact according to our results. This finding doesn't support previous researches and studies seen so far. Several prior studies have asserted that ITO allows banks to achieve considerable benefits in term of strategy (Hanafizadeh & Zare Ravasan, 2018; Rajaeian *et al.*, 2017; Su *et al.*, 2017; Tayauova, 2012) and quality services (Mungai & Moturi, 2015; Pascual *et al.*, 2016). Following our results, managers give less importance to these two variables. However, these two variables could be considered as key functions and are a source of competitive advantage. These types of functions should not be outsourced or delegated for any reason. Banks invest in human resources to keep in the house, such as touching upon the company's management strategy (Pahirathan, 2017). According to (Demez & Ustaoglu, 2012), there are so often miss quality services in ITO and sometimes loss of management control. (Alipour *et al.*, 2011) argues that there is a strategic risk of losing control or information. Therefore, even though ITO occurs strategical benefits like flexibility, focus on core competencies, and improvement of the service quality, those benefits are not the first ITO motives in the banking industry.

## **5.2 Main empirical findings**

At the study's conclusion, we find out that ITO practice is common in the banking sector (Gulla & Gupta, 2012). Therefore, the purpose of our study was to distinguish the motivating factors of this practice in the banking area. Then, we established an analysis that shows how our hypothesis can be justified through a survey. We constate across the results that our fixed objectives have been fully filled. Evidence has been exhibited in the methodology chapter precisely in the data analysis of questionnaires. Moreover, our study brings a significant contribution to the strategy literature particularly ITO in Banking sector. Our study has also a vocation to be a decision support for managers.

We have concluded that Financial and Technological benefits were the two main factors (out of four). Among these two, Technological benefits had a slightly stronger weight in the ITO decision than the Financial benefits. We did not find a statistically significant correlation of ITO decision with the Strategical benefits' factor. Finally, Service Quality was significantly positively correlated with ITO decision, although we had to perform a separate non-parametric hypothesis test, independently of the remaining three factors.

ITO is an important strategic decision. The achievement of objectives expected demands some pre-requires. There is a pre-decision period to observe in which bank decision-makers should analyse in-deep the necessity to outsource and the potential supplier. If this period has well respected, the probability of ITO failure is reduced even eliminated. According to (Adeleye *et al.*, 2004), this is a preventive measure.

Nonetheless, we highlight some pitfalls accidentally arising through ITO during the contract execution. To avoid the complication, we have started some solutions as a contract amendment or revision, back to house, etc. as highlighted by (Larcker *et al.*, 2015) and (Serokastolka & Dagmara, 2017). The fact that outsourcing creates a mutual benefit is why the vendor company invests a lot to keep alliance and achieve mutual benefits.

### **5.3 Limitations of the study and suggestions for further research**

There was little willingness in the targeted sample to answer the survey, resulting in a small sample size (N=22). We would have wished to collect a much bigger sample size, strengthening the statistical significance of your study.

The lack of responses could be partly explained by the health situation crisis, which led many employees to work remotely and not be readily available to answer our survey.

Our study focuses exclusively on one multinational bank. The dimension of our targeted bank maybe subject of a great interesting investigation source and reliable results. For this purpose, our study includes different independent branches in a different location. However, it could impact and reflect the current reality about ITO if we associate plural independent and competitor banks. In this case, we could have a more representative result about the subject. From this point of view, the focus on one bank represents a study limitation.

Considering the limitations already pointed out, we would suggest some improvements for future research on this topic. As far as the sample size is concerned, we would recommend increasing its size by contacting a larger group of managers. We should ensure appropriate measures to increase the response rate, such as allowing a longer response period, and reminding them to reply to the query once the response period approaches the end.

To increase the representativity of more banks in the study, one should consider including more than one bank, which would be interesting, though much more demanding as far as the survey deployment is concerned (let us note that we had privileged access to the bank for professional reasons).

In future work, the conceptual model and the associated hypothesis could be improved through additional literature research on ITO risks.

