

Offshoring Managed Services: A Case Study with a Cost Accounting Perspective

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Research Objectives

Increasing cost-consciousness in the telecommunications industry drives network vendors to seek more cost-efficient solutions for delivery. The purpose of the study is to describe and evaluate how internal offshore activities are managed in the managed services market of the telecommunications industry and how cost accounting methods support this management. The theoretical part of the research aims to present offshoring as a global strategy and solution to improving business. In the practical part of the study offshore activities and their management, as well as the challenges and benefits that result from it, are examined through business cases of one company and interpretations are made based on the empirical evidence provided by those business cases.

Empirical study

The empirical study was conducted by using both primary and secondary sources. Primary sources were business case interviews with project managers, while the study was supported with company internal documentation related to business cases or offshoring activities in general.

Findings

Offshoring continues to be a growing trend. With the help of technology a lot of services can be transferred to global service centers where better utilization of shared resources and a lower cost per head help to reduce the costs of delivery. There are undeniable benefits from offshoring in terms of cost savings and faster service delivery as long as the transfer and maintenance of global operations are managed carefully from beginning to end. The study shows that challenges in offshoring managed services arise more commonly with communication and cultural issues rather than with technical feasibility or implementation and that cost accounting methods related to offshore activities leave room for improvement.

Key Words

Offshoring, Services, Managed Services, Telecommunications, Network equipment provider, Cost accounting

JOHDETTUJEN PALVELUJEN SIIRTÄMINEN ULKOMAILLE: Case tutkimus kustannuslaskentänäkökulmalla

Tutkimuksen tavoitteet

Telekommunikaatioalan yritysten enenevä kustannustietoisuus ajaa verkkopalveluiden tarjoajia etsimään kustannustehokkaampia ratkaisuja palvelujen tuottamiseen. Tutkimuksen tavoitteena on kuvata ja arvioida kuinka ulkomaille siirrettyjä toimintoja johdetaan ja kuinka kustannuslaskentamenetelmät tukevat tätä johtamista. Tutkimuksen teoreettinen osuus esittelee toimintojen siirtämistä ulkomaille globaalina strategiana ja ratkaisuna yritystoiminnan parantamiseen. Empiirisessä osassa tutkitaan ulkomaille siirrettyjä toimintoja ja tämän prosessin johtamista, sekä siihen liittyviä haasteita ja hyötyjä yhden yrityksen ja edelleen yrityksen yksittäisten yritysprojektien kautta.

Empiirinen tutkimus

Tutkimuksessa käytettiin sekä ensisijaisia että toissijaisia lähteitä. Haastattelut projektijohtajien kanssa toimivat ensisijaisina lähteinä, kun taas toissijaisia lähteitä olivat yrityksen sisäiset materiaalit, joko projekteihin tai yleisesti toimintojen ulkomaille siirtämiseen liittyen.

Tulokset

Toimintojen siirtäminen ulkomaille on yhä kasvava trendi. Teknologia edesauttaa palveluiden siirtämistä globaaleihin palvelukeskuksiin, jossa jaettujen resurssien korkeampi käyttöaste sekä alhaisemmat henkilökustannukset alentavat palvelujen tuottamisen kustannuksia. Palvelujen siirtämisestä ulkomaille on havaittavissa kiistattomia etuja sekä kustannussäästöjen että palvelujen toimitusnopeuden muodossa niin kauan kuin palvelujen siirtäminen ulkomaille ja niiden tuottaminen jatkossa globaalisti on johdettu hyvin alusta loppuun saakka. Tutkimuksessa havaitaan, että yleisimmät haasteet palvelujen siirtämisestä ulkomaille syntyvät kommunikaatiovaikeuksista ja kulttuuritörmäyksistä eivätkä niinkään teknisestä toteuttamisesta. Lisäksi havaitaan, että nykyiset kustannuslaskentamenetelmät ulkomaille siirrettyihin toimintoihin liittyen jättävät parantamisen varaa.

Avainsanat

Toimintojen siirtäminen ulkomaille, palvelut, johdetut palvelut, telekommunikaatioala, verkkolaitetoimittaja, kustannussäästöt

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Katariina Karstila

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Abstract

Tiivistelmä (Abstract in Finnish)

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ABBREVIATIONS

B2B	Business-to-business
BOT	Build-operate-transfer
BPO	Business process outsourcing
CAPEX	Capital expenditure
CC	Cost centre
CT	Customer team
ERP	Enterprise resource planning –information system
GIC	Global invoicing code
GNOC	Global network operation centre
GNSC	Global network solution centre
ICT	Information and communication technology
IOS	International offshoring of services
IT	Information technology
KPI	Key performance indicators
MNC	Multinational company
MS	Managed services (company business line)
MSP	Managed service provider
NO	Network operations (company business line)
NOC	Network operation centre
NPO	Network planning & optimization (company business line)
OPEX	Operational expenditure
OSS	Operation systems support
RBV	Resource-based view
RNOC	Regional network operation centre
R&D	Research and development
SBU	Service business unit
SDC	Service delivery centre
SLA	Service level agreement
SPC	Standard production cost
TCE	Transaction cost economics

1. INTRODUCTION

1.1. Motivation for the Study

The trend of offshoring, initially developed in the manufacturing sector decades ago, has permeated the service sector with force (Zeynep & Masini, 2008). According to various sources (Barrar & Gervais, 2006; 303, Bhidé, 2008, 153), more than half of the American Fortune 500 firms and a large number of Western European and Japanese firms offshore services. European and US firms are confronted with increasing competition from overseas firms and as a result increasingly offshore their operations to countries that offer significant labor cost advantages (Farrell, 2004). A key enabler of offshoring services has been the developments in information and communications technology (ICT) within the last decade: Internet, broadband, and digitalization, which have greatly reduced the challenges of distance and geographical location in doing business (Lewin & Peeters, 2006a). Driven by these cost pressures and IT-developments offshoring service activities has become an attractive option for multinational companies (MNC) to lower production costs and improve operational efficiency. Aiming for these extraordinary advantages service suppliers and buyers are constantly looking for ways to leverage cost differentials while maintaining or even upgrading quality and the continuity of supply and demand (Wethey, 2009).

Putting the study into context, telecommunications as an industry is a prime candidate for offshoring efforts. According to Abramovsky & Griffith (2006), the more ICT-intensive a firm is the more likely it will purchase and produce services offshore than less ICT-intensive firms. This is because ICT lowers the relative cost of offshoring and as firms are cost-minimizing demand for offshored services increases as the ICT-intensity of a firm increases. Companies in the telecommunications business aim to provide worldwide connectivity to customers and would similarly gain from being able to supply network services remotely from any location in the world. As a logical consequence, IT and ICT services have been the first to encounter the world of offshore service delivery. Offshoring shows a lot of potential for communications services companies, which are early adopters of the growing international business strategy.

In the telecommunications industry, certain network operating services typically outsourced by operators is referred to as “managed services”. Managed services is considered to include the transfer of processes such as network operations and management and hosting services by third parties. Managed services is a relatively new, yet one of the fastest growing, segments of the global telecommunications market. Its emergence resulted from operators’ need to transform their business in response to radical shifts in consumer demand and technology. These managed services tasks are taken on by network vendors, such as the case company, to allow operators to re-evaluate their core business in an increasingly competitive market.

As the telecommunications and IT industries converge, the potential market for outsourced services expands, offering industry players additional opportunities and challenges. In the meantime, these new opportunities in managed services create a demand for new approaches to service delivery. Network vendors, just like operators, have to develop new ways to stay on top of their game and maintain market share. This has driven network vendors to create global services to provide partial or complete capacity outsourcing through one or more network operating centers.

The relocation of labor-intensive services to countries with lower labor costs is consistent with the theory of advantageous trade. The concept of absolute advantage as part of international trade theory states that if a foreign country can supply us with a commodity cheaper than we can provide it ourselves, then it is better to trade for their relatively cheaper goods with our relatively cheaper goods instead of producing everything ourselves (Mankiw, 55, 2007). In this way, both countries can gain from trade. Let us assume that in this case study India has an absolute advantage of supplying many of the services needed by the company. Then, the theory of comparative advantage, which is more complex and counter-intuitive than the theory of absolute advantage, suggests that instead of absolute monetary costs opportunity costs of producing goods across countries should be considered. In that case it may result that India and other countries of the case company’s service delivery can complement each other through specialization and increase world output in total.

Although production offshoring has been around for a few decades (Sturgeon & Levy, 2005), since free trade agreements became globally more common, services offshoring has only been

developing after the late 1990s and shows a lot of potential for telecommunications and IT companies that are forerunners of the growing international business strategy. The range of services offshored has grown to include even those that were previously considered impossible to detach from the proximity of the customer. This suggests that the activity of offshoring services is likely to continue and even accelerate in the years to come as companies experience economic incentives to relocate activities to cheaper countries (Garner, 2004). However, the value of the offshoring strategy is debatable. As in outsourcing, the criticism for offshoring often rests upon the fact that letting go of critical business activities, even though they are not considered core business functions, may inevitably harm the business in the long run. (Barthélemy, 2003)

Previously, the topic of service offshoring has been approached from a macro-economic perspective (e.g. Sturgeon & Levy, 2005; Weidenbaum, 2005). Currently, there is little academic research in the field of services offshoring on an operational level, even less on the offshoring of telecommunications-specific services and an insignificant amount of publications on the cost accounting of services that are offshored. The study aims to further investigate and suggest improvements to the existing business practices and processes of offshoring managed services in the telecommunications industry. The motivation for the study is business-oriented and the focus of the topic is shaped by the case company's needs to gather a more objective understanding of how big a role offshoring plays in service-oriented cases and how the cost accounting aspects of these cases could be further developed. The topic as such is contemporary in the global business world where offshoring is an eminent strategic practice and which shows undeniable growth in multiple industries. Furthermore, the study makes an academic contribution as it aims to offer a new perspective and input to the theory of offshoring services. This topic provides an opportunity to examine existing theory and concepts, apply market knowhow and assess existing approaches to managing offshoring within the case company.

1.2. Research Objectives and Scope

Offshoring has become a weapon for battling the challenges of increasing cost-consciousness of firms and changing conditions of the managed services market. The purpose of the study is to

describe and evaluate how offshore activities are managed in the particular market of telecommunications managed services and how cost accounting methods support this management. In practice, the study examines offshore activities in one company through business cases and interpretations are made based on the empirical evidence provided by those business cases. The research draws on the strategic aspects of offshoring and also touches upon costing and pricing aspects of managed services, for instance the costing and pricing methods within managed services and how they might be simplified and standardized in order to reach higher synergy savings and profitability. This study contributes to the existing knowledge of managed services and services offshoring with a focus on the strategic practice of offshoring services and the cost accounting issues within managed services.

The scope of the problem is as follows. The study concerns only captive offshoring; it does not discuss outsourcing activities within the network vendor business. However, outsourcing is discussed naturally due to the fact that operators outsource managed services to network vendors, such as the case company, which makes managed services the core setting of this study. The scope of this research is the range of managed services which are provided to and by the telecommunications industry excluding wider media and content markets and IT services from detailed analysis. The study only takes into account factors relevant to services offshoring in the telecom service providers' market, more accurately in the network operations part of managed services. This is also known as network-led solutions and companies that focus on these types of services will be introduced in the industry analysis chapter, Chapter 3.2.

Two other types of solutions provided in the managed services market are service- and consultancy-led solutions, which are excluded from this study. Service-led solutions, such as hosting, are also supplied by network vendors, but are a much smaller source of revenue than network-led solutions. To give you an idea of the companies competing in these markets the biggest service providers are Buongiorno, Zed and Brightpoint, while examples of consultancy-solutions providers include among others Accenture, IBM, Hewlett-Packard and Infosys. The scope excludes customer (in other words operator) interface, meaning the offshore business cases and the costing issues related to them are studied fully from an in-house and not a third party perspective.

1.3. Methodology and Restrictions

The research is conducted during employment at the case company. The empirical evidence is collected in forms of interviews, questionnaires and other documents from the archives of the company. The research problem is dissected into a theoretical and an empirical part on offshoring and managed services, where the theoretical part is based on previous literature and the empirical analysis on both general interviews about offshoring and managed services and interviews about individual managed services business cases. The restrictions of the research include the narrow scope of observations available through the study of one company. Consequently it is quite contestable to consider the results as universal. However, from the author's point of view it is not the purpose of the study to produce general findings as much as to present the specific findings and circumstances of this case. Furthermore, the benefits of a single-company case study include a more in-depth analysis of individual cases within managed services.

1.4. Central Terminology

Offshoring is often defined as the relocation of business functions overseas, either within company boundaries or outside. In this paper the term offshoring only refers to captive, in other words in-house, offshoring, whereas the term *offshore outsourcing* will be used to describe functions relocated both abroad and outside the company. In contrast, *outsourcing*, which is not the focus of this paper, refers to functions sourced outside the company regardless of their geographical location.

Managed services (MS) is business jargon that is commonly used in IT and ICT industries to describe the specific business-to-business (B2B) service portfolio that a company offers its customers where it leads or manages a customer's services on its behalf. In the context of the telecommunications industry, and this study, managed services are primarily the network operations and management –related services that a network vendor, like the case company, provides for an operator's benefit. Only the network-led solutions aspects of managed services will be discussed in this paper.

A *Global Network Solution Centre (GNSC)* is a marketing concept in the case company that is also known in the industry as a shared delivery center or a global network operation centre (GNOC). The GNSC concept combines a range of network-solutions into one location, where operations and processes are streamlined to drive economies of scale and deliver standardized service solutions remotely as part of the whole customer contract.

1.5. Structure of the Study

The study is organized as follows. The second chapter explores the theory of offshoring in depth in order to underline its significance as a research domain and hence sets the theoretical background of the paper. Chapter three briefly presents the case company and the industry characteristics followed by a description of the Managed Services paradigm in the case company and its cost accounting features. The fourth chapter explains the research methodology used to gather the empirical evidence on offshoring in the case company and the case studies are discussed and analyzed in Chapter five. Chapter six concludes the study.

2. OFFSHORING

This chapter identifies relevant key academic studies related to services offshoring: both theory and empirical results (prior evidence) are included. The chapter aims to state what we know and don't know about offshoring based on a review of the literature.

2.1. Defining Offshoring

Offshoring, outsourcing and offshore outsourcing

Offshoring, outsourcing and *offshore outsourcing* are terms that are often confused and used interchangeably even in academic literature, albeit they represent different concepts (Hätönen, 2009; Brainard & Litan, 2005). The shoring and sourcing decisions tend to overlap in the increasingly global economy, but should be understood to be different. Offshoring refers to the relocation of business processes or operations abroad regardless of whether they are “produced” within company boundaries or not (Bunyaratavej et al., 2008). The business decision is a shoring decision; whether to produce offshore or onshore and if offshore, where.

Offshoring occurs at multiple levels of foreign involvement and company ownership. The ownership of the offshore operation can either be transferred completely to an outside vendor or kept in-house or it falls somewhere in-between. In this way, the control shifts between internal hierarchical and contract-based governance. (Hätönen, 2009). In this paper I will refer to offshoring only in the in-house, also known as captive, sense of offshoring where firms set up their own centers in foreign countries and maintain full control and ownership.

In contrast, outsourcing is defined as contracting a process out to another company either locally or overseas. It presents a make-or-buy decision whereas offshoring presents a location decision (Abramovsky & Griffith, 2006). A third dimension of this terminology is presented by the combination of offshoring and outsourcing, hence the term offshore outsourcing, otherwise known as international outsourcing, which requires two conditions to be met: activities are moved both outside company and domestic country boundaries. The distinction between outsourcing and offshoring will become less clear over time due to the increasing trend in both.

Whether a service is outsourced or offshored in-house, either way it is a response to the ever-increasing cost-consciousness and changing market conditions. The varied options between offshoring and outsourcing are illustrated in Figure 2-1 below. This paper focuses on the bottom left square of the figure, where operations are kept in-house, but transferred offshore.

		Outsourcing	
		No	Yes
Offshoring	No	Operations kept in-house and onshore	Operations transferred to an external vendor onshore
	Yes	Operations kept in-house but transferred offshore	Operations transferred to an external vendor offshore

Figure 2-1: Combinations of Offshoring and Outsourcing

Source: Author, modified from Abramovsky & Griffith (2006), De Koster & Delfmann (2008) and the BCG Inc. (2005)

Additionally, an array of terms related to offshoring include *nearshoring*, which is a form of offshoring where activities are relocated to a lower-cost economy in close geographical proximity (Ellram et al., 2008); *farshoring*, where a process is transferred further afield; *inshoring*, which means picking services within a country; and *bestshoring*, which implies choosing the country that best qualifies your needs according to specific criteria. Other related terms used in various research include *business process outsourcing (BPO)*, which refers to whole business functions, such as customer service, being outsourced (BCG Analysis, 2005).

Manufacturing Offshoring versus Services Offshoring

For the benefit of this study the definition of offshoring is useful to be broken down further, distinguishing between offshoring products and offshoring services. Production offshoring, also known as physical restructuring, is the relocation of physical manufacturing of physical goods. Offshoring the production of manufactured goods has been a common business practice for

decades (Lewin & Peeters, 2006a) facilitated by international free trade agreements since the late 1970s. In contrast, services offshoring is only a 21st century phenomenon, which caught wind due to technological advances. Although extensive and exhaustive research has been done on production offshoring (Kedia & Lahiri, 2007; Bunyaratavej et al., 2007), researchers argue that the current state of research for services offshoring and offshore outsourcing still has a long way to go before covering the conceptual and practical underpinnings of the subject adequately enough (Vivek, 2008; Wethey, 2009). The research related to manufacturing location decisions does not necessarily apply to services due to the different nature of manufacturing and services (Bunyaratavej et al., 2007). Services have certain archetypal attributes including intangibility, inseparability, heterogeneity, and perishability that differentiate them from goods (Kedia & Lahiri, 2007) and need to be acknowledged separately by companies in offshore decision-making and by academicians in services offshoring research.

