# Critical Success Factors for IT outsourcing within small to medium enterprises

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as part of my assessment for BSc Information system and Management

May 2014

**Declaration of authenticity**

I certify that this research project presents the findings sourced and referenced from my research.

The relevant sources of information have been duly referenced throughout this document and are listed in the Bibliography section.



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May 2014

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 appendix A.

# Abstract

Gartner finds that worldwide IT Outsourcing Market is going to reach $288 Billion in 2013, does this make a case for organizations to tap further into business to business (B2B) and business to government (B2G) relationships with outsourcing vendors?

Notwithstanding that outsourcing would seem like a trend driven by a bandwagon effect, management of outsourcing has to be managed diligently in order to be able to measure their success. Lacity and Willcocks (2012) describe the imitative behavior of organizations engaging in outsourcing as "the bandwagon effect". The foundations of impression conformity and conformity as driving behavior have been confirmed by psychologists, including Solomon Asch (1907 to 1996).

In order to ensure that outsourcing is successful, one may lay out the objectives outlining the expectations guiding management in driving the outsourcing effort. It is possible that in the future, an outsourced function can be considered for back sourcing, that is, taking over a function that was originally outsourced, and, this may be driven by a cost versus benefit analysis of the function, and, other investment appraisal methods, that may consist of quantitative and qualitative analysis when investigating whether to outsource a function or keep it as part of the core activities managed by the organization being analyzed.

Reducing the burden of dealing with politics and stakeholders to project managers gives more time and resources for specialized vendors to focus on their core competence, which may be technical and thereby allow for economies of scale to be achieved through specialization. The principle of working at an arm's length allows for increased objectivity in fulfilling defined roles and responsibilities, which underpin the basis for specialization.

Risk management is a pre-emptive manner of avoiding unnecessary risks and consciously taking decisions on quantifiable and non-quantifiable risks, which can be categorized into financial risks, such as fraud, risks relating to inefficiencies, vendor opportunism during the negotiation of contracts, particularly when the vendor is not asked to renew the service contract, risks relating to lack of cultural knowledge or lack of sound management control principles, that may be foregone in highly dynamic business environment we are experiencing since the industrialization.

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# Chapter One

# 1. Introduction

# 1.1 Project problem

"What if we stopped scanning the horizon with our binoculars and began examining instead our own decision making and behaviour through the most powerful of microscopes?" Malcolm Gladwell, 2005

Business organizations, particularly small-to-medium enterprises tend to focus on providing a focus strategy, with a view to provide flexibility in the manner that they can offer services to their clients, according to research interviewers.

This document outlines the critical success factors that may be used by project managers in handling requirements leading to the successful implementation of technologies, which, is not implemented in a vacuum. The risks imposed by inappropriate management of outsourced functions implies for the adequate use of professionally managed outsourced services using empirically proven practices as the basis for planning, and, performance management using metrics which assess whether the business practices have been outsourced to the satisfaction of the business managers and the stakeholders on behalf of which they are managing the organizational process, including the client(s), investors, and, other stakeholders.

Change management, people management, and, careful and diligent performance and vendor management to ensure that the timely, financial, and, quality criteria originally established are adhered to and adapted according to the needs of the client organization, and, in its best interests.

# 1.2 Project objectives

The main objectives of this project is to review the critical success factors leading to sustainable and feasible outsourcing, through