Finally, when it comes to the statistical analysis, future research could consider more advanced statistical methods than the multiple linear regression, such as performing a PLS (Partial Least Squares) analysis of the conceptual model, which would provide more reliable results.

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## 7 Appendices

### 7.1 Appendix A: Survey

#### 7.1.1 Appendix A.1: Survey contents

##### 1. Introduction

The aim of this survey is to collect information to address a research problem concerning the motivation factors for IT outsourcing in the banking sector. This is the theme of my Master dissertation in “*Universidade Autónoma de Lisboa*” currently in progress.

The participation in this questionnaire is voluntary, anonymous, and confidential. Your collaboration is very much appreciated.

You need about 5 minutes to complete the survey.

For any question please contact: +351 915309855

[gadiagamamadou@outlook.com](mailto:gadiagamamadou@outlook.com)

##### 2. Socio-Demographic questions:

###### 2.1. Gender:

Male/Female

###### 2.2. Age group:

18 to 24 years

25 to 34 years

35 to 49 years

50 to 64 years

65 years or older

###### 2.3. Highest level of education:

High school degree

Bachelor’s degree

Master’s degree

Doctorate degree

Other

###### 2.4. Job Location:

Australia

Belgium

Canada

France

Hongkong

Italia

Luxembourger

Portugal

Spain

UK

USA

2.5. Professional experience:

Junior

Senior

Top manager

2.6. Time working in the bank

0 to 4 years

5 to 9 years

10 to 14 years

15 or more years

**3. IT outsourcing benefits:**

3.1. Strategic benefits

Outsourcing I.T. services has the following strategic benefits:

1. The bank can concentrate better in implementing its strategies.
2. Allows the bank to focus on its core competencies.
3. Enhancing individual capabilities that distinguish our bank from our competitors.
4. Provide the capability of IT to support the needs of business operations.
5. Allows to improve the management of technology and human resources.
6. Reduction of the number of IT staff.

3.2. Financial benefits

Outsourcing I.T. services has the following financial benefits:

7. Permits to reduce IT expenditure.
8. To gain financial freedom and flexibility (releasing capital, flexibility in budgeting, and investments).
9. To ensure control over IT expenditure.
10. Release fixed capital from IT for the benefit of other economic activities.
11. Outsourcing an IT service is cheaper than sourcing it internally.

12. Ensure more profits.

### 3.3. Technological benefits

Outsourcing I.T. services has the following technological benefits:

13. Ensures the availability of necessary or new technology.

14. Access to rare, effective, accurate technology skills and needs.

15. Reduces the risk of technology obsolescence.

16. Allows the standardization IT environment (hardware, software, processes).

17. Establishes a well-functioning IT environment.

### 3.4. Service quality benefits

Outsourcing I.T. services has the following service quality benefits:

18. Performing the process at a higher quality than our bank (a safe, reliable service that corresponds to our needs, and capable of adapting to individual requirements).

19. Allows the permanent availability of service (e.g., more services, 7d/24h).

20. Allows our bank to assure user satisfaction.

21. Performing the process faster and/or at a higher accuracy than our bank.

## 4. IT outsourcing decision:

22. ITO is indispensable for the banking sector.

23. I am fully satisfied with the outsourcing of IT services.

24. IT Outsourcing is appropriated for the Banking sector.

25. IT Outsourcing has fulfilled my expectations.

26. I support further outsourcing of business processes.

27. If there is a better offer (cheaper and more technological, the process I am in charge should be outsourced).

## 5. Conclusion:

Your participation has helped us a lot for the achievement of this project and we appreciate it.