Offshoring services and offshore outsourcing services have gained significant momentum in recent times. According to Kedia & Lahiri (2007) the increasing regularity with which firms have been migrating service functions to providers in offshore destinations has been a single business issue in the last few years that has constantly merited the attention of practitioners, academicians, consultants, policy makers, politicians and common public. Kedia & Lahiri (2007) also claim that the growing trend is now largely recognized by the previous audiences as unstoppable and should therefore be considered a standard business practice that has the potential to result in manifold gains at firm level. The activity of offshoring has emerged as a key strategy especially in ICT and IT-oriented businesses. Since the development of the Internet and telecommunications industry in 1990s the availability of reliable and affordable communications infrastructure has spread world-wide. The following section will unfold the reasons behind offshoring having gained its current momentum.

2.2. Previous Literature on Offshoring

The literature on offshoring has evolved over the years from the traditional view of offshoring manufacturing operations for the sake of low-cost production to a more contemporary view of offshoring knowledge and service work with more strategic objectives. The majority of literature

that is relevant for this study focuses on the topic of offshoring service work (Bunyaratavej et al. (2007); Kedia & Lahiri (2008); Lewin & Peeters (2006); Stringfellow et al. (2008); and Youngdahl & Ramaswamy (2008)). The literature on offshoring contains a number of different perspectives: Abramovsky & Griffith (2006), Bhalla et al. (2008), Bryson & Daniels (2007) and Metters (2008) have studied offshoring and outsourcing from the ICT and IT-perspectives; Ellram et al. (2008), McIvor (2009), and Vivek et al. (2008) have focused on the transaction cost economics (TCE) and resource-based view (RBV) of offshoring and outsourcing; Barthélemy (2001) has highlighted hidden costs in IT-outsourcing and Stringfellow et al. (2008) have highlighted invisible costs of offshoring; Benni & Peng (2004), Bunyaratavej et al. (2008), Dossani & Kenney (2007), Hätönen (2009) and Kotabe & Murray (2004) have focalized their studies on the locational aspects; Amiti & Wei (2006) have focused their studies on the effect of offshoring on productivity, while Zeynep & Masini (2008) draw on the strategic aspects of offshoring.

Offshoring has been studied at different levels. Abramovsky & Griffith (2006) and Lewin & Peeters (2006) have examined the phenomenon at global or general level, whereas several academicians (Amiti & Wei (2006); Garner (2004); Kumar & Zander (2007); Sturgeon & Levy (2005); and Weidenbaum (2005)) have dissected the issue at national level, usually focusing on economic, policy and institutional issues in the United States. Kshetri (2007), for instance, has discussed the topic at industry level. Lastly, some academic studies on offshoring at firm level have been made by Bunyaratavej et al. (2007), Dossani & Kenney (2007), Kedia & Lahiri (2007), Lewin et al. (2008), and Manning et al. (2008). Surprisingly, practical studies at operational or microeconomic level remain scarce. According to Stringfellow et al. (2008), there is a great need to study service offshoring from the operations perspective. Metters (2008) and Youngdahl & Ramaswamy (2008) call for venturing across disciplinary lines to borrow theories from organizational behaviour, leadership and sociology to reach a better understanding of offshoring.

2.3. Factors Influencing the Offshoring Decision

The most commonly stated business motivations to offshore services are to reduce costs, become more efficient and gain strategic advantage (Aron & Singh, 2005; Bhalla et al., 2008). Similar to the motivations for outsourcing, the key reason behind offshoring is to generate cost efficiencies, often by cutting down labor expenses. Other times reasons to offshore can be strategic, such as to enter new markets, to tap new talent that is not currently available in the domestic market, or to overcome domestic regulations that might prevent certain activities from taking place (Bhalla et al., 2008). The strategy of shared services is to standardize, streamline, and consolidate common business functions and processes in an organization, in order to improve efficiency and effectiveness keeping both cost reduction and overall profitability in mind (Zeynep & Masini, 2008). Another human resource aspect stated by companies is capacity. Customers are demanding more functionality and a higher rate of innovation and this demand cannot be serviced solely with domestic capacity. The rate of hiring people in the domestic country does not meet the need for capacity, so as a result firms choose to offshore. (Bhidé, 2008, 159)

As mentioned above, the factors influencing the location decision of services are numerous. There are considerations both in favor and against moving services offshore, some that apply to all companies at institutional level and some that are more unique to each company. Offshoring is deeply rooted in a variety of concepts: governmental attitudes, managerial attitudes, international historical relationships, technological advances and the general view of business processes (Metters & Verma, 2008). The company should carefully weigh a wide range of individual factors, for instance the nature of tasks that it is looking to offshore, the firm's ability to attract and retain high-quality employees and the legal and regulatory regimes in the country in question to see if the strategy of offshoring is suitable for them. (Bhidé, 2008) In the following section, I will discuss the most commonly quoted economic and strategic reasons, the technological drivers that make the trend possible and attractive for the global economy in the first place, regulatory challenges faced by companies, and human resource aspects. Finally, the impacts of offshoring on the micro economy, in other words the firm, are summed up at the end of the chapter.

2.3.1. Economic Factors

Aspects of cost and quality are key elements of the offshoring debate. There is a natural trade-off between cost and quality, which is currently being challenged by customer demand. In general, when production costs are high, quality is high and vice versa. Customers in monopolistic markets have the power to demand price reductions, thus forcing companies to cut costs in order to maintain their previous profit margins. However, the customer concurrently insists on better quality and smoother delivery. The combination of increased quality, enhanced delivery and reduced prices results in deterioration of the supplier's financial equation. Offshoring is a solution to cut costs and maintain competitiveness, although it does not automatically guarantee the same, let alone a higher, quality that has been reached domestically. Low wage and high quality combinations are seen as relatively arbitrary and short-lived because other companies will move to exploit them causing wages to rise. Quality will eventually be the paramount consideration in order to maintain customer satisfaction and competitiveness globally. (Bunyaratavej et al., 2007)

The most frequently cited reason for initiating offshore operations is to achieve cost savings. In addition to land and other primary resources being cheaper abroad, a considerable factor causing a gap between production costs in developed and developing countries is labor costs. Multinational companies pay significant attention to labor cost and productivity differentials across countries and consider offshoring a relevant solution to cut labor costs. The reasoning behind the theory of comparative advantage is directly applicable in this case: every country should concentrate on supplying what they have an abundance of (Mankiw, 2007, 55).

For decades, some countries like China and India have had an abundance of low-cost unskilled labor and should thus flourish in labor-intensive work, whereas developed countries like the US, the UK and Finland have an abundance of capital and should focus on capital-intensive work. Capital in this case means both human (knowledge and skills) and physical (technology and machinery) capital. Therefore, the relocation of labor-intensive services, such as computer engineering, to countries with lower labor costs, like India, is consistent with the basic economic theory of comparative advantage. (Garner, 2004) Nowadays, the competitive situation has

accelerated with the additional element of high skill level present in China and India, but wage levels still lagging behind (Bhidé, 2008).

Nevertheless, true economic costs from offshoring are not necessarily visible only from wage differences. A number of factors affect the total cost of moving processes abroad. On the one hand, cost savings may actually be increased further when other personnel costs are taken into account: health insurance, benefits, pension contributions, taxes, social payments, etc. On the other hand, although general start-up costs of offshoring may be lower initially, it may not remain that way and the company may have to incur costs that would not be present in the home country. These could be for instance higher transportation, telecommunication or management supervision costs. Also the difference between countries' wage levels needs adjustment by the amount of capital available per employee to better reflect true productivity of a worker. The more capital-intensive a society is the more productive their workers are. Regardless of all the different cost components, managers consider the total costs of offshoring to remain below the costs of producing domestically. (Garner, 2004)

Although cost savings is one of the primary drivers for offshoring, it is not the most sustainable. Gartner Inc. analysis (2007) focuses on the benefits and considerations of outsourcing, but the findings can well be applied to offshoring. Too much focus on cost usually leads to dissatisfaction, because the targeted cost savings are either not truly achieved or are otherwise eroded and unsustainable. More permanent drivers, that Gartner analysis points out, include accessing specialist skills, acquiring new competencies, achieving internal process flexibility, economies of scale and other synergy benefits, and upgrading service quality. Gartner analysis recommends firms to take a longer-term view towards what can be accomplished with outsourcing, in this case offshoring, and to ensure beforehand that good management, for instance risk or human resource management, is in place.

The question that should also be addressed is, "What items are included in cost savings calculations?" Many times cost savings may be calculated without transition costs for instance, which may distort the whole story. The analysis should look at the total cost of operating the service delivery, which stretches across departments and business units and is not limited to the

budget of delivering the service from the new location. Management should also keep in mind that hidden costs are not shown in the budget of offshore delivery, but should be included in the analysis. In addition, savings reported by a certain project rarely account for new costs associated with for instance the governance of a new relationship between the local and offshore units or internal costs of transitioning to a new delivery model. (Gartner Inc., 2007) What the above implies is that quoted savings should always be treated with care to fully understand what is included in the analysis and what is not in order to avoid making decisions that are based on misleading information.

Stringfellow et al. (2008) states that although the cost savings from offshoring service work may be quite clear, there are certain “invisible costs” that are brought along with operating at a distance that need to be considered. Service offshoring decisions should include considerations of both visible and invisible costs. Visible costs refer to labor costs, operational costs and other costs related to doing business in the particular foreign environment. Invisible costs are related to communication and culture associated with the use of foreign service providers. These are costs that stem mainly from the unique characteristics of services and are thus influenced by interaction intensity and interaction distance (see Figure 2-2 below). (Stringfellow et al., 2008)

Interaction intensity can be explained by service uniqueness. Firstly, services often contain a high portion of intangible components that are hard to articulate. Secondly, the degree to which the customer is part of the services process, is a term much discussed in operations management literature. A third factor is the service quality, which is subjective to a certain degree. Interaction distance is on the other hand explained by the combined effects of cultural, language and geographic distance between service providers and customers. (Stringfellow et al., 2008) The shorter the combined distance of these three factors between the home and host country, the lower the invisible costs of transferring operations offshore are.

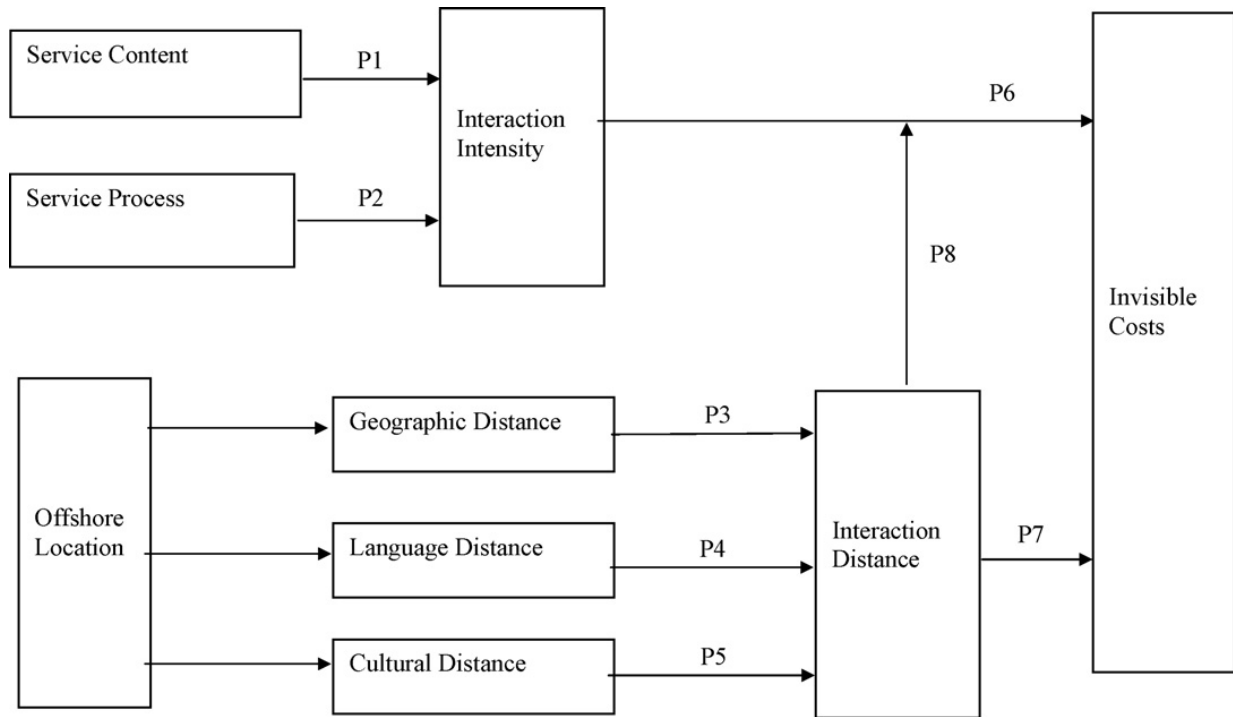


Figure 2-2: Conceptual Framework of Invisible Costs

Source: Stringfellow et al. (2008)

The Boston Consulting Group’s analysis on business process outsourcing and offshoring (2005) also suggests that the decision to outsource or offshore should be about strategic impact in addition to cost reduction. The key drivers behind cost reduction are labor cost savings, economies of scale and cost variability. As illustrated by Figure 2-3, the aim to reduce costs has the lowest strategic impact for the company and the shortest time span of offshoring. The more intense the partnership model is and the higher the level of organizational readiness and BPO sophistication, the higher the strategic impact of the decision on the firm. Already a step towards the right direction is to focus on longer-term drivers such as: improved customer service, increased productivity, reduced time to market, higher revenues. The highest impact would result from succeeding to create competitive advantage for the firm. In this case the key drivers include increased strategic flexibility and an enhanced global footprint. (BCG Inc., 2005)

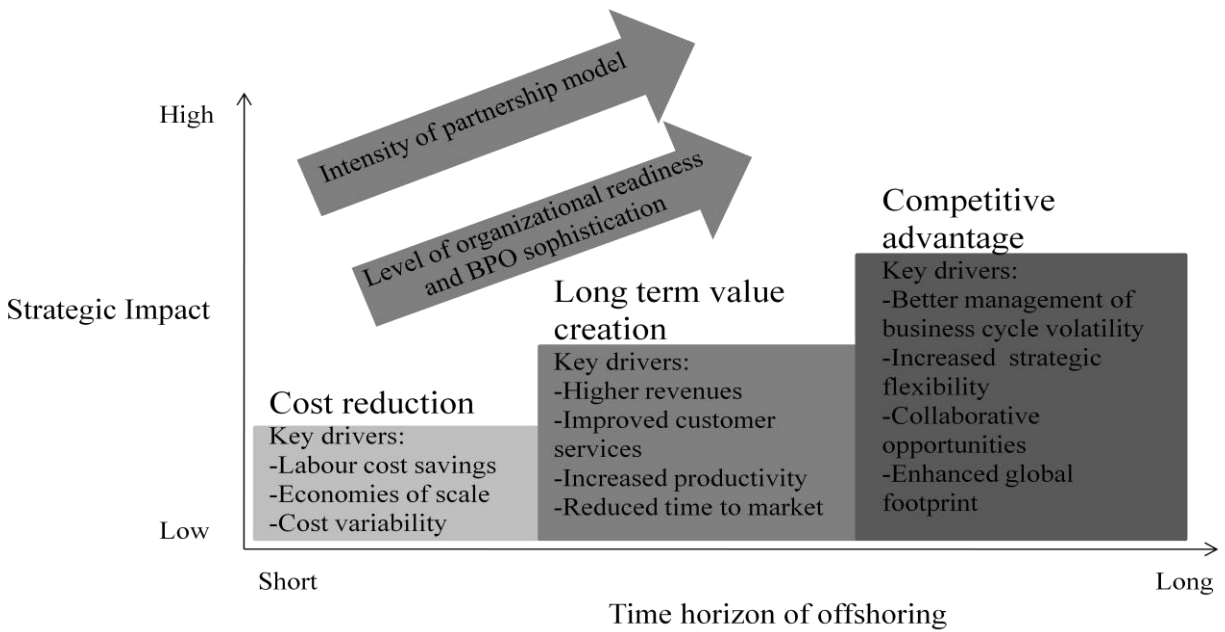


Figure 2-3: Strategic Impact of Offshoring

Source: Modified from BCG Inc. (2005)

Approximately 70-80 percent of offshoring activity is based on the model of offshoring to a captive center, or wholly owned subsidiary, in a low-cost country. The benefits of this model include cost and scale advantages that low-cost countries offer, yet operational control over the offshored activities can be fully retained. Examples of international companies having established captive centers in low-cost countries to manage and support functions such as IT, transaction processing, finance and accounting are multiple: Philips and Lufthansa to name a few. (BCG Inc., 2005) With the offshoring decision, companies face the attraction of potential benefits on one hand and their ability to realize those benefits on the other. Simultaneously, the company also faces the risks stemming from the complexity of operations, the geographic separation between houses and other things (Bhalla et al., 2008).