Thank you very much for your collaboration

## 7.1.2 Appendix A.2: Survey implementation on “Sondage” program

### Master thesis dissertation

#### I - Socio-Demographic questions:

Responder identification

##### 1 - Gender

- Male:
  - Female:
- 

##### 2 - Age group:

- 18 to 24 years
  - 25 to 34 years
  - 35 to 49 years
  - 50 to 64 years
  - 65 years or older
- 

##### 3 - Academic background:

- High school degree
  - Bachelor?s degree
  - Master?s degree
  - Doctorate?s degree
  - Other
- 

##### 4 - Job location:

- Australia
  - Belgium
  - Canada
  - France
  - Hongkong
  - Italia
  - Luxembourgger
  - Portugal
  - Spain
  - UK
  - USA
- 

##### 5 - Position:

- Junior
  - Senior
  - Top manager
  - Other
- 

##### 6 - Time working in the bank:

- 0 to 4 years
- 5 to 9 years

- 10 to 14 years
- 15 or more years

**II - IT outsourcing Benefits:**

*Outsourcing I.T. services has the following financial benefits:*

**1 - Strategic benefits:**

Outsourcing I.T. services has the following strategic benefits:

	strongly disagree	disagree	undecided	agree	strongly agree
1.1 The bank can concentrate better in implementing its strategies.	<input type="radio"/>				
1.2 Allows the bank to focus on its core competencies.	<input type="radio"/>				
1.3 Enhancing individual capabilities that distinguish our bank from our competitors.	<input type="radio"/>				
1.4 Provides the capability of IT to support the needs of business operations.	<input type="radio"/>				
1.5 Allows to improve the management of technology and human resources.	<input type="radio"/>				
1.6 Reduction of the number of IT staff.	<input type="radio"/>				

**2 - Financial benefits:**

Outsourcing I.T. services has the following financial benefits:

	strongly disagree	disagree	undecided	agree	strongly agree
2.1 Permits to reduce IT expenditure.	<input type="radio"/>				
2.2 To gain financial freedom and flexibility (releasing capital, flexibility in budgeting, and investments).	<input type="radio"/>				
2.3 To ensure control over IT expenditure.	<input type="radio"/>				
2.4 Release fixed capital from IT for the benefit of other economic activities.	<input type="radio"/>				
2.5 Outsourcing an IT service is cheaper than sourcing it internally.	<input type="radio"/>				
2.6 Ensure more profits.	<input type="radio"/>				

**3 - Technological benefits:**

Outsourcing I.T. services has the following technological benefits:

	strongly disagree	disagree	undecided	agree	strongly agree
3.1 Ensures the availability of necessary or new technology.	<input type="radio"/>				

3.2 Access to rare, effective, accurate technology skills and needs.	<input type="radio"/>				
3.3 Reduces the risk of technology obsolescence.	<input type="radio"/>				
3.4 Allows the standardization IT environment (hardware, software, processes).	<input type="radio"/>				
3.5 Establishes a well-functioning IT environment.	<input type="radio"/>				

**4 - Service quality benefits:**

Outsourcing I.T. services has the following service quality benefits:

	strongly disagree	disagree	undecided	agree	strongly agree
4.1 Performing the process at a higher quality than our bank (a safe, reliable service that corresponds to our needs, and capable of adapting to individual requirements).	<input type="radio"/>				
4.2 Allows the permanent availability of service (e.g., more services, 7d/24h).	<input type="radio"/>				
4.3 Allows our bank to assure user satisfaction.	<input type="radio"/>				
4.4 Performing the process faster and/or at a higher accuracy than our bank.	<input type="radio"/>				

**5 - IT outsourcing decision:**

	strongly disagree	disagree	undecided	agree	strongly agree
5.1 ITO is indispensable for the banking sector.	<input type="radio"/>				
5.2 I am fully satisfied with the outsourcing of IT services.	<input type="radio"/>				
5.3 IT Outsourcing is appropriated for the Banking sector.	<input type="radio"/>				
5.4 IT Outsourcing has fulfilled my expectations.	<input type="radio"/>				
5.5 I support further outsourcing of business processes.	<input type="radio"/>				
5.6 If there is a better offer (cheaper and more technological, the process I am in charge should be outsourced.	<input type="radio"/>				