2.3.2. Technological Factors

Cost savings, seemingly the most influential reason to practice offshoring, has, however, been acknowledged decades ago. This suggests that new incentives to offshore have transpired. The biggest drivers behind the offshoring trend for services are technical advances that have made it

possible to offshore increasing types of services, even ones previously thought impossible due to proximity requirements by customers. Metters (2008) analyses services that can be transmitted electronically, because any task that can be transmitted this way is a candidate for being performed offshore, excluding legal restrictions. Depending on the industry, electronically transmitted service operations range today from back-office activities (e.g. accounting), to processes with customer contact (e.g. call centers) to higher-order analysis (e.g. product design).

Furthermore, the nature of international trade is changing. Whereas for centuries trade has mostly entailed the exchange of complete goods between countries, today it is increasingly about adding bits of value to global supply chains. Grossman & Rossi-Hansberg (2008) have introduced the term “task trade” to describe this finer international division of labor. In recent decades the growth of world trade and globalization has been greatly enabled by multinational companies (MNCs) having built manufacturing affiliates abroad and located input processes there, thus creating vertical production networks (Hanson et al., 2004). This phenomenon is called vertical specialization in manufactured goods. However, vertical specialization within services has only been discovered in recent times.

Vertical specialization, which occurs when countries specialize only in particular stages of a good’s or service’s production sequence, has been encouraged by recent developments in information and communications technology (ICT). Before these developments services had to be produced in proximity to the customer. Technology has facilitated the integration and globalization of the world’s economies. Hummels, Rapoport and Yi (1998) recognize three conditions to vertical specialization:

1. a good must be produced in multiple sequential stages,
2. two or more countries must specialize in producing some, but not all, stages, and
3. At least one stage must cross an international border more than once.

These conditions ultimately identify the idea of countries linking sequentially according to comparative advantage in a skill area to produce a final good or service instead of horizontal specialization where firms or countries produce a good or service from start to finish and then export it.

Offshoring is therefore closely linked to technological advance. As said, recent technological advances have allowed companies to locate labor-intensive services in other countries just like developments in transportation allowed for the relocation of goods' manufacturing some time ago. Some examples of these recent technological advances are the Internet, personal computers and fiber optic cable that have reduced communications costs and consequently encouraged relocation. Naturally services that require direct contact, e.g. health care or cosmetic services, remain out of the offshoring equation, but most labor-intensive services can be relocated. Multinational companies tend to offshore a number of segments excluding their creative and management oriented services. In the information technology business functions that are usually continued domestically include R&D and Marketing. (Hummels et al., 1998)

A notable benefit from offshoring, that especially suits the telecommunications industry, is that companies now have constant coverage for global business customers that need round-the-clock support. Uninterrupted operations can be a way for many service companies to differentiate themselves from competitors, but in the telecommunications industry it is an absolute necessity for competing with other network providers in the industry at all. (Stringfellow et al., 2008)

2.3.3. Regulatory Factors

While offshoring of services may be highly associated with rapid technological change, technology is only part of the story. The third aspect that has influenced international trade in services and services' vertical specialization is the deregulation of service industries and trade liberalization. Many services industries are economically important and politically sensitive, e.g. airline, medical, media and communications, postal services, and thus have been heavily regulated in the past. The telecommunications industry falls into this category and governments are not always willing to share their telecommunication data and networks.

Recently, however, many countries have deregulated their domestic services. Reasons behind this are the realization that competition raises the living standard of domestic consumers and forces companies to optimize their cost structures. As developed countries have opened up their borders for services, many developing countries have adopted new technologies faster. As a

result, offshoring has become an attractive option for MNCs (Garner, 2004). A multinational company perhaps largely responsible for India's premier role in services offshoring is General Electric. The direct (about 20 000 employees) and indirect contributions (getting Indian software firms off the ground) were great in the late 1990s and early 2000s. In the mid 1990s, GE accounted for 20-50% of the revenue of three of India's largest software firms today, Wipro Systems, TCS and Infosys Technologies. (Metters & Verma, 2008)

Of course the liability of foreignness – the social, political and economic costs associated with operations of a foreign firm within a particular host country – has to be taken into consideration, because doing business abroad may result in a competitive disadvantage for an MNC (Bunyaratavej et al., 2007). The offshore country itself may pose certain risks. Developing countries have significantly less stable infrastructure, including roads, telecommunications and electricity, which could cut off service delivery; political or economic unrest may prevail, or instability in some areas could lead to data and people being captured illicitly (Kumar & Zander, 2007, 46).

The fact that certain countries, India, Ireland and Barbados to name a few, have come out as winners in the “attractive host country” game deserves some reflection. Government deregulation on the part of both developed and developing countries was required. Many developing country governments proactively sought offshore service business, reasons being that it is seen as “clean” and “modern” and more desirable than traditional manufacturing because of environmental reasons and the benefits of computer training. These countries spent heavily to improve their telecommunications infrastructure. Differential tax rates were also used to attract offshoring business. India for instance lowered their tariff levels on computer equipment significantly and the Irish government provided extraordinary tax advantages that made Ireland the largest BPO offshoring destination in 2001.

On the opposite end of the chain, lack of services regulation from the developed world is perhaps a large factor in the rise of services offshoring. International trade in services was not even covered by the General Agreement on Tariffs and Trade (GATT) (Metters & Verma, 2008). Today, a lot of US and Europe-based MNCs source service work from India. However, in order

to limit exposure and dependency on one country MNCs are exploring alternative offshore locations in Eastern Europe, China and the Phillipines (Bryson & Daniels, 2007, 13). It is possible that protectionist responses from the developed world governments could increase particularly in the midst of a global economic downturn. So developed country policy will be an important factor in determining the further evolution of services offshoring. (Dossani & Kenney, 2007)

2.3.4. Human Resource factors

The leading reason to offshore tasks in the early 21st century has been the fact that it usually results in significant cost savings due to wage differentials between developed and developing countries (Malmberg, 2003). A growing number of companies no longer consider reducing labor costs as the only strategic driver behind offshoring decision. Accessing highly skilled talent pools around the world has emerged as a new key strategic driver (Bunyaratavej et al., 2007; Lewin & Peeters, 2006; Manning et al, 2008). Disregarding the labor cost argument for this section, since it was discussed in section 2.3.1. on economic factors, we will now look at other human capital -related benefits and risks.

Offshoring evidently provides access to knowledge and skills that is not as available domestically. (Stringfellow et al, 2008) A few companies have claimed offshoring to be a consequence of capacity restrictions in the domestic country. Customers demand more functionality and at the current rate of innovation suppliers cannot service demand locally. Sometimes insufficiencies to meet demand with the local labor market or the need for speedier development of products and services weigh more in the basket for reasons to offshore than cost reduction reasons (Bhidé, 2008, 158-159). The sheer population size of countries such as India and China and the high percentage of the population that is in the workforce is already reason enough to increase the use of offshored workers (Kumar & Zander, 2007, 40).

Services offshoring differs from manufacturing offshoring in the way that it requires a well-educated work force. Many of the countries that have invested in IT-infrastructure, e.g. China and India, also have a very large proportion of their labor force highly educated with university

degrees. Both China and India have a higher number of university graduates per year than the US (Kumar & Zander, 2007, 40). Furthermore, a high fraction of those university graduates has specialized in engineering or computer science (Bhidé, 2008, 159). Many companies are sourcing from, for instance India, because the value addition and sophistication of the work completed have increased. In India, some of the most sophisticated work done already resembles the most sophisticated work performed in developed countries. (Dossani & Kenney, 2007)

In the case of shared service centers or global centers, a reason to look for capabilities offshore is that there is the opportunity to benefit from economies of expertise (Bryson & Daniels, 2007, 261). The employees trained to perform certain service tasks for a number of customers can improve the service levels of the company (Manning et al., 2008). Economies of expertise is an uncertain benefit though, as multinational companies have quoted a greater risk of employee turnover offshore (Manning et al., 2008). Captive offshore centers have lower turnovers in work force than outsourcing companies so there is a greater opportunity to train employees to adapt to customer needs and hence improve the quality of customer service.

An opportunity of labour productivity increase and better response time should not be disregarded either (Metters, 2008a). According to Amiti & Wei (2006), offshoring can have an effect on productivity through at least four channels: (i) a static efficiency gain; (ii) restructuring; (iii) learning externalities; and (iv) variety effects. Offshoring can also affect the labor demand through three channels. First, if labor and services are substitutes a substitution effect is possible through the input price of materials or services. A fall in the price of imported services would lead to a fall in the demand for labor. Second, if offshoring leads to a productivity improvement then firms can produce the same amount of output with less input. Hence, offshoring is expected to reduce the demand for labor. Third, offshoring can affect labor demand through a scale effect. Increasing offshoring can make the firm more efficient and competitive, increasing demand for its output and hence labor. (Amiti & Wei, 2006.)

From a managerial perspective offshoring allows a more reduced hierarchy or a simplified management structure than would be possible locally. However, it presents managerial capacity constraints, as it consumes scarce top-management time. (Bhidé, 2008, 163) The risks of

offshoring usually first occur when it is time to think about the management of a globally dispersed project. How to ensure that deadlines are kept, timely delivery, the functionality of end products and meeting original plans? Successful offshore projects are often not realized abroad completely, but a large part of the job remains near the customer, users and other stakeholders. These tasks usually require project management, planning and architectural roles, in which developed countries like Finland can still compete successfully. (Malmberg, 2003) Offshoring certain functions also frees up internal or local resources to work on more “value-added” needs. This should result in additional revenues by decreasing the time to market new products or services. (Kumar & Zander, 2007, 41)

However, offshore employees are often not well suited for tasks that require local or tacit knowledge. (Metters, 2008a) Another risk regarding work force that should be considered is that it will be increasingly difficult to bring back laid-off or offshored talent to rebuild the infrastructure once more domestically if needed. In the first place offshoring work will most likely be criticized publically (Kumar & Zander, 2007, 46), not to mention internally (Lewin & Peeters, 2006a), so bad publicity and a strong resistance from within the company should be accounted for.

In addition, cultural and language differences between customers, domestic employees and offshored employees can create problems. According to a study conducted by Aelera in 2004, the risk of losing service quality was cited as the number one risk by many executives involved. Cultural differences were cited as the second biggest risk (Metters, 2008b). Although culture and language barriers are much higher in the information age than in earlier times, the global society can benefit from far greater benefits like increased learning and communication that offshoring knowledge work has the possibility to provide. (Kumar & Zander, 2007, 52)

2.4. Summary of Microeconomic Impacts of Offshoring

The opportunities and threats of offshoring for a company are manifold. As mentioned in the previous chapters the economic benefits may include reduced cost of providing services, economies of scale and increased productivity from servicing customers from a global center; the

human resource opportunities include availability of specialized and highly educated workforce at lower rates, access to new talent and skills and a specialized group of employees who can provide specific services at a better quality, at a much reduced time-to-market; and the general business opportunities include increased customer satisfaction through round-the-clock service accessibility and uninterrupted operations, fast, easy and cost-efficient service delivery, shared knowledge and shared risk within the company, phased and controlled implementation of new processes and achieved flexibility in operations.

The opposite side of the coin includes economic threats such as hidden costs that were not accounted for, transition costs, eroding profit margins by passing on cost savings to the customer and rising employee costs in offshore locations due to inflation and pressure to raise wage levels; the threats regarding personnel include resistance to organizational culture change, overlapping tasks and responsibilities, failed change and people management and not retaining trained and skilled labor in the long term; the threats business-wise include loss of control of operations, inflexibility regarding customization for customers, and regulatory obstacles imposed by the host country. According to Metters (2008a), managerial concerns with offshore operations include local knowledge, cultural differences, cultural bias, country risk, communication, seasonality, scale, distance issues, and domestic employee morale. Figure 2-4 below sums up the most common business advantages and disadvantages of offshoring that have been discussed previously in more detail.

There are certain levels to offshoring and outsourcing models that companies can realize. The drivers of the client and service provider companies determine the level at which the partnership is based on. If a firm wants to strategically aim for the most value-adding and long-term solution of international outsourcing of services (IOS), the transformational partnership, the drivers will include global innovative talent and a world class delivery model instead of an inexpensive labor pool and higher quality and skilled labor that are the main drivers of a tactical relationship. (Kedia & Lahiri, 2007) On the other hand, a more common short term view of the IOS partnership model, the tactical partnership, is practiced by several MNCs today. Both BCG (Figure 2-3) and Kedia & Lahiri partnership models stress the benefits of aiming for a more intensive partnership.

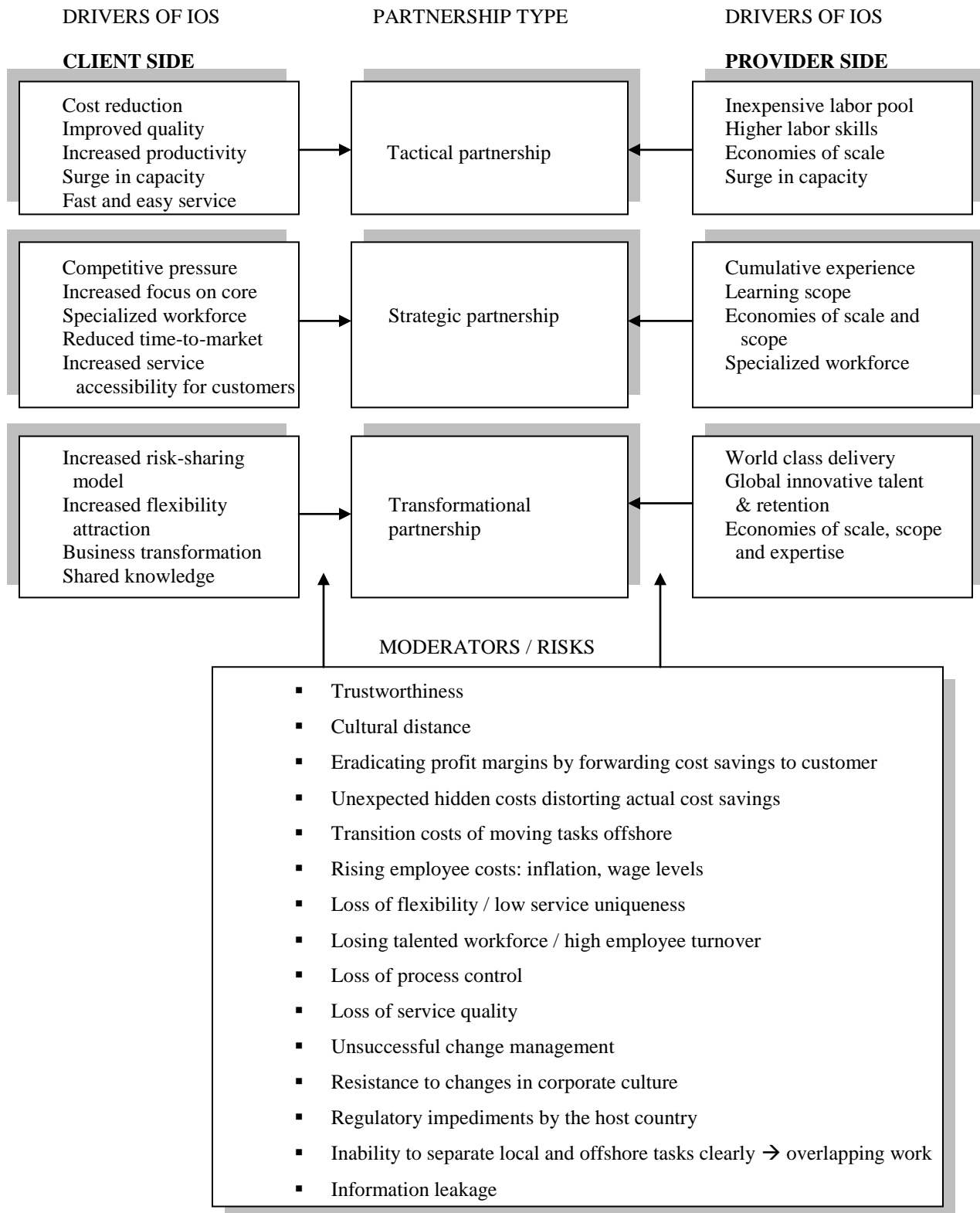


Figure 2-4: Model of International Outsourcing of Services (IOS) Partnership

Source: Author, modified from Kedia & Lahiri (2007)

This chapter summed up the previous literature on offshoring and the key elements that set the background of offshoring activities. The next chapter introduces the setting in which these offshoring activities are practiced, the industry of telecommunications and the more specific market of managed services.

3. THE CASE COMPANY AND MANAGED SERVICES

The following background information on the case company and the industry and services in question set the stage for the current managed services environment and the need for offshoring development that is the subject of this paper. In this chapter I will depict the current situation of the case company, describe the telecommunications industry, its players and the industry characteristics. Furthermore, I will define the term managed services, examine the elements of managed services and global delivery and illustrate the operations model of these services within the case company. At the end of this chapter I will look at the different cost accounting methods in which offshoring business projects are currently managed in the case company. The purpose of this chapter is to also combine the discussion of offshoring with the setting of managed services to examine how offshoring work fits within managed services and the case company.