## 7.2 Appendix B: Likert item variables' frequency tables

### 7.2.1 Appendix B.1: Strategic benefits

Table 20 - Strategic benefits

	strongly disagree Row N %	disagree Row N %	undecided Row N %	agree Row N %	strongly agree Row N %
Q1-1 The bank can concentrate better in implementing its strategies	4,5%	13,6%	22,7%	54,5%	4,5%
Q1-2 Allows the bank to focus on its core competencies	4,5%	27,3%	4,5%	50,0%	13,6%
Q1-3 Enhancing individual capabilities that distinguish our bank from our competitors	9,1%	13,6%	40,9%	31,8%	4,5%
Q1-4 Provides the capability of IT to support the needs of business operations	9,1%	13,6%	13,6%	59,1%	4,5%
Q1-5 Allows to improve the management of technology and human resources	18,2%	9,1%	22,7%	50,0%	0,0%
Q1-6 Reduction of the number of IT staff	4,5%	13,6%	18,2%	45,5%	18,2%

Source: SPSS output / personal research

### 7.2.2 Appendix B.2: Financial benefits

Table 21 - Financial benefits

	strongly disagree Row N %	disagree Row N %	undecided Row N %	agree Row N %	strongly agree Row N %
Q2-1 Permits to reduce IT expenditure	13,6%	0,0%	9,1%	72,7%	4,5%
Q2-2 To gain financial freedom and flexibility (releasing capital, flexibility in budgeting and investments)	13,6%	4,5%	13,6%	59,1%	9,1%
Q2-3 To ensure control over IT expenditure	4,5%	9,1%	27,3%	50,0%	9,1%
Q2-4 Release fixed capital from IT for the benefit of other economic activities	0,0%	22,7%	18,2%	40,9%	18,2%
Q2-5 Outsourcing and IT service is cheaper than sourcing it internally	13,6%	13,6%	36,4%	13,6%	22,7%
Q2-6 Ensure more profits	4,5%	22,7%	45,5%	22,7%	4,5%

Source: SPSS output / personal research

### 7.2.3 Appendix B.3: Technology benefits

Table 22 - Technology benefits

	strongly disagree Row N %	disagree Row N %	undecided Row N %	agree Row N %	strongly agree Row N %
Q3-1 Ensures the availability of necessary or new technology	4,5%	13,6%	31,8%	40,9%	9,1%
Q3-2 Access to rare, effective, accurate technology skills and needs	4,5%	18,2%	13,6%	40,9%	22,7%
Q3-3 Reduces the risk of technology obsolescence	4,5%	22,7%	22,7%	31,8%	18,2%
Q3-4 Allows the standardization of IT environment (hardware, software, processes)	4,5%	18,2%	13,6%	50,0%	13,6%
Q3-5 Establish a well-functioning IT environment	9,1%	27,3%	22,7%	31,8%	9,1%

Source: SPSS output / personal research

### 7.2.4 Appendix B.4: Service quality

Table 23- Service quality

	strongly disagree Row N %	disagree Row N %	undecided Row N %	agree Row N %	strongly agree Row N %
Q4-1 Performing the process at a higher quality than our bank (a safe, reliable service that corresponds to our needs, and capable of adapting to individual requirements)	13,6%	31,8%	9,1%	45,5%	0,0%
Q4-2 Allows the permanent availability of service (e.g., more services 7d/24h)	4,5%	13,6%	22,7%	45,5%	13,6%
Q4-3 Allows our bank to assure user satisfaction	4,5%	36,4%	13,6%	45,5%	0,0%
Q4-4 Performing the process faster and/or at a higher accuracy than our bank	13,6%	22,7%	18,2%	40,9%	4,5%

Source: SPSS output / personal research

## 7.2.5 Appendix B.5: ITO decision

Table 24- ITO decision

	strongly disagree Row N %	disagree Row N %	undecided Row N %	agree Row N %	strongly agree Row N %
Q5-1 ITO is indispensable for the banking sector	0,0%	18,2%	22,7%	45,5%	13,6%
Q5-2 I am fully satisfied with the outsourcing of IT services	4,5%	31,8%	22,7%	31,8%	9,1%
Q5-3 ITO is appropriate for the banking sector	4,5%	4,5%	36,4%	45,5%	9,1%
Q5-4 I have fulfilled my expectations	0,0%	22,7%	40,9%	31,8%	4,5%
Q5-5 I support further outsourcing of business process	9,1%	18,2%	22,7%	40,9%	9,1%
Q5-6 If there is a better offer (cheaper and more technological), the process I am in charge should be outsourced	9,1%	13,6%	22,7%	50,0%	4,5%

Source: SPSS output / personal research

## 7.3 Appendix C: Survey answers

### Enquête anonyme

Titre : Master thesis dissertation  
Espace : Survey00001  
Statut : Cloturé  
Type : Enquête anonyme

Auteur : Mamadou GADIAGA  
Date de création : 17/07/2020  
Début du vote : 28/07/2020  
Fin du vote : 24/08/2020

### Statistiques globales

Sessions démarrées : 31  
Sessions terminées : 22

### Statistiques détaillées

#### I - Socio-Demographic questions:

##### Q1 - Gender

Type : Question à choix unique

Question obligatoire : oui

Nombre de personnes ayant visualisé la question : 22

Nombre de personnes ayant répondu à la question : 22

- Male:	:		13/22 - 59 %
- Female:	:		9/22 - 41 %

##### Q2 - Age group:

Type : Question à choix unique

Question obligatoire : oui

Nombre de personnes ayant visualisé la question : 22

Nombre de personnes ayant répondu à la question : 22

- 18 to 24 years	:		1/22 - 5 %
- 25 to 34 years	:		5/22 - 23 %
- 35 to 49 years	:		8/22 - 36 %
- 50 to 64 years	:		8/22 - 36 %
- 65 years or older	:		0/22 - 0 %

##### Q3 - Academic background:

Type : Question à choix unique

Question obligatoire : oui

Nombre de personnes ayant visualisé la question : 22

Nombre de personnes ayant répondu à la question : 22

- High school degree	:		5/22 - 23 %
- Bachelor?s degree	:		2/22 - 9 %
- Master?s degree	:		12/22 - 55 %
- Doctorate?s degree	:		2/22 - 9 %
- Other	:		1/22 - 5 %

##### Q4 - Job location:

Type : Question à choix unique

Question obligatoire : oui

Nombre de personnes ayant visualisé la question : 22

Nombre de personnes ayant répondu à la question : 22

- Australia	:	0/22 - 0 %
- Belgium	:	0/22 - 0 %
- Canada	:	1/22 - 5 %
- France	:	6/22 - 27 %
- Hongkong	:	0/22 - 0 %
- Italia	:	3/22 - 14 %
- Luxembourger	:	3/22 - 14 %
- Portugal	:	6/22 - 27 %
- Spain	:	2/22 - 9 %
- UK	:	0/22 - 0 %
- USA	:	1/22 - 5 %

#### Q5 - Position:

Type : Question à choix unique

Question obligatoire : oui

Nombre de personnes ayant visualisé la question : 22

Nombre de personnes ayant répondu à la question : 22

- Junior	:	3/22 - 14 %
- Senior	:	11/22 - 50 %
- Top manager	:	6/22 - 27 %
- Other	:	2/22 - 9 %

#### Q6 - Time working in the bank:

Type : Question à choix unique

Question obligatoire : oui

Nombre de personnes ayant visualisé la question : 22

Nombre de personnes ayant répondu à la question : 22

- 0 to 4 years	:	7/22 - 32 %
- 5 to 9 years	:	2/22 - 9 %
- 10 to 14 years	:	7/22 - 32 %
- 15 or more years	:	6/22 - 27 %

## II - IT outsourcing Benefits:

### Q1-1 - 1.1 The bank can concentrate better in implementing its strategies.

Type : Question à choix unique

Question obligatoire : oui

Nombre de personnes ayant visualisé la question : 22

Nombre de personnes ayant répondu à la question : 22

- strongly disagree	:	1/22 - 5 %
- disagree	:	3/22 - 14 %
- undecided	:	5/22 - 23 %