Managed Services

Managed Services (MS) is a branch of the telecommunications industry. MS is defined as “*the practice of transferring day-to-day related management responsibility as a strategic method for improved effective and efficient operations*” (Wilson, 2006). A service provider is the organization that supplies the managed service; for instance a company that offers subscribers access to a telephone network. The organization that has oversight of the managed service is then referred to as the customer, client or offerer.

In short, a managed services provider in the telecommunications industry offers to maintain and administer an operator’s network. MS enables the service recipient to free up resources to focus on their core business of serving end-users. Usually a managed service provider is a company that offers outsourcing of information and communication technology (ICT) services. The

offering covers solutions to operate networks, optimize end-to-end performance and service platforms and terminals.

3.1. The Case Company

The case company is a western multinational in the telecommunications infrastructure business with operations in more than 150 countries. The company's operations are divided into 7 larger geographical regions that are more or less split continent-wise, excluding Antarctica. The main global service delivery sites are in India and Portugal. (Case company internet, 22.3.2009) The case company discovered the need to research this topic because it has been strongly involved in offshoring managed services activities during the past few years and continues to see development in the area. Offshoring is a part of the company's strategy and as the concept is gaining momentum the company has seen a need to study the situation more closely as well as the current costing and pricing methods related to the process. Although it is not possible to generalize the results from a single case study, analysis should present valuable insights and suggestions for further research in the field.

The case company's managed services comprises of four service business lines: hosting, network operations (NO), network planning and optimization (NPO) and shared delivery. The four different business lines offer a range of solutions to the customer. Primary solutions are: hosting, outsourcing, build-operate-transfer (BOT), network on demand and operations start-up. This paper focuses on network operations, which offers a comprehensive service that provides operations from centralized or remote locations as well as on-site services. The NO services further comprise network operation center (NOC) services and field maintenance services. NOC services include remote operations, such as monitoring, trouble management, performance management, provisioning management and operation systems support (OSS) administration. Field maintenance services include on-site operations, such as preventive and corrective maintenance, as well as provisioning management. (Company intranet, 2.3.2009)

3.2. Telecommunications Industry Characteristics and Competitive Landscape

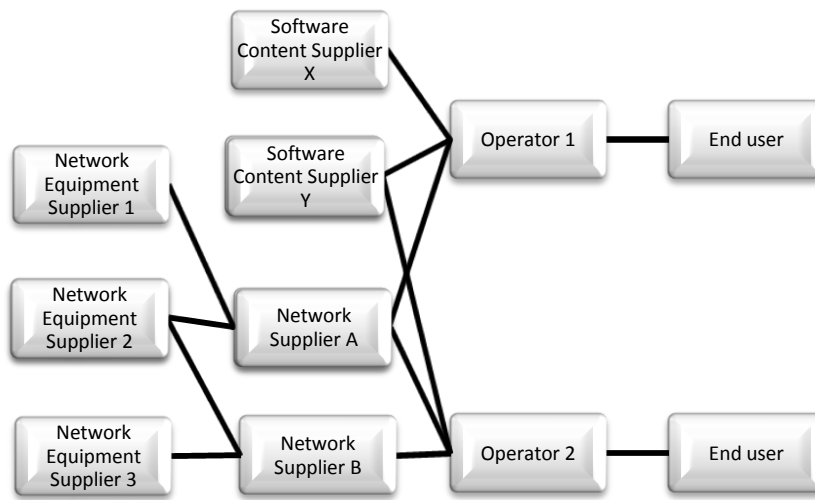


Figure 3-1: The Players and the Mix of Business Relationships in the Telecommunications Industry

Source: Author

As illustrated in Figure 3-1, the players of the telecommunications industry are primarily operators of mobile and fixed telephone lines, suppliers of network equipment, handset manufacturers, software and application developers and network service providers. As we can see from the figure above, only operators communicate with end users regarding services. In addition to the service side, end users are targeted by handset manufacturers on the product side, but this is not relevant for the sake of the study. Operators communicate and do business with a lot of service providers, for instance content and network operation services providers, which makes the industry primarily a business-to-business (B2B) market. The supply of services or equipment is not necessarily restricted to one supplier, as is shown in Figure 3-1, instead multi-vendor solutions are common. This is because operators choose to especially procure their network management from a supplier other than the network equipment supplier for the purpose of risk management. Operators have a choice of doing business with one or more network suppliers who in turn have one or several equipment suppliers. The number and particular fit of suppliers for each company is a strategic choice and thus variation of supplier combinations exists from operator to operator. First of all, a great deal of important business elements are

outsourced by operators in order to focus on their core business, customer service, but similarly network suppliers trade with equipment suppliers.

Change has been present in telecommunications ever since the concept and system were invented. The structure of telecom services has undergone significant changes since 1980. Traditional services on the phone network, for example fixed-wire local and international services, later evolved to facsimile, mobile and wireless services. The economics of wired networks takes into consideration three main benefits: firstly there are large economies of scale and scope, which was sometimes seen as a justification for building monopolies, secondly there is a possibility to efficiently share network capabilities among multiple operators, but this usually requires some regulatory intervention, and finally there are significant positive network externalities in communications, which means that the network is more valuable to users when more people are connected. (Mattoo et al., p. 392-393.) These benefits are also valid for mobile wireless networks.

One belief in the industry today is the expectation of a transformation in the industry value chain. Today operators like Vodafone, Deutsche Telekom and Telefonica O2 and network equipment vendors like Alcatel-Lucent, Ericsson and NSN are considered to add high value to the telecommunications value chain while terminal vendors and service providers do not add as much value. These actors may change positions in the future suggesting that operators and equipment vendors are in a sunset business and need to do radical changes in order to sustain competitiveness in the future. (Case company intranet, 2009)

Competitive Landscape

Increased competition in the telecommunications industry creates a tougher business environment every day, but also presents good business opportunities for some players. The demand for new mobile services and content provides additional revenue streams, but requires both investment in new technologies and the ability to manage those increasingly complex technologies effectively. Operators no longer consider managing their network as part of their core business and as such have recognized the value of exploiting outsourcing. Outsourcing more and more of the operation and maintenance services of telecommunication networks gives rise to

the many developing business opportunities for network specialized companies, known as managed services, and also transforms the industry setting.

The target benefits from outsourcing service delivery for the network vendor customer, in other words mobile operator, include operational efficiency, reduced costs, predictable operational expenditure, improved customer satisfaction and loyalty, reduced customer prices, improved network quality, focus on core activities, and improved key performance indicators. This is the frame in which outsourcing decisions are made by operators and the degree of risk in failing to meet these benefits determines the ultimate choice of operator in-sourcing or outsourcing. The main targets for operators to outsource network operations are to cut costs, improve service quality and network availability, reduce time-to-market and technological risks and avoid idle resources. Hosting activities are most common for small scale companies that do not have the capacity to own and manage all services, but which would be of great importance to their customers. Relying on sourcing the maintenance of a peripheral service to a third party the operator benefits from allocating the newly idle resources to sales and customer relations, which are currently operators' most business critical activities. (Case company intranet, 11.01.2009)

Factors affecting the operator outsourcing also vary depending on the degree of development of the specific national telecommunications market. The factors commonly considered in developed western world markets include cost savings, high propensity to outsource after new entrants, cost and innovation orientation to stay competitive, ownership issues like the fact that private equity owners tend to take more advantage of outsourcing if it is financially good for the company, domino effects from the operator situation and employee protection. In contrast, emerging markets tend to focus more on the constraints that rapid growth imposes on the business, but rapid subscriber growth also provides more incentive to outsource due to capacity reasons, domino effects, ownership issues, but from the perspective of willingness to involve outsiders and the operator's management background affects the decision to take up a service provider.

As the industry setting changes companies are adapting their business segments according to demand. Hence, companies are forced to broaden their view of the market resulting in the convergence of three markets for outsourced managed services, telecommunications, media and

content and IT and systems integration depicted in Figure 3-2. The overlap of firms with different specialties competing for the same customer base is an increasing reality. Despite the aggressive competition among managed service providers, the biggest competitor yet remains operator in-sourcing (Case company intranet, 21.01.2009). Nonetheless, this is gradually changing with increasing competitiveness of the operator market.

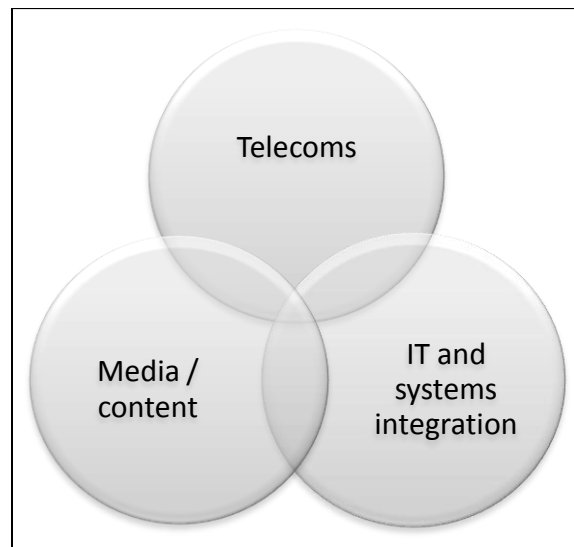


Figure 3-2: The Converging Managed Services Market

Source: Author

The market players in managed services, just like telecommunications industry in general, can be divided into telecom vendors, service-oriented IT & software companies, tool companies, system integrators, consulting companies and operators themselves. From the many suppliers of managed services to telecommunications operators some provide specialist services for specific functions, while others cover a wider range of functions across the whole value chain. The most important managed services providers spanning the whole value chain of outsourcing network operations and service hosting are the major equipment vendors: Alcatel-Lucent (A-L), Ericsson, Huawei and Nokia Siemens Networks (NSN). As illustrated below in Figure 3-3, these four main suppliers in the telecommunications industry today for full end-to-end solutions in managed services tend toward the generalist end offering technology-oriented solutions. Recently network companies such as Motorola and Nortel have been struggling and mergers in 2006 created rather equally strong “Big 3”, Ericsson, Nokia Siemens Networks and Alcatel-Lucent, with services

revenue ranging between 4-6 billion Euros. Huawei is an underdog to the “Big 3”, but also the fastest growing network equipment vendor as it is capturing market share at the expense of its more prominent competitors. Close rivals to network vendors are the ever-changing service-oriented IT & software companies like Hewlett-Packard and IBM. These companies also offer a general supply, but of service-oriented solutions. Despite IT services being excluded from this analysis, it is worth noting that the more the markets converge, as described above, the more the IT service markets are considered addressable by the leading managed services players in telecommunications.

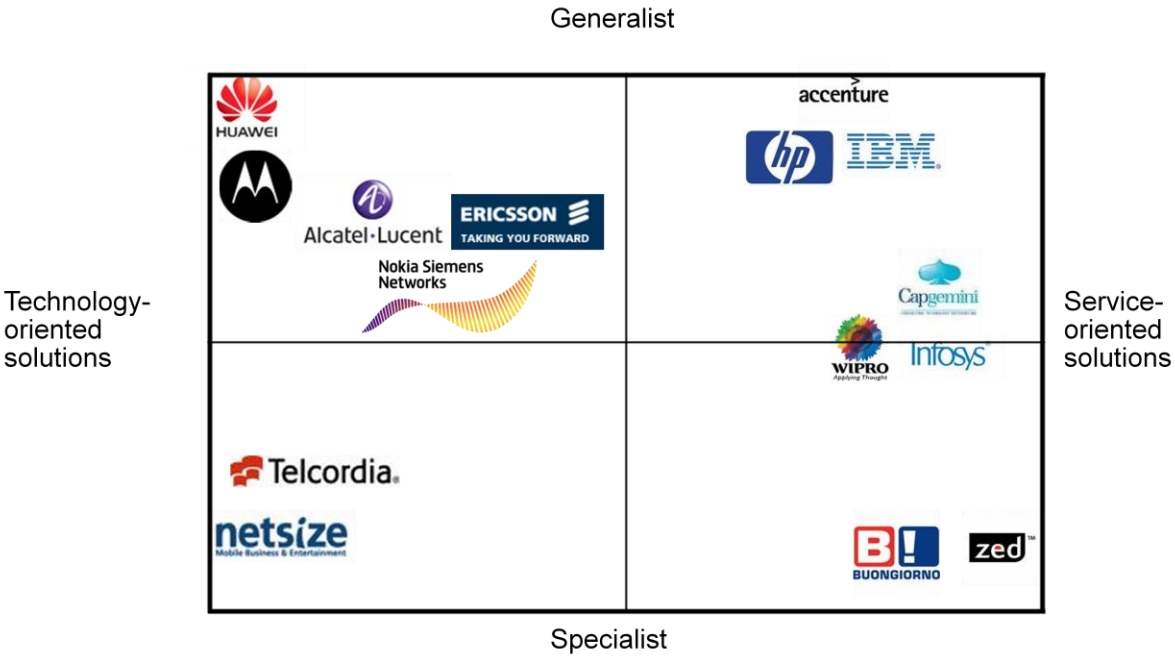


Figure 3-3: The Managed Services Landscape
 Source: Modified from Informa Telecoms & Media (2008)

Table 3-1 below presents the portfolio elements of the four biggest companies’ MS sectors. As we can see, most of the elements are covered by all companies with slight differences in positioning. Ericsson is often seen as an undisputed market leader covering the widest range of portfolio elements. Huawei has the least amount of references and experience especially in multi-vendor networks, however it is the most aggressive competition currently, building its managed services portfolio constantly through with the help of new partnerships.

Table 3-1: The Managed Services Portfolio Elements Typically Covered by the Supplier

Source: Respective companies' websites (1.3.2009)

	A-L	Ericsson	Huawei	NSN
Build-Operate-Transfer	x	x	x	x
Business / IT Consulting		x	x	
Hosting	x	x	x	x
Infrastructure & 3 rd Party Management	x	x		x
Network Operations	x	x	x	x
Network On Demand	x	x		x
Network Roll-out	x	x	x	x
Operations Start-up	x	x		x
Operations Support	x	x		x
Network Optimization	x	x	x	x
Systems Integration		x	x	
Railway Communications		x		x

3.3. Managed Services Operations

In this section I will describe a managed services delivery model, the business process flow and the common division between global and local managed services. I will also go through the principles of global delivery and the part of the process, which is offshoring delivery -related in managed services.

3.3.1. Managed Services Operations Model

In a changing world customers increasingly demand availability and easy use of devices and services regardless of the time and place. Numerous changes have already occurred ranging from narrowband to broadband, audio to video, single products to integrated solutions, vertical integration to horizontal service provision and telecom provider to services provider. Business customers demand more and more outsourced services to release resources for core business. A business strategy for managed services involves the following aims: to tap new revenues, achieve

and increase operational efficiency and to tap new growth markets. (Case company intranet, 2009)

Offshoring, the focal topic of this paper, comes into play as part of the managed services strategy through leadership in cost efficiency. Cost efficiency is achieved by delivering certain services from shared delivery centers and standardizing as much of the global process as possible. Due to the special nature of current service delivery managed services business cases are commonly uniquely evaluated and customized according to customer needs. The MS delivery model includes four elements: standardization, global knowledge, global network operation centers and shared delivery concepts. The service combines these elements to deliver a solution based on standardized processes and tools, delivery is centralized through global competence centers and knowledge, the shared delivery concept is for cost efficient delivery of a broad range of services that can be customized to meet specific operator requirements.

As illustrated below in Figure 3-4, the basic business process flow within managed services includes stages from initiation to closing. Between these primary and final steps the service execution flows through planning, implementing, operating and controlling stages, just like any service execution. The actual execution occurs between the implementation, operating and controlling phases as illustrated in Figure 3-4.

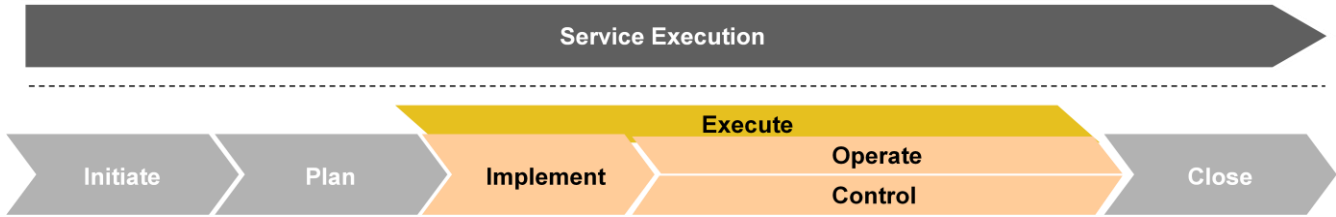


Figure 3-4: Managed Services Business Process Flow Model

Source: Case Company (2009)

The principles and elements to achieving a well functioning global delivery can be divided into three levels in a pyramid-like manner (see Figure 3-5). The foundations of global delivery are based on a functional operations model that introduces standards and blueprints for operations,

SLA and KPI frameworks that facilitate shared delivery within the whole company. The next level of the pyramid is built on top of a functional operations model that utilizes local and regional resources to leverage local synergies and customer interface aspects. The highest level then introduces the concept of global network solution centers (GNSCs), which are used for remote delivery of operation services. These centers develop shared delivery into providing remote operation services and automated processes from a global expert pool with the most developed tool support that leverages global synergies.

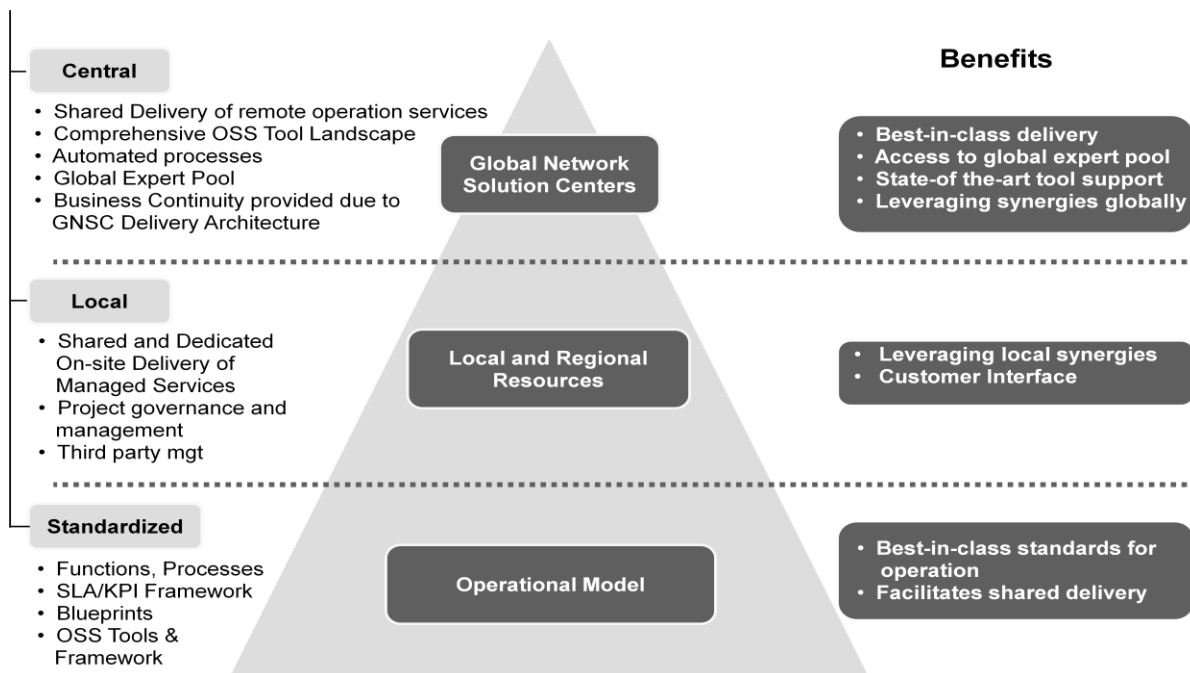


Figure 3-5: Key Elements of Global Delivery

Source: Case Company (2009)

3.3.2. Service Delivery through Global Service Centers

Global network solution centers (GNSC) are centers that are set-up by the case company in low-cost labor intensive countries that provide the same operation and implementation services that could be offered locally, but which benefit from economies of scale when centralized. In a typical case the managed service provider and the customer are based for instance in Finland, but most of the service is delivered from the supplier's offshore location, e.g. in India. Often all other

services excluding customer operations management would be transferred to the GNSC. The GNSC pools the global, end-to-end strengths of the services business unit (SBU), offering: network operations and management, hosting, care maintenance services, remote integration, consulting, planning and optimization, network benchmarking and learning solutions / knowledge management. The functions of a GNSC are listed below.

A global network solutions center involves the following functions: network operating center, business intelligence, optimization, remote care, planning, knowledge management and remote integration. The GNSC handles outsourced network operations and management processes in the global network operation part of the center. The value proposed by these centers includes centralizing knowledge development into one “powerhouse” resulting in the highest possible quality of services. It is also about achieving cost efficiency – aiming at the lowest possible cost to achieve targeted quality levels by combining local and virtual or global operations. The centers provide transparent and comprehensive visibility to the service levels and customers as well as the company can benefit from benchmarking of operator cases.

The case company has three global network operation centers (GNOCs), all of which are newly established, meaning within the last five years. The first, and currently largest in capacity, was set up in Chennai India in 2007. The second was founded in Lisbon Portugal also in 2007, but operations began in 2008. The third was implemented in 2009 and will start operations in late 2009. The global network operations center (GNOC) setup is based on the company’s managed services operations model. The MS operations model is always used when shared delivery services from the GNOC are required because all interactions are based on the model. The MS operations model provides the standardized base for the whole operation on top of which more customized and skilled elements can be built.

Figure 3-6 provides an illustration of the possible operations performed under a managed services contract. This helps to understand the unique service portfolios of the business cases introduced further on in the research paper, and the divisions of local and global delivery components within a managed services case. The main functions that can be performed offshore in global network operation centers (GNOCs) include service level agreement (SLA)

management on the business management side and activities on the operations management side range from fault management, performance management, configuration management, security management, technical support, operations systems support administration, end-user support and operator support to content management. End-user and operator support activities may need to be addressed locally in case there is a local language requirement.

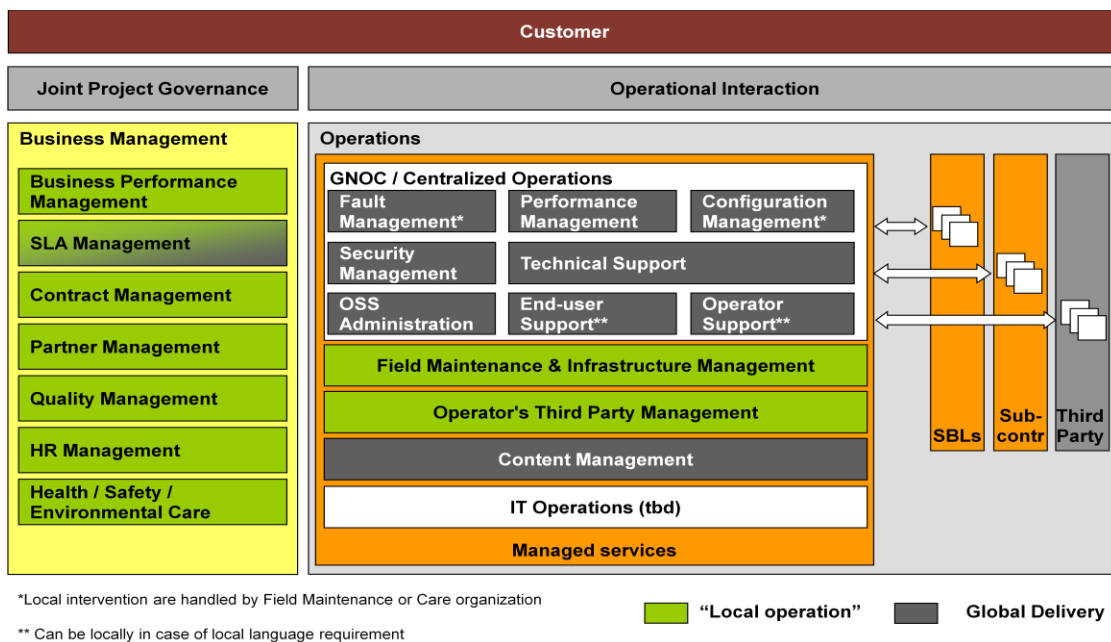


Figure 3-6: A managed services operations model showing a typical division of global and local operations

Source: Case company (2009)

The common mission for all offshore projects is to achieve a healthy positive gross margin while increasing the quality of service. The vision is to have fully functional shared delivery operations according to the company blueprint. As a general rule, GNSC should be used for service delivery if cost savings are achievable in comparison to a purely local delivery setup and if operations from a GNSC are technically feasible. The cost savings of using a GNSC result from a combination of lower cost per head at the global centre compared to local resources and a better utilization of shared resources in the GNSC. These cost savings are however partly offset by added costs such as the actual transmission of activities from the local operation centers to global centers, some necessary overlap of local and global organizations during a transfer period from

the local set-up to the global mode and sometimes even a higher total number of resources used in a shared GNSC & local delivery mode compared to a purely local organization due to the fact that some local organization is always required.

The decision on the final scope of delivery from a global centre depends on factors like technology, physical proximity requirements, local competence, global centre competence, language requirements and possible local synergies with other projects to name a few. In practice, regulation issues need to be taken into careful consideration when opting for offshoring. The process of producing and providing services in other countries has certain requirements that need to be regarded in a hierarchical manner. In the case company an infrastructure solution is selected based on the following criteria in order of importance:

1. Satisfies the local laws and regulations
2. Satisfies company policies, rules and standards
3. Satisfies the working peoples' needs
4. Creates the most cost effective solution
5. Is the most efficient in operational sense

3.4. Cost Accounting Tools in Managed Services

An operator's decision to outsource services from a service provider is ultimately a cost decision. As firms are cost minimizing, the demand for outsourced services depends on the relative cost of producing the services in-house compared to outsourcing. As such, if a company's network operations' costs accumulate to more than the sales when they are produced in-house, the operator searches for means to manage the network more cheaply. Usually this means seeking outside resources to do it. In order for the service provider to be granted the customer case the price of the service must remain below the operator's in-house operation costs and additionally the offer has to be cheaper or better than that of the competition. In most managed services cases the customer demands both better quality and lower price.

Above all, the tough cost environment above all in the telecommunications industry has driven firms to relocate labor across borders. Horizontalization of processes along with the abundance of cheap and technologically skilled labor in certain countries has directed many firms in the

strategic direction of offshoring. In the case company, as a general rule, a service should be delivered by a GNSC, if cost savings are achieved and if it is technically a feasible option to transfer operations abroad. Cost savings are usually achieved by a combination of a lower cost per head in comparison to local resources and better utilization of the GNSC shared resources. These cost savings are partly offset by additional costs such as transfer costs from local NOC to GNOC or the costs from resource overlap for a short period of time. (Case company intranet, 2009)

The Standard Production Cost (SPC)

The standard production cost (SPC) is a cost measure used by the case company. Almost all business cases in the case company are planned according to the number of man working days put in the project. Wage costs differ depending on the competence group: technician, senior technician, surveillance technician, manager, shift leader, etc. The SPC equals the daily cost of an engineer for the company. The time used in project work will show up in the project cost as an SPC. The goal is to allocate all service cost to the project where the time has been used.

The SPC main cost elements include labor costs (salaries, social security, bonuses, incentives etc.), local travel costs, cars (company & project), phone, IT equipment, training costs, management overhead costs (country, sub-region, and region), and platform allocation costs (i.e. HR, office space, IT systems). In addition, contractor related costs are included, but it should be noted that global overheads are not allocated to SPC. Global overheads then come on top of the project SPC and other direct costs. It should also be noted that costs like local third party material costs, external subcontracting costs, contracting costs and international travel costs across borders are booked directly to a project and thus excluded from SPC.

Pricing Guidelines

The basic pricing guidelines for managed services in the company help to achieve the sought margins. The five common services pricing strategies include: market based pricing, value based pricing, customer cost baseline minus, risk reward sharing pricing and cost plus pricing. Cost plus pricing should in all cases be provided as a secondary pricing strategy. Therefore, it should not be used as the primary pricing strategy unless no other strategy is applicable.

The main differences between services and equipment pricing include the facts that services pricing is not based on predefined internal reference price lists, it is mainly driven by project specific scope of the work, the service packages and sales items are globally defined and due to its customized nature the pricing of services needs to be selected and optimized according to project specific requirements.

3.5. Summary of Offshoring Managed Services in the Case Company

Reflecting on the theory of offshoring presented in Chapter 2, more specifically on Figure 2-4 (page 31, re-illustrated below), helps us to parse the set-up of the case company and distinguish the partnership type employed with clients. The blueprint for an offshoring case in the case company currently balances between strategic and a transformational partnership, with elements from both types of partnerships. There is still room for development of the ideal offshoring partnership and the aim should be reaching the most advanced level, the transformational partnership, which provides the most benefits for both client and provider sides. The industry analysis of both client and provider side drivers in Chapter 3.2. shows evidence of the fact that elements of Figure 2-4 are strongly present, but remain at a tactical partnership level.

4. RESEARCH METHODOLOGY AND DESIGN

4.1. Research themes

There are four themes in focus of the interviews within the company. These include the motivations, the benefits and opportunities, the challenges and threats and the cost management issues of offshoring. The original beliefs and doubts among the case company employees concerning offshoring that created the need for this study in the first place included the following: that cost savings are achieved by relocating service delivery to shared delivery centers, that the standard production cost (SPC) –tool is an incomplete measure for budgeting projects, that cost and sales recognition are currently not 100% in line with each other and

between business lines and regions, and that the erosion of gross margins (the transfer of cost savings to customers) needs to be prevented when offshore delivery is applied. These beliefs may seem explicit or even banal based on the literature review and company information discussed earlier, but for which empirical support is sought through the interviews and company analysis process.

4.2. Research Design

In addition to the literature review, which forms the basis for the analyses, the study is conducted by means of research in a case company in the telecommunications industry. The study is carried out as a single-company case study, which was chosen as the most appropriate research method for this study due to the current needs of the company. Offshoring and the financial aspects related to services offshored can be most practically studied in the context of the company that practices it. The content of offshoring cannot be fully understood in isolation, but needs a more contextual approach because a purely theoretical approach gives an unrealistically simplified view of the settings. Considering the one-organization view, however, it is needless to say that generalization of the results is quite difficult to achieve.

The methodology can be said to be exploratory by nature. Exploratory research provides an understanding of and insights into a situation without necessarily stating definitive conclusions. Exploratory study also relies on secondary research in the forms of reviewing available literature, informal qualitative approaches such as discussions within the company and more formal approaches like interviews and case studies. As the results of qualitative research tend to answer questions like “how”, “when” and “why”, they lack answers to questions like “how often” or “how much”, which are left for quantitative and statistical research to answer. This is why exploratory research is typically not generalizable to the population; in this case the telecommunications industry and its competitive companies, at large. Exploratory research results are arguably not useful for decision-making on their own, but they can provide significant comprehension of a given situation.

The field of study is initially approached as objectively as possible studying the features, roles and strategies available in addition to the interpretations and routes chosen by the company regarding offshoring aspects and practices. Secondly, a subjective approach is taken through interviews to focus on the deeper interpretations and the tacit knowledge within the company. Subjective studies always portray the researcher's personal views and emphasis in the interviews as well as those of the interviewees. Arguing for the subjective approach, getting as close to the organization, its methods and people as possible is a way to reach relevant conclusions about the topic that would perhaps not be possible with only objective study.

4.3. Data Collection

In practice, the data sample consists of five managed services business cases initiated between 2007, when offshoring was first implemented in the company, and 2009. The sample choice criteria requires that all cases fall under the managed services network operations business line and offshoring has been considered or already integrated to some extent of the service delivery. Cases of different offshoring degree, maturity stage and geographical location are covered. Managed services is however much more popular in Europe and Asia Pacific regions than for instance North and South America, which affects the choice of cases. The cases are studied in terms of their offshoring strategies, costing and pricing aspects related and the benefits and challenges involved.

The data collection is carried out during and after employment at the case company. The primary source of information are the informal theme interviews held with internal employees in relevant functions, such as business case specific functions or otherwise offshoring-related functions within the case company. A total of seven interviews of similar structure are held: one interview for each business case as well as two interviews on offshoring in general. A secondary, yet important, source of material are the various forms of financial calculations on business cases such as forecasted cost savings and profitability estimations. Actualized cost savings and profit & loss account information proved to be too difficult to acquire considering the novelty of the offshoring practice and the lifecycle stages of the business cases.

The case study is executed by conducting semi-structured interviews lasting from 30 minutes to one hour each. The themes for the interviews are as follows: (1) the current status of the business case, (2) the offshoring of the business case, (3) the challenges of offshoring in the business case, (4) the benefits of offshoring in the business case, (5) the costing and pricing methods of the business case and (6) the history and future of offshoring within the company. Each topic was discussed with the help of more structured questions that were all open to discussion (see Appendix 2). The topics and more specific questions were sent to the interviewees in advance; however all interviews were unique in the emphasis of topics and some discussions even took an additional course of their own enriching the results further.

Some interviews were conducted in English, some in Finnish depending on the more natural common language for the participants. This may present some challenges when quoting and interpreting the results. Suggestions for improvement on handling offshoring as a part of the managed services equation are based on both findings from the varying financial information available for business cases as well as the analysis of interviews. The case studies have been done in order to compare real life offshoring cases with the theory from the literature and especially to verify how well the company's offshore-related theory is implemented into processes in practice.

The following chapter discusses the interviewed cases in order of discussed topics, commenting and comparing different cases as we go along, instead of analyzing case by case. The preliminary table at the beginning of the chapter will give a brief introduction to the key features of each case in question.

5. BUSINESS CASE ANALYSIS AND INTERVIEWS

Table 5-1: Key Data of the Business Cases Studied

Source: Author

	Customer Continent	Offshore location	Contract Duration	Starting year, Current year	Business Case Scope
Case 1	Europe	India	5+ years	Start: 2006 Currently: 4 th year of operations, renewal after first year	Monitoring shift, fault management SLM
Case 2	Australia	India	5+ years	Start: 2007 Currently: 3 rd year of operations	Network operation scope: performance, fault and change management, operations support
Case 3	Europe	Portugal	4+1 years	Start: 2007 Currently: 3 rd year of operations	PSTN network operations & planning
Case 4	Europe	Portugal	5 years	Start: 2007 Currently: 1 st year of operations	Complete solution: network design, optimization, implementation and operation
Case 5	Europe	RNOC Austria / GNOC Portugal	3+ years	Start: 2009 preliminary & budgetary Currently: On hold	Network operations, planning & performance

Offshoring services within the case company started in 2006 when the first captive network operation center was set up in India, Chennai. During the following years the strategy was developed further and it was noticed that the centralized network operation center concept should be expanded. When the GNOC in India was at maximum capacity the company developed plans to establish a global network operation center in Portugal in 2008, where quality and cost of labor met the specified requirements. According to Respondent J.R., Portugal as a location is beneficial due to it being a European Union Member State and some customers within Europe prefer centralized delivery to be practiced within a closer range than India. This as such would

more precisely be known as nearshoring instead of offshoring. The company is now in the stage of starting-up its third GNOC, this time also in India, but in New Delhi. Despite customers' resistance so far to offshoring, it seems the net cost savings are so large that it is worth practicing.