- agree :  12/22 - 55 %  
 - strongly agree :  1/22 - 5 %

**Q1-2 - 1.2 Allows the bank to focus on its core competencies.**

Type : Question à choix unique

Question obligatoire : oui

Nombre de personnes ayant visualisé la question : 22

Nombre de personnes ayant répondu à la question : 22

- strongly disagree :  1/22 - 5 %  
 - disagree :  6/22 - 27 %  
 - undecided :  1/22 - 5 %  
 - agree :  11/22 - 50 %  
 - strongly agree :  3/22 - 14 %

**Q1-3 - 1.3 Enhancing individual capabilities that distinguish our bank from our competitors.**

Type : Question à choix unique

Question obligatoire : oui

Nombre de personnes ayant visualisé la question : 22

Nombre de personnes ayant répondu à la question : 22

- strongly disagree :  2/22 - 9 %  
 - disagree :  3/22 - 14 %  
 - undecided :  9/22 - 41 %  
 - agree :  7/22 - 32 %  
 - strongly agree :  1/22 - 5 %

**Q1-4 - 1.4 Provides the capability of IT to support the needs of business operations.**

Type : Question à choix unique

Question obligatoire : oui

Nombre de personnes ayant visualisé la question : 22

Nombre de personnes ayant répondu à la question : 22

- strongly disagree :  2/22 - 9 %  
 - disagree :  3/22 - 14 %  
 - undecided :  3/22 - 14 %  
 - agree :  13/22 - 59 %  
 - strongly agree :  1/22 - 5 %

**Q1-5 - 1.5 Allows to improve the management of technology and human resources.**

Type : Question à choix unique

Question obligatoire : oui

Nombre de personnes ayant visualisé la question : 22

Nombre de personnes ayant répondu à la question : 22

- strongly disagree :  4/22 - 18 %  
 - disagree :  2/22 - 9 %  
 - undecided :  5/22 - 23 %  
 - agree :  11/22 - 50 %

- strongly agree : 0/22 - 0 %

**Q1-6 - 1.6 Reduction of the number of IT staff.**

Type : Question à choix unique

Question obligatoire : oui

Nombre de personnes ayant visualisé la question : 22

Nombre de personnes ayant répondu à la question : 22

- strongly disagree : 1/22 - 5 %  
- disagree : 3/22 - 14 %  
- undecided : 4/22 - 18 %  
- agree : 10/22 - 45 %  
- strongly agree : 4/22 - 18 %

**Q2-1 - 2.1 Permits to reduce IT expenditure.**

Type : Question à choix unique

Question obligatoire : oui

Nombre de personnes ayant visualisé la question : 22

Nombre de personnes ayant répondu à la question : 22

- strongly disagree : 3/22 - 14 %  
- disagree : 0/22 - 0 %  
- undecided : 2/22 - 9 %  
- agree : 16/22 - 73 %  
- strongly agree : 1/22 - 5 %

**Q2-2 - 2.2 To gain financial freedom and flexibility (releasing capital, flexibility in budgeting, and investments).**

Type : Question à choix unique

Question obligatoire : oui

Nombre de personnes ayant visualisé la question : 22

Nombre de personnes ayant répondu à la question : 22

- strongly disagree : 3/22 - 14 %  
- disagree : 1/22 - 5 %  
- undecided : 3/22 - 14 %  
- agree : 13/22 - 59 %  
- strongly agree : 2/22 - 9 %

**Q2-3 - 2.3 To ensure control over IT expenditure.**

Type : Question à choix unique

Question obligatoire : oui

Nombre de personnes ayant visualisé la question : 22

Nombre de personnes ayant répondu à la question : 22

- strongly disagree : 1/22 - 5 %  
- disagree : 2/22 - 9 %  
- undecided : 6/22 - 27 %  
- agree : 11/22 - 50 %

- strongly agree :  2/22 - 9 %

**Q2-4 - 2.4 Release fixed capital from IT for the benefit of other economic activities.**

Type : Question à choix unique

Question obligatoire : oui

Nombre de personnes ayant visualisé la question : 22

Nombre de personnes ayant répondu à la question : 22

- strongly disagree :  0/22 - 0 %  
- disagree :  5/22 - 23 %  
- undecided :  4/22 - 18 %  
- agree :  9/22 - 41 %  
- strongly agree :  4/22 - 18 %