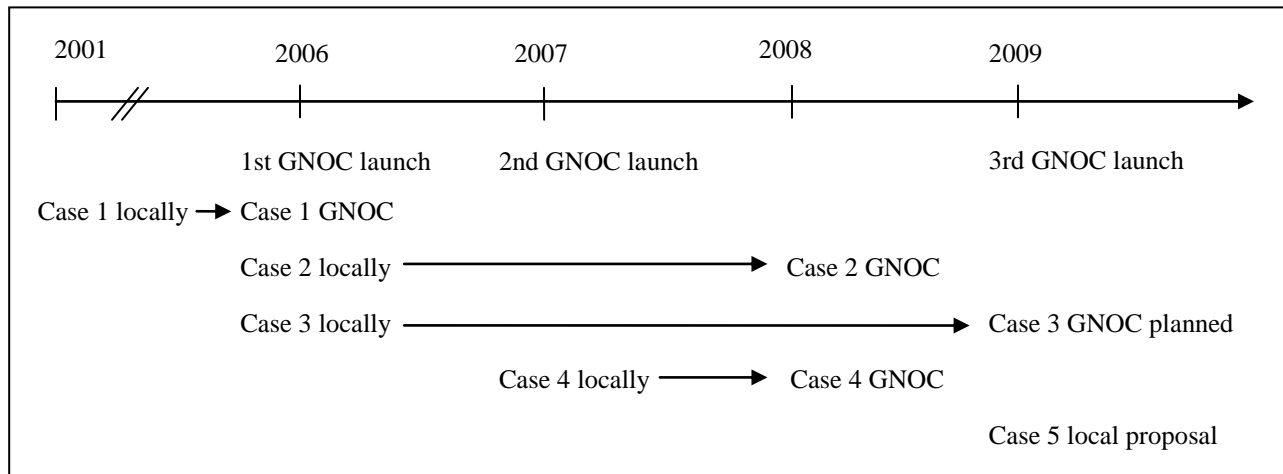


Figure 5-1: Chronological Order and Time Horizon of the Business Cases with regards to Offshore Activity

Source: Author

The following five business cases are in chronological order counting from the initial starting point of the case. The general business relationships are two or three-fold: firstly, there is a relationship between the network vendor and the operator, which sometimes consists of a separate relationship between the network vendor's local and global functions; secondly, there is an internal division of work between local units and global network centers within the network vendor. This is depicted below in Figure 5-2.

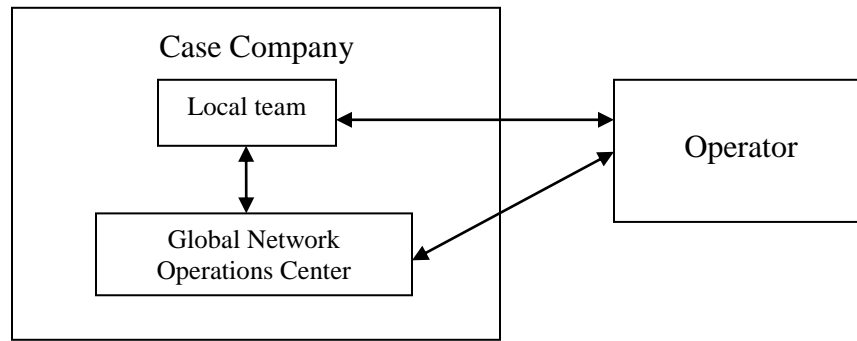


Figure 5-2: The Business Relationships in a Network Operations Case

Source: Author

5.1. Case 1

The first business case is chronologically the oldest, in other words longest running, business case included in this paper. The project is operated today from the network operation centre in India. The company provides a range of services including technical front office, network monitoring, second line maintenance, performance and configuration management, multivendor spare part management and field and site maintenance services. The company has been active in the project since 2001 having renewed the contract twice after initiation. The CEO of the customer company comments positively on the business relationship.

“It is great to have a reliable supplier that can provide us solutions and operations that enable significant cost savings and allow us to focus on other areas.”

(Case company internal, 2009)

According to the transition manager, whom I interviewed about the business case in question, offshoring was attempted to be introduced into the operations of the business case first in 2006-2007, immediately after the company’s first global NOC opened up, but the attempt failed. The current team was more successful the second time round one and a half years later in 2008 thanks to reasons like offshore services having been fully implemented with new management in the managed services organization, increasing global pressure applied within the company to utilize the global NOCs and their resources and to cut costs in the meantime and the capacity and capability of the company’s first global network center in Chennai having increased a lot.

The attitudes among team leaders paying visits to the global center were initially skeptical and negative and thoughts like “This will never work”, were verbalized. The interviewee continued to describe the complications and reasons behind failing to implement offshoring and meet targets the first time explaining that there were multiple challenges at that time, which is why any one reason is hard to dissect or highlight above others. There was the escalation of demand from the customer, the customer’s apprehension with the company’s performance in offshore operations, a very unstable network and adding on more people to the task all the time, instead of removing a task in Sweden once it was moved to India.

“We never succeeded to lower the costs here in Sweden totally, if you look at the total case. We moved the tasks to India, offshored them to Chennai, but instead of removing people from here and removing costs from here we did new tasks, meaning we kept the same amount of people, resources, here and kept adding on more resources in India on top of that.”

Thus, an actualized challenge for this case in the initial trials of offshoring was that with the rate of adding on people in India and transferring tasks offshore, not as many were removed in Sweden. The team did not succeed in lowering the costs in total, because instead of removing people, and meanwhile costs, from Sweden when tasks were moved to Chennai there were new tasks taken on, meaning that the same amount of people, resources, were kept on and more resources were added in India on top of that.

However, the first failure helped the team that was battling with the same issue more than a year later to realize where improvement was needed. In the initial stages of the second attempt to offshore tasks the team moved quickly and put a lot of effort into re-evaluating the prospects of Chennai only to realize that the center was much more prepared this time, yet still required a careful and controlled approach to transitioning tasks.

“Of course there are things to consider when you do this; you can’t just think you move one position from Sweden to Chennai without doing any adaptation or changes. You need to really figure out what are the main tasks you want them to do for you.”

The whole project was reviewed in detail and all possibilities sought out. Processes were broken down into task-based activities and every task was evaluated according to the possibility of moving it offshore or not.

“The contract extension for this case was due in some months’ time and the team understood that if they couldn’t lower the price internally, cost-wise, and lower the price to the customer they would lose the contract in the long run. Therefore a wider scope of transitioning tasks to India was evaluated in order to dramatically cut costs, which is what they had failed to do in previous phases.”

With also the capacity and capability increase in Chennai the team now had the possibility to move more of their scope offshore depending on the respective proximity limitations of each task.

The distribution of functions between local and shared delivery centers for this particular case is currently 15 % on the GNOC and the remaining 85% are operated locally. The aim is to reach a total 70 % of the total delivery costs for the project arising at the GNOC and only 30 % locally. The transition manager comments that in his realistic view 60 % offshore delivery can be reached within a few years.

The interviewee sees the benefits of offshoring accumulating in the near future due to the facts that there is a workforce in the global network operations centers that is extremely talented, capability and capacity have been hugely developed over the years in the company premises, the talented and centralized workers can allocate their time over a range of projects and in the meantime offer a faster-time-to-market for services than the operator could provide itself. In contrast, one of the threats of not achieving the planned cost benefits in this case is the changing index regulation of India and rising prices causing wage differentials to diminish between India and Sweden. Another potential threat to the company is the increasing customer awareness and bargaining power to share the savings achieved with the operator.

The interviewee explained that the cost plus calculation method was applied in the case because it was an existing delivery and they had a good understanding of the actual costs. Some assumptions were made regarding the changes in scope and delivery model concerning

offshoring in particular. The business case shows that GNOC services definitely reduce the total delivery costs, which is why the team continues to look for more tasks that can be delivered from the GNOC. In addition to saving costs on using GNOC, the team has managed to reduce the delivered scope while keeping the customer price on the level of the previous contract. This is the ultimate goal of offshoring managed services: to provide better quality with fewer resources, in order to keep the margins within the company. As the case shows above all that the largest cost savings resulted from tasks being offshored to GNOC it was successful in terms of offshoring.

During delivery the cost baseline has changed adversely, mainly because some management functions were underestimated in the original draft. A second factor resulting in discrepancy between planned and actual costs was renegotiated contracts with subcontractors, whose prices rose due to cost pressures. An additional reason to changes in cost baseline for this case was the initial presence of double costs during the transfer of operations to GNOC from customer. The business case has already begun to yield a positive gross margin despite the fact that the customer has been granted a discount during the first nine months of the contract period. The first year of the contract is against all odds probably the one with the most cost savings because of slimming activities that have been quite intense in the beginning to maintain the cost baseline.

In general, even if cost savings are achieved the most in the first year of the contract, because the most radical changes are implemented, the project itself is not going to yield profits to the company before later stages. This is what can be seen in Figure 5-3 below, which shows the cost savings analysis for the whole business case one year into the past and a year into the future. This analysis contradicts with the previous statement of achieving cost savings in the first year, because the statement refers to only cost savings achieved from a lower SPC and slimming activities in terms of man hours, whereas the figure shows that projects are usually negative in the first year due to initial investments and transfer costs. In this business case the target profit margins were achieved in negotiations. An uncontrolled expansion of the scope during the delivery phase, however, is seen to be one of the biggest threats endangering the cost benefits sought by the offshoring.

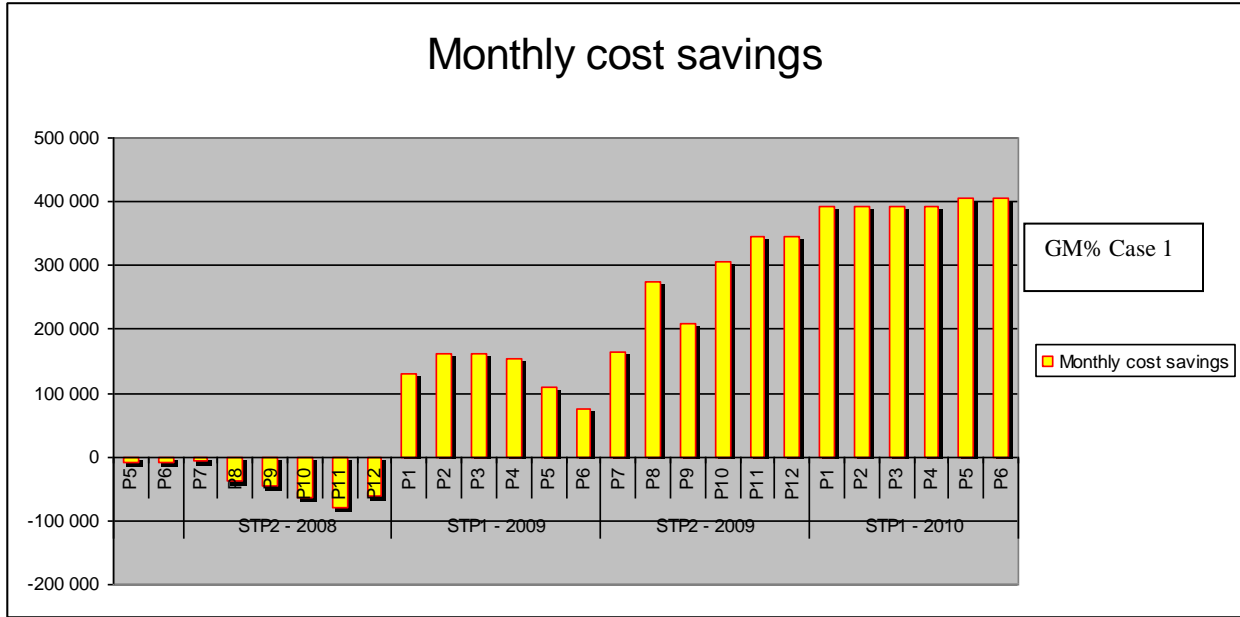


Figure 5-3: Estimated Monthly Cost Savings of Case 1

Source: Case company (2009)

Allocating costs within internal company business lines appears to raise problems. This is the case also in this project where allocating external costs remains to be a challenge although the team has worked quite a lot with defining cost collectors and allocating costs correctly. It seems that allocating especially external costs between projects and the different business lines of the company continues to pose problems. The current cost and sales recognitions methods are not accurately in line with each other nor are they fully aligned between business lines either. The cost recognitions are usually done as soon as they occur, but the sales recognition lags behind between different business lines and regions. There are some inconsistencies between recognizing the cost and sales between business lines and some disputes arise regarding both effort in the business case and the cost owner. An example of such is that network design work is done in a network implementation project but costs are reported under managed services. This external cost then later becomes a significant problem when it comes to recharging the actual costs between business lines.

The interviewee considers the SPC as a valuable measure for internal costs. The general local SPC varies around 800 whereas the offshore SPC is somewhere between 120 and 200. That already suggests a fourfold difference in costs. The case transformation manager considers the

SPC to already be quite a good measure, but says it would be much better if SPCs were differentiated for different types of work and competence. Managed services projects also have many external workers and since there is no SPC for externals, cost calculations are not always very accurate. In the external worker's daily cost rate no such things as management, workplace resources and IT and tools are included, which means that in projects with many externals these costs end up as unaccounted for.

With the critical interrelationships between managed service division and the shared delivery centers one problem is the recharging of costs from the GNOC. Although GNOC has its own cost position the cost recharge is not done automatically via the work allocation tool WTR. Instead, timesheets are sent to responsible managers for approval and costs are recharged manually, with perhaps error and delay. The interviewee states that error and delay are minimal as long as the offshore tasks are limited, but the more that tasks are added offshore, which they continuously are, the further away from optimal the cost recharging method is. This project has been successful up to now and more offshoring opportunities within the project continue to be seen.

5.2. Case 2

The second business case of the study is the only business case located geographically outside Europe, in the Asia and Pacific region. This has to do with the fact that managed services contracts are much more common and largely practiced in Europe and North America regions. The option to offshore services became financially viable and attractive for this case after making heavy losses when operating only locally. Heavy losses were only forecast to continue if no cost savings solutions were implemented. In addition, the Chennai GNOC presented a more than suitable environment for this specific operator as many of the processes have been modified for the specific benefit of this operator's Indian market. The operator has already become acquainted with the network vendor company's methods and abilities over the years and the network vendor has the position to leverage its knowledge of the operator's operations to provide smoother transition of services.

During the interview, the project was in transition stage having fully transferred all the operations in scope over to the GNOC, but being shadowed by the local team for a few months. The actual business case is then set to continue for another four or five years. Services delivered from the GNOC cover approximately 30 percent of the total scope of the project. From the GNOC the scope includes change management, configuration management, fault management, performance management and operational support system functions. Fault management entails network surveillance, incident management, operational reporting, corrective maintenance and preventive maintenance activities. Configuration management services include the integration of new equipment, network augmentation and scheduling of network changes. Performance management includes several types of reporting services and key performance indicators. The GNOC also supports the customer systems and monitors their Internet Protocol.

The customer did not object to offshoring. In general the customer company was already indirectly familiar with the network vendor's global center in India the network vendor having a significant extent of the customer's Indian operations there. In fact, the interviewee comments that the network vendor is looking to expand its cooperation with other geographical units of the same operator company in order to benefit more from synergies. The GNOC in Chennai India is very much one-customer-oriented at the moment, and this specific business case happens to be another geographical unit of the same operator, so the case and the case company can benefit very well from moving operations to this centre where they are already familiar with the operator's tools, systems and interfaces.

Furthermore, from the customer's point of view, the operator company's representatives paid several visits to the global network operations center in India to familiarize themselves with the facilities and opportunities before the offshoring project was launched. These visits resulted in a more positive and trustful relationship between the network vendor and customer and the customer is of the opinion that the network vendor can add plenty of value to their operations. The customer is certainly looking for cost savings benefits to be forwarded to them as well, but the network vendor is rather aiming to retain the same level of charges in return for better support, increased quality and flexibility.

The reasons behind moving operations offshore to India were cost savings related. The interviewee implied that India is an extraordinary country in the sense that there is an abundance of high quality labor, skilled and highly educated, that is accessible for companies like the case company at a much lower cost than in developed countries. In addition, it is one of the few geographical areas where graduates have a high technological skill set that is readily available for ICT-industry companies. Thus the two main benefits, cost savings and high quality skilled labor, are available in the same place.

Another benefit, according to the interviewee, is also the fact that there being a relevantly large number of employees, 700, at the operation centre equipped with the knowledge and capabilities of remote network operations services a skilled group of people can take on a new offshoring project at a much reduced time. The time is increasingly reduced as the learning curve continues. The core competency and skill level is already there so the additional training needed to get the staff up to skill is minimal. The interviewee elaborates that the case company uses consistent processes and organizational structure across different accounts and projects so the processes themselves would run as smoothly as possible, be very tested and robust.

The challenges that the interviewee presents in relation to this case are differences in culture and problems with language. The network vendor has already started language training both ways, teaching English slang and the way Australians talk to the GNOC workers in India and teaching the Indian culture and slang to the local contacts in Australia. The interviewee considers this a step in the right direction and already overcoming the major hurdle.

There have also been some regulatory challenges from the Australian government's side in relation to transferring operations to India. More specifically this is related to the government denying the transfer of certain data of the Australian network back to India as a cause of which the initial proposal was modified. A challenge has also been to get the full support of the local unit, in this case the case company's local workers in Australia, while they may be experiencing a downsizing threat as a result of the offshoring.

The interviewee admits that from the customer's perspective the case company needs to prevent the risk of degradation of network performance and availability. As a result of offshoring there will be a transfer period and an adaptation period on the global network operation center side, during which the business case team needs to pay extra attention to keeping the roles and responsibilities of people clear in order to avoid misunderstanding and lapses in network performance. Another risk that the interviewee recognizes is that the company loses the ability to revert back to Australia if necessary if some skilled local personnel who are in positions equivalent to what is being picked up offshore are laid off.

5.3. Case 3

The third business case is a project operating in Spain since the beginning of year 2009. The first few months were dedicated to preparation, making sure that the network vendor was ready to take on the operator's tasks after ramp-up stage. During this preparation stage the business case was in line with plans, budgets and contracts and running smoothly. The business case is a multi-business line task ranging from network implementation and optimization to all quality-related operations management tasks. Considering the whole range of tasks offshore activities account to only nine percent of the total, but considering only the network operations segment, the activities offshored add up to a much larger portion.

The business case is the largest offshoring task, in terms of resources, that the Portugal GNOC has seen. To put it in perspective, the global network operations center has previously operated a network for 200 000 subscribers and with this project the number of subscribers will radically increase to 18 million. Not only is this an opportunity to develop offshore efficiencies further, but even more a situation that brings about unforeseeable challenges that the network vendor, meaning the case company, cannot afford not to master.

For this case the motivations to offshore were two-fold. Firstly, cost savings and secondly company policy based issues drove the decision to offshore. The interviewee confirms that when comparing the costs of operations locally in Madrid with the costs of operations in the GNOC in Lisbon, the transfer results in approximately a 15 per cent reduction in original costs. When

looked at in more detail, the reason behind this is a difference in salary levels. The interviewee reveals, however, that a difference in salary levels is an evident one, but the real savings for the network vendor should result from a further optimization of operations in the GNOC. This means that the savings resulting from transferring operations offshore will be largely forwarded to the customer, but bringing in more and more processes to the shared delivery center as well as building and developing tools within the GNOC will lead to profit creation for the network vendor. Purely from a project point of view over a period of one to one and a half years the aim of the business case is to make profit.

Even though the contract is a major milestone for the company it presents high risk and numerous challenges. Being the very first contract of this size in the Portugal GNOC, the interviewee states that there are evidently high risk factors for launching it successfully.

“So first of all, yes, it’s a very good reference [for the company], but secondly it’s a high challenge. Simply because ramping-up an organization and processes from basically zero to 18 million is quite a challenge currently.”

The interviewee elaborates on two challenges. First of all, challenges with staff include two aspects: changes in the nature of tasks and environment of the GNOC and changes in the amount and level of skill of the personnel. The second part of the human resource challenge relates to the amount of people working at the global site. The Lisbon GNOC has until recently only been working in a fixed line network environment with a very small customer base.

In contrast, the current environment requires staff to have know-how in all three fields: mobile, fixed and data, thus creating a need for the GNOC to “up-skill” their internal staff. Also the customer base has multiplied by thousands creating another challenge to meet demand on the required rate. According to the interviewee, the Lisbon GNOC employs roughly about 50 people. Now only for this particular business case, they are employing 140 people. Therefore there is a very steep ramp-up and a very steep learning curve in effect at the GNOC. Under the strict time constraints, these rates are really affecting quality. The interviewee concludes that the challenge needs to be mastered or cases will be lost.

The second challenge discussed is language. This is quite an imminent problem in the shared delivery centers. The interviewee claims that there will always be problems with language, if it is not an English speaking environment being operated. The network operation centers need to communicate with the local operator's field maintenance unit; this is essential in the operational environment. The problem is that local field maintenance personnel are usually a group of people with very low skill level speaking only their local language. Similarly the NOC staff in Portugal, is not very fluent in languages other than their native language and English, in this case Spanish. The result is having to introduce a layer of people interfacing with those technicians in the field speaking Spanish and the GNOC in English.

“So the challenge is now to take the existing organization in the GNOC and transform it to the needs of the project. And this comes with time. This can only be done through experience.”

The benefits discussed by the interviewee are two-fold. First of all in this case the parent company of the operator intends to centralize more and more of its operators' functions into the GNOC, which means more business for the network vendor. The second and bigger advantage of offshoring compared to competitors is attempted by introducing tools, which are shareable and that have the ability to automate standard processes. The parent company of the operator is naturally looking to increase savings from increased shared center delivery. It is also especially looking for tool rationalization rather than people rationalization, meaning that currently it has too many different tools in use for specific tasks, taking up too many resources and it is looking for solutions to combine the tasks into fewer tools. From the operator perspective, this is an even more sustainable solution in the long run with respect to intensifying operations through people. The risk for the network vendor lies in making the shared delivery center too focused on one operator. The interviewee warns that if a GNOC is tailored too much to the needs of one operator in particular, efficiency gains and other internal gains will be lost, that would otherwise result from operators benefiting from each other's activity in the GNOC.

“If you're dedicating this [the GNOC], then the benefit is only on salary, not on optimization. (...) If we succeed in introducing tools which are shareable and which have the ability to automate standard processes, then this is the big

advantage and the big benefit of our GNOC solutions compared to those of our competitors.”

In this case both a top down pricing model and a bottom up costing model was used to estimate the price charged from the customer. The price expectations from the customer side were in line with the costs they incurred for the operations transferred adjusted with the average savings that result from these types of outsourcing cases. This was the top down pricing. The bottom up costing is based on the case company's own costs from the operations and the difference between these two methods is the margin that the case company receives. The margin target for this case was negative for the first year, because heavy costs are unavoidable due to transition. However, margin targets are turned around from the second year onwards. The biggest cost savings for the case company in this particular case did not accumulate so much from GNOC operations specifically, but rather from changing the delivery model locally. According to the interviewee, this could be reached through process re-engineering and combining maintenance and installation teams in the field.

Individual business cases are measured on their individual margin. However, the case is sold as an end-to-end service case to the customer, which means that the margin that was discussed earlier is shared among all business units. According to the interviewee, this creates disputes and control issues internally for the case company.

“Purely from project point of view, I don't care too much how this is split behind the project, as long as I'm delivering the service margin which has been my target. But this is a general issue in [the company] Managed Services that is complicated and creates problems. [...] Currently we already have disputes between business units on regional level how to share the pain [costs] of the first year.”

The interviewee continues to explain that the arguments are especially painful for business units, but do not concern the project. For the benefit of the business case each business unit does not have a dedicated controller working on the project. Instead there is one managed service controller who measures actual costs against the business case.

“If you are managing the project according to the company blueprint, then you will fail, because there is much too many overheads in there. But in service delivery you have to have a transfer execution, no silo execution.”

The project does not look at splitting margins or the business units’ responsibility. To give an example, in the first year of this business case, there is one business unit that is making a profit and two that have a negative margin. Until the margin is turned around for all the business units *“the margin recognition between those business units will continue to be uptight”* according to the interviewee. The interviewee puts forward a solution that commonly takes place in the internal organization’s accounting: *“To put it bluntly, what happens is the one business unit that is making a profit will be pushed to share their margin.”* In this case the operator was at first against offshoring. The parent company on the contrary felt quite positively about it, due to attractive cost savings and was willing to impose this on their daughter on the condition that operations are not offshored to India. The customer wanted operations to be managed within Europe mainly due to the fact that Indian and European operations are still different from each other. The choice was also human resource management related, as the customer believed that due to higher turnover of people in India the operations are more secure if handled from within Europe.

The interviewee disagrees with the suggestion of managed services network operations cases being possible to standardize. The case company has tried to implement a unified business case. There are, however, always wishes from the customer’s side. This is why each region and each team working on a certain project usually creates and modifies their own tools. During the tender phase in this case for example, a lot of changes occurred and the whole phase lasted for a year before the contract was signed.

“If we are not able to act really fast and customize your own individual case to the needs of the customer, then you lose your case to competitors.”

What the interviewee does consider of importance to standardize are for instance the general rules that apply to business cases: what activities have to be done offshore, how you handle costs that are not in the business case or that are not unforeseeable, how risks are taken into account in the business case, or how and to what extent the shared delivery centers act in the business cases.

“Shared delivery centers are purely cost centers, which charge all extra costs to the project. [The case company] has these kinds of rules, but they are partial and need to be developed, but a standard business case is not realistic.”

5.4. Case 4

The fourth business case has now been running for 3 years, but in contrast to the previous mobile network case, this case concerns mainly fixed line operations. The customer in this case has been against offshoring from the initial suggestion. However, after some negotiations, the customer agreed that as long as the services conducted offshore do not affect the customer interface and operations run smoothly it is alright to offshore. These customer apprehensions towards the idea of offshoring were one of the reasons that drove to the decision of choosing a closer global network operations center than the one the company had established in India. Another reason for choosing the GNOC in Portugal was the specific operator-focused operations in the Chennai GNOC that may not have been suitable for this operator’s needs. The reason why collaboration or mutual synergies with the operations from the previous case are unlikely to be reached is because the first case is a mobile network case entirely whereas the second one is much more a fixed line network case.

Regardless that the second case already has more than a year of offshore activities’ ground work behind it, it has not developed the offshore activities with rapid pace due to a number of problems, communication to name one of the biggest. After approximately one and a half years of operations the case is starting to show initial signs of profitability, which is quite natural for long term network operations cases.

An interesting and challenging phenomenon of many managed services cases is the transfer of people to the network vendor, which is what happens to some extent in Case 2. This conjures new problems regarding cost-efficiency issues as well as managing human resources to best serve the customer operator with the delivery of the network. In this case clear cost savings were calculated based on estimations of reducing resources. The interviewee claims the project team to have experienced challenges in reaching the efficiency level that was planned. Resources

could not initially be reduced at the pace that was hoped while keeping up the level of quality required. A positive margin was reached for the project's second year, although the project was performing negatively the first two quarters of the third year. This was turned around in the middle of the third year by reducing 40 percent of the resources on the local end.

Research about the possibility of offshoring in this case started a year before any concrete action was taken. The GNOC in Portugal was considered as the first choice for this particular operator. A thorough list was made in collaboration with the Portuguese GNOC, and reviewed several times, to see which operations could in fact be transferred elsewhere and on what schedule. The amount of human resources or work hours that could quite easily be transferred was minimal.

According to the interviewee, the most challenging obstacle to overcome in the process turned out to be language. In this case the operator's tool environments and operation tools, meaning all customer interfaces not under the network vendor's ownership, are in Finnish. Thus, all customer orders and fault tickets come in Finnish limiting the choice of activities that the case company can offshore. Nonetheless, there are some more technical tasks within network operations that do not have to involve the customer and these activities are then the ones that can first be offshored. The offshoring for these tasks has however been put on hold due to some actualized restructuring issues.

There were three motivations to offshore that the interviewee discussed. First of all, the case company strategy, which outlines that every network operations case should look at the possibilities of offshoring. Secondly, or most importantly though, cost savings intentions were the main reason to offshore. Thirdly, it was motivated by some new potential projects coming into the local unit, which would limit the resources locally even more creating demand for more tasks to be relocated.

The risks mentioned include being a small-priority case for the global network operations center in comparison to Case 1, which may affect the chance of getting things done in the best possible way for the operator. Another risk, the biggest according to the interviewee, is the actual capability of the global center to take over the operations from the local unit, because the

operations encompass so much older technology and fixed line operations that the global network center has no prior experience with.

“Considering the competence there is [at the shared delivery center] and their realistic interest towards our tasks, it is an evident and very relevant risk that everything goes wrong from the global network operation center’s side.”

The potential benefits that lie within offshoring this case are that the network operations center already has increasing capabilities and resources to offer these operations due to the synergies created with Case 1. The synergies are small, however, considering that the cases regard two different types of technologies. Nevertheless, some tasks remain the same, pertaining to coordination and field support. First and foremost the offshoring activity aims to reach cost savings benefits: supplying services with less costly resources, but secondly the project team expects the offshoring to create quality in the long run. The interviewee highlights that

“The fact that the standard production cost per day is approximately 100 EUR smaller than when produced locally, is already a big difference.”

An imminent risk with the calculated cost savings regarding personnel costs is that they will be delayed, because double resources or resources locally cannot be cut in time. Another risk is that there has been subcontracting involved and in case the subcontractors suddenly increase prices the project budget may become distorted.

The customer price for the business case was based on bottom-up costing, including initial estimated costs added with the business unit’s standard margin. The case also involves a fixed project payment and a subscriber based variable price. The variable price is based on the volume of subscribers that the network vendor has to service the network for. In this case though, the trend for subscriptions has been negative, since the fixed line network is losing customers to mobile operations.

5.5. Case 5

The fifth business case is more of a learning case in the sense that the whole case is still in a preliminary stage with no activities. The company bid for the network operations management of

the operator and calculated the most suitable option in terms of quality and cost balance, but the operator put the case on hold after preliminary suggestions and budgets. This does not jeopardize the analysis of the case; on the contrary, the reasons behind the customer choosing another supplier or remaining with its own network management can be evaluated.

The theme of offshore operations has become varied due to a number of reasons, but one of them is that offshoring is not seen as the single independent low-cost solution anymore. Today the variation arises from the need to balance global resources with local requirements. Initially offshoring may have occurred only for the benefit of producing in low-cost economies paying very little attention to the clients' end users and their convenience of having close-proximity service. In contrast, the common practice now is to arrive at the best solution for the end user in terms of quality of service by mixing and matching offshore and onshore activities.

The fifth case is a perfect example of this theory as the company chose to offer a slightly more expensive local network operation center for the operator in return for much higher quality of delivery than the customer would ever have received through delivery from a global network operations center. The company decided to focus on the customer's need for customization in this case and compiled a solution that it thought would best fit these needs. Currently, the project is waiting for customer feedback and either approval or rejection or further negotiations.

5.6. The Future of Offshoring

The future development of offshoring, that more and more activities will be offshored, is evident for all the interviewees. Respondent A.A. comments that THE CASE COMPANY has the advantage of having only three shared delivery centers instead of tens. In this way the company has the potential of pooling together a vast number of tools, equipment and resources to supply better services for the customer and compete against its competitors. There is a growing demand for offshoring due to pressure on the market to reduce costs. Respondent J.R. claims that with a technology-pull offshoring will grow stronger in the future with even more opportunities. The risk of transferring all the cost savings to the customer remains, as seems to be the case currently with cost savings from salary differences. All interviewees comment that the aim should be on

automation to achieve cost savings and in that way improve the margins kept within the company. The interviewee A.A. also claims that “the trend is more nearshoring than offshoring”, which means that the network vendor and a lot of the customers prefer to keep the activities within their continent, although they are willing to accept and exploit the fact that some geographical areas can provide the same service with a lower price. The standard production costs for an engineer in Portugal are still about 20 000 EUR less annually than the standard production costs for an engineer with the same tasks in Austria for example. Hence, cost savings can be reached even by nearshoring.

As mentioned above with the fifth business case, the trend nowadays focuses and values customization. Therefore, companies in the telecommunications industry may be moving slightly away from the fixation on cost-consciousness and moving rather towards seeking long term value through customer relationship management.