**Q2-5 - 2.5 Outsourcing an IT service is cheaper than sourcing it internally.**

Type : Question à choix unique

Question obligatoire : oui

Nombre de personnes ayant visualisé la question : 22

Nombre de personnes ayant répondu à la question : 22

- strongly disagree :  3/22 - 14 %  
- disagree :  3/22 - 14 %  
- undecided :  8/22 - 36 %  
- agree :  3/22 - 14 %  
- strongly agree :  5/22 - 23 %

**Q2-6 - 2.6 Ensure more profits.**

Type : Question à choix unique

Question obligatoire : oui

Nombre de personnes ayant visualisé la question : 22

Nombre de personnes ayant répondu à la question : 22

- strongly disagree :  1/22 - 5 %  
- disagree :  5/22 - 23 %  
- undecided :  10/22 - 45 %  
- agree :  5/22 - 23 %  
- strongly agree :  1/22 - 5 %

**Q3-1 - 3.1 Ensures the availability of necessary or new technology.**

Type : Question à choix unique

Question obligatoire : oui

Nombre de personnes ayant visualisé la question : 22

Nombre de personnes ayant répondu à la question : 22

- strongly disagree :  1/22 - 5 %  
- disagree :  3/22 - 14 %  
- undecided :  7/22 - 32 %  
- agree :  9/22 - 41 %  
- strongly agree :  2/22 - 9 %

**Q3-2 - 3.2 Access to rare, effective, accurate technology skills and needs.**

Type : Question à choix unique

Question obligatoire : oui

Nombre de personnes ayant visualisé la question : 22

Nombre de personnes ayant répondu à la question : 22

- strongly disagree	: 1/22 - 5 %
- disagree	: 4/22 - 18 %
- undecided	: 3/22 - 14 %
- agree	: 9/22 - 41 %
- strongly agree	: 5/22 - 23 %

**Q3-3 - 3.3 Reduces the risk of technology obsolescence.**

Type : Question à choix unique

Question obligatoire : oui

Nombre de personnes ayant visualisé la question : 22

Nombre de personnes ayant répondu à la question : 22

- strongly disagree	: 1/22 - 5 %
- disagree	: 5/22 - 23 %
- undecided	: 5/22 - 23 %
- agree	: 7/22 - 32 %
- strongly agree	: 4/22 - 18 %

**Q3-4 - 3.4 Allows the standardization IT environment (hardware, software, processes).**

Type : Question à choix unique

Question obligatoire : oui

Nombre de personnes ayant visualisé la question : 22

Nombre de personnes ayant répondu à la question : 22

- strongly disagree	: 1/22 - 5 %
- disagree	: 4/22 - 18 %
- undecided	: 3/22 - 14 %
- agree	: 11/22 - 50 %
- strongly agree	: 3/22 - 14 %

**Q3-5 - 3.5 Establishes a well-functioning IT environment.**

Type : Question à choix unique

Question obligatoire : oui

Nombre de personnes ayant visualisé la question : 22

Nombre de personnes ayant répondu à la question : 22

- strongly disagree	: 2/22 - 9 %
- disagree	: 6/22 - 27 %
- undecided	: 5/22 - 23 %
- agree	: 7/22 - 32 %
- strongly agree	: 2/22 - 9 %

**Q4-1 - 4.1 Performing the process at a higher quality than our bank (a safe, reliable service that corresponds to our needs, and capable of adapting to individual requirements).**

Type : Question à choix unique

Question obligatoire : oui

Nombre de personnes ayant visualisé la question : 22

Nombre de personnes ayant répondu à la question : 22

- strongly disagree	:	3/22 - 14 %
- disagree	:	7/22 - 32 %
- undecided	:	2/22 - 9 %
- agree	:	10/22 - 45 %
- strongly agree	:	0/22 - 0 %