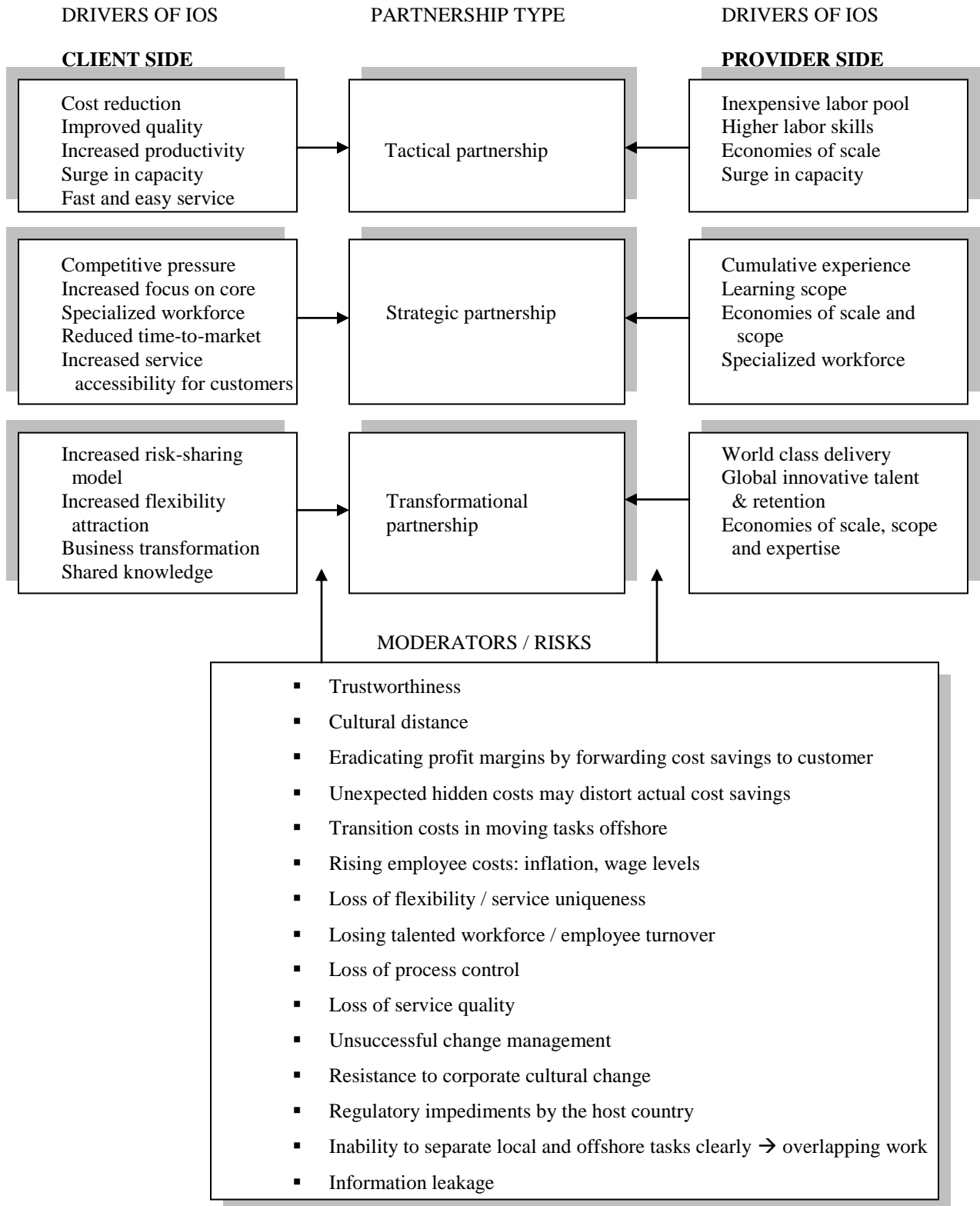
6. CONCLUSION

6.1. Discussion and Summary

The purpose of this study was to describe and evaluate how offshore activities are managed in the particular market of managed services and how cost accounting methods support this management. The five different business cases studied provide insight into the practice of managed services and how much reality resembles what is depicted in offshoring theory. The research drew on the strategic aspects of offshoring and touched upon costing and pricing aspects of managed services.

From the above five cases and supplementary material we can conclude that moving network operations offshore is on the rise but does not come without challenges. The amount of network operations tasks offshored makes up a large portion of the total telecommunications services managed offshore. This is because with the technology today, more routine activities like fault and performance management can be moved abroad, whereas network implementation or consulting based activities often remain local.

The drivers and hindrances for setting up different levels of partnerships between operators and network operations providers were discussed in Chapter 2.4 and illustrated in Figure 2-4. In order to link the theory and empirical evidence of this study together, I will reflect the results of the business cases presented in Chapter 5 through the model. The model is presented once more below. Although the blueprint for an offshoring case in the case company currently balances between strategic and a transformational partnership, as mentioned in Chapter 3.5., typically an actualized case only reaches a tactical or a strategic partnership level.



The cases show that benefits are to be gained from offshoring network operations. Some of the benefits mentioned in the above cases include freeing up local resources to focus on customer interface issues, cost benefits, gaining knowledge and capacity that would not be available domestically. These benefits are also supported by literature.

The challenges of offshoring are said to be both quantitative and qualitative. Maintaining the service quality throughout the process of moving operations offshore remains a challenge. Especially the initial stages of service delivery from the offshore location are risky in regards to quality of service: personnel are newly trained and insecure; tools and systems are not running smoothly; and overlap in roles and functions can cause miscommunication, delay and unaccounted costs. Drawing on the characteristics of services, as discussed in Chapter 2.1., it has been seen that different challenges occur in practice than with manufacturing offshoring. Services create more invisible costs that stem from communication and cultural issues.

Although the biggest challenges in most offshore cases seem to arise with communication and cultural issues, surprisingly few challenges arise with technical feasibility issues. These can be for instance not having advanced-enough technology to actually perform the task remotely, or cost accounting issues, such as failure to recognize company internal revenues correctly to the correct business line. A critical time in the offshoring process occurs during the transition phase when resources are added onto the chosen global network operation center and should equally be decreased at the local level. A reasonable overlap period is common, necessary and advisable, but as the case interviews demonstrate, failing to reduce the resources in the long run will result in failure to reach the goals sought out by offshoring the network operations in the first place.

Interdisciplinary literature concerning culture and communication challenges needs to be applied to the discussion of offshoring challenges in the ICT industry, because many of the practical issues that arise in the interviews are related to communication challenges that hinder offshoring in the case company's global network operation centres. Communication-related costs were also raised in the research by Stringfellow et al. (2008) as sources of hidden costs when transferring operations offshore.

Communication and cultural issues that arise in these projects make the technical challenges of offshoring seem nominal. Transnational companies face the challenges of managing global knowledge networks and multicultural project teams that interact across boundaries using global communication technologies. Companies' internal and external networks mediate their worldwide activities and directly link to their production chains. (Soderberg & Holden, 2002.) If these complex interchanges of information do not work smoothly and are at risk of being misunderstood, the whole business process is at risk. This is a risk that was mentioned in Case 2 and 3. In Case 2 it was a question of conducting language and cultural training for both Indians and Australians to understand each other's English, where as in Case 3 it was a challenge for non-native English speaking Finns to understand Indian English.

Internal conflicts about revenue recognition between business units create a disadvantage for the case company in combating fierce competition as a united front. Within one project it seems like there are separate companies acting in their own individual benefits under one common roof, which may result in an overall hindrance to the company itself. The so-called internal competition drives a wedge between business units and does not motivate to reach mutual targets that would benefit the company as a whole.

Theory and empirical evidence are in line on the fact that certain locations are more popular than others in offshoring services, India at the top of the list for multinational companies. This is often due to educational, infrastructural and economic incentives that have been aided by the offshoring companies, but most importantly by the nation itself through massive investments. Initially cost savings may result purely from wages, but in the long run this is not sustainable and other means of competitive advantage need to be present. Over time companies that have once offshored some tasks will continue to offshore more processes and more automation will be involved increasing the cost savings for the company. The risk for companies to calculate their cost savings too optimistically prevails, especially if the possibility of hidden costs or additional overheads is not accounted for.

A risk that was mentioned in Case 2 is bringing back talents or tasks that have once been offshored and discontinued domestically, because it is extremely costly and difficult. A risk that

is mentioned in both literature and by the case interviewees is that the quality of service may be degraded at the start of an offshoring process because the level of knowledge has not yet reached the level that was currently held in domestic sites. The same degradation may occur if the offshoring transfer is not successful and service delivery needs to be transferred back to its original location where the same talent may not be available to provide it anymore.

Finally, considering the human resource aspect of offshoring, both theory and empirical evidence shows that personnel are likely to present feelings of heavy resistance towards offshoring tasks, because they are afraid of losing their jobs in short or long term and will refuse cooperation and transfer of tacit knowledge that would aid the process.

6.2. Contribution of the Study

6.2.1. Theoretical Findings

Previous research in the area of offshoring focused first on illustrating the importance of global sourcing as a tool for competitive advantage, then on the evolution from manufacturing to services offshoring, the evolution from tactical to more strategic objectives, a tighter integration of partnerships between clients and service providers and evolving ownership patterns. Theory suggested that services have such important characteristics that distinguish them from manufactured goods that the decision-making of offshoring is also very different.

The activity of offshoring has clearly emerged as a key strategy especially in the IT-oriented business, yet there is was a research gap that needed to be filled in the field of services offshoring study from the operations perspective. Theory also called for venturing across disciplinary lines to borrow theories from organizational behavior to reach a better understanding of offshoring. From a strategic perspective, many theories encouraged firms to seek more permanent drivers in offshoring than cost savings, such as accessing specialist skills, acquiring new competencies, achieving internal process flexibility and upgrading service quality. Kedia & Lahiri and BCG analysis especially highlighted the importance of a strategic partnership that adds value for both client and provider side businesses.

6.2.2. Empirical Findings

The business cases were studied in order to compare real life offshoring cases with the theory from the literature and especially to verify how well the company's offshore-related theory is implemented into processes in practice. The cases showed that the case company experiences many of the same phenomena that are presented in the field of offshoring research. We have seen that even in this case, offshoring is a key strategy for an IT-oriented business. Also, one of the first things mentioned about captive offshoring was the fact that companies may prefer to maintain control of the offshore relationship and the quality of output that brands the company. This is exactly what the case company prefers.

The practical issues raised in the interviews support that of findings in previous literature. Cultural differences have been stated a primary cause of problems in offshoring by the interviewees and this is also supported by theory. The company needs to focus on the risk of degradation of network performance and availability to the customer. Managing multicultural teams in order to ensure smooth service quality, especially in transition phase between local and global resources, should be a top priority in order to remain competitive. Service quality is another risk that is common to both empirical and theoretical evidence. As operators have the choice of sourcing their services from one or several network vendors, customer relationship management is an important element in gaining and retaining large contracts.

Offshoring has had a tendency of negative branding in the Western world as it may involve local lay-offs and other reductions of the business. A resistance from within the company towards offshoring should be accounted for when planning offshore activities in each business case and the personnel involved should be trained well enough to know what to expect. Resistance towards offshoring is present in the case company as well and could be tackled and alleviated with training. A benefit of offshoring human resource-wise is that it frees up valuable resources locally to focus on other tasks, for instance more projects can be taken on because local interface related tasks are reduced per project and the more automated tasks offshored. At the best the company already achieved timely and uninterrupted service delivery with added customer value in the previously presented business cases.

Particularities that cannot be compared to theory include cost accounting elements that were problematic in the business cases. Cost accounting-wise overhead costs total to a high proportion of the business case costs and currently make projects appear less attractive on project profit and loss accounts than is actually the case. The high distribution of global overheads to projects obscures the real well-being of the business case. The same applies to inaccurate revenue recognition between business cases and business lines that are involved in one project, which results in a distorted view of the attractiveness of one business case over another.

6.3. Suggestions for Further Steps in the Company

In general I would suggest that the company revise its tool for allocating costs in offshoring managed services projects so that as little overheads as possible are allocated to burden of the project. Furthermore, I would encourage the company to be aware of hidden costs that are likely to result from cultural and communication challenges. When an offshoring decision is made, the total costs should be borne in mind, including transition costs, maintenance costs and possible invisible costs. Liability of foreignness, which was discussed in theory, greatly affects the size of invisible costs. This may cause high uncertainty in service delivery, which is why it is a key factor for management to focus on.

Freeing up valuable local resources to take on more projects is a clear benefit of offshoring and the company could focus more on the specific value-adding processes and talent of each country it is located in. Economies of expertise in the global centers present a risk of high employee turnover, which is why I suggest focusing on retaining the talented workforce abroad. As was mentioned as a risk in Case 2, bringing back offshored talent and operations is extremely expensive and time consuming after the decision has been made to discontinue them locally. There is no one left with the specific expertise and the learning curve needs to start from the beginning. This is why the decision to offshore should not be taken lightly as the case company has perceived and always weighs each case and its prospects independently according to the current operator needs and the provider's own ability to meet those needs.

The company may also want to consider expanding its global expert pools to Eastern European countries with wage differentials to Western Europe, but with high level of education, better infrastructure and political and national stability than offshore locations via the European Union that may attract customers more than India. This strategy is to limit exposure and dependency on certain locations. The ultimate focus for the company, however, should be on the offshore locations meeting the strategic fit of the company in terms of aiding the delivery of maximum quality services at high speed, in a competitive, but not cost-focused manner. Not only discussing offshore locations, but the company has a huge opportunity of expanding managed services to regions like Latin America where it is not nearly as popular as Europe and the South Pacific. Increasing customer demand and changes to operator attitudes of course have an effect on the location decision of the company's next global network operations center.

In addition to broadening geographical markets in managed services, the convergence of the IT, telecommunications and media industries creates opportunity for the case company to expand into other fields of services. The expansion of the market creates a risk of increased competitiveness, hazed industry boundaries, and decreasing margins. However, acting on the opportunity as an innovation leader could create unexpected competitive advantages for the company. The increasing potential to offshore more and more services that can be transmitted electronically is tremendous and all aspects of it should be researched if not utilized.

To sum up the link between theory and empirical evidence, the benefits of aiming for a more intensive and long term strategic partnership in offshoring, as Figures 2-3 and 2-4 present, are clear. Customer relationship management is as important profit-wise, if not even more important, than the actual cost savings from offshoring. This is because long term customer relationships and mutual needs and offerings are more sustainable drivers of offshoring than labor cost savings.

6.4. Suggestions for Further Academic Research

Research in services offshoring is yet to bloom (Vivek, 2008, Youngdahl, 2008). To fully benefit from studies relating to offshoring knowledge and service work, further research is needed that

spans across disciplinary boundaries and includes a combination of communication and cross-cultural management research with offshoring research. It has become clear that the phenomenon of offshoring continues to be driven by more than just cost considerations (Youngdahl & Ramaswemy, 2008). The strategic impact of offshoring services requires more academic study on the microeconomic level from the practical case study perspective.

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Internet:

www.alcatel-lucent.com

www.ericsson.com

www.huawei.com

www.nsn.com

Other:

Case company intranet archives

APPENDICES

APPENDIX 1 – Interviews and Discussions

Case Interviews:

- Case 1: Respondent J. B., Transition Manager, 2.6.2009
- Case 2: Respondent S.R., Network Operations Manager, 22.5.2009
- Case 3: Respondent K. S., Engagement Principal, 7.4.2009
- Case 4: Respondent H. J., Operations Manager, 25.3.2009 & 16.4.2009
Respondent M. M., Engagement Principal, 16.4.2009
- Case 5: Respondent K. H., Business Architect, 6.2.2009
Respondent M. B., Head of GTM Sales Development, 26.3.2009

Other Interviews:

- Respondent J. R., Head of Global Delivery 21.4.2009
- Respondent A. A., Head of Managed Services, North East 27.4.2009

Other Discussions:

- E. N. & M. M., Project planning discussion 20.1.2009
- T. M., Operations Consultant – NOC 22.1.2009
- M. L., Sales Development Manager 23.1.2009
- J. T., Head of Strategy & Business Development 26.1.2009
- G. T., Head of Remote Delivery 20.2.2009
- J. R., Head of Global Delivery 27.2.2009
- E. N. & M. M., Project development discussion 23.3.2009

APPENDIX 2 – Outline of Discussion Topics and Questions for the Case Interviews

A. GENERAL QUESTIONS

Basic information on the managed services (MS) business case:

- your role
- the current status of the business case
- the country and scope
- the volume
- the delivery centers involved

What does the case life cycle look like? When did it start? Has the scope changed?

What are the main objectives of the business case?

B. THE OFFSHORING EQUATION OF THIS BUSINESS CASE

What is the proportion of offshore delivery in the case compared to local?

What were the drivers for using a GNOC?

What services are delivered from GNOC?

What were the reasons behind the delivery location decision in this case?

C. THE CHALLENGES OF OFFSHORING

What are the challenges of using a GNOC as part of delivery?

What are the challenges in planning GNOC delivery?

What are the challenges of carrying out GNOC delivery?

What are the risks of offshoring?

D. THE BENEFITS OF OFFSHORING

What are the benefits of using a GNOC as part of delivery?

E. THE COSTING AND PRICING METHODS

What is the pricing structure of this business case? Why and based on what strategy?

Has / Will GNOC services reduce(d) total delivery costs?

Will the case company achieve cost savings in the business case? If not, why?

By how much (%) did actual cost savings deviate from planned cost savings? Why do you think this is?

Where did the largest cost savings result from?

Has the cost baseline changed significantly during the contract duration? What were the reasons behind this?

What can endanger the cost benefits achieved in a project?

When did / will the contract start to make a profit? Also in which year were optimum savings or cost advantages achieved and why is that?

Was the target profit margin achieved in negotiations?

Was the project gross margin affected by the use of offshore activities?

Do the current costing methods provide efficient / accurate measures to allocate the correct costs to and within projects?

Are current cost and sales recognition methods accurately in line with each other and between business lines and regions?

Have the cost and sales recognition of the project worked smoothly and reflected each other?

Have there been any inconsistencies or disputes between business lines and their views on the effort put in?

Is the standard production cost (SPC) a sufficient measure in estimating costs of a project and calculating cost savings between local and shared delivery centers?

How are the cost methods evolving and what are the critical interrelationships between managed services and shared delivery centers?

F. THE HISTORY AND FUTURE OF OFFSHORING

How long has concentrated offshore delivery been a part of the case company managed services?

Have offshore functions increased during the last 5 five years?

How do you see the future of offshoring and managed services?

Has the scope changed during the course of the project? Has the operator been looking to outsource more MS operations in the future? Could this lead to increased offshoring and greater cost advantages for the vendor?

Is it possible to prevent the erosion of gross margins in offshore business cases – the transfer of case company cost advantages from offshoring to the customer? How?

What is the impact of offshoring on managed services?

In your opinion, what is the general attitude of the case company personnel towards offshoring?

A few years ago, now and in a few years time? What is your attitude?