**Q4-2 - 4.2 Allows the permanent availability of service (e.g., more services, 7d/24h).**

Type : Question à choix unique

Question obligatoire : oui

Nombre de personnes ayant visualisé la question : 22

Nombre de personnes ayant répondu à la question : 22

- strongly disagree	:	1/22 - 5 %
- disagree	:	3/22 - 14 %
- undecided	:	5/22 - 23 %
- agree	:	10/22 - 45 %
- strongly agree	:	3/22 - 14 %

**Q4-3 - 4.3 Allows our bank to assure user satisfaction.**

Type : Question à choix unique

Question obligatoire : oui

Nombre de personnes ayant visualisé la question : 22

Nombre de personnes ayant répondu à la question : 22

- strongly disagree	:	1/22 - 5 %
- disagree	:	8/22 - 36 %
- undecided	:	3/22 - 14 %
- agree	:	10/22 - 45 %
- strongly agree	:	0/22 - 0 %

**Q4-4 - 4.4 Performing the process faster and/or at a higher accuracy than our bank.**

Type : Question à choix unique

Question obligatoire : oui

Nombre de personnes ayant visualisé la question : 22

Nombre de personnes ayant répondu à la question : 22

- strongly disagree	:	3/22 - 14 %
- disagree	:	5/22 - 23 %
- undecided	:	4/22 - 18 %
- agree	:	9/22 - 41 %
- strongly agree	:	1/22 - 5 %

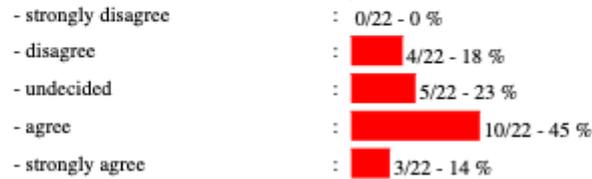
**Q5-1 - 5.1 ITO is indispensable for the banking sector.**

Type : Question à choix unique

Question obligatoire : oui

Nombre de personnes ayant visualisé la question : 22

Nombre de personnes ayant répondu à la question : 22



**Q5-2 - 5.2 I am fully satisfied with the outsourcing of IT services.**

Type : Question à choix unique

Question obligatoire : oui

Nombre de personnes ayant visualisé la question : 22

Nombre de personnes ayant répondu à la question : 22



**Q5-3 - 5.3 IT Outsourcing is appropriated for the Banking sector.**

Type : Question à choix unique

Question obligatoire : oui

Nombre de personnes ayant visualisé la question : 22

Nombre de personnes ayant répondu à la question : 22



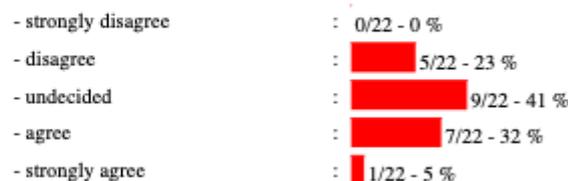
**Q5-4 - 5.4 IT Outsourcing has fulfilled my expectations.**

Type : Question à choix unique

Question obligatoire : oui

Nombre de personnes ayant visualisé la question : 22

Nombre de personnes ayant répondu à la question : 22



**Q5-5 - 5.5 I support further outsourcing of business processes.**

Type : Question à choix unique

Question obligatoire : oui

Nombre de personnes ayant visualisé la question : 22

Nombre de personnes ayant répondu à la question : 22

- strongly disagree	:	 2/22 - 9 %
- disagree	:	 4/22 - 18 %
- undecided	:	 5/22 - 23 %
- agree	:	 9/22 - 41 %
- strongly agree	:	 2/22 - 9 %

**Q5-6 - 5.6 If there is a better offer (cheaper and more technological, the process I am in charge should be outsourced.**

Type : Question à choix unique

Question obligatoire : oui

Nombre de personnes ayant visualisé la question : 22

Nombre de personnes ayant répondu à la question : 22

- strongly disagree	:	 2/22 - 9 %
- disagree	:	 3/22 - 14 %
- undecided	:	 5/22 - 23 %
- agree	:	 11/22 - 50 %
- strongly agree	:	 1/22 - 5 %

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Source: Program "Sondage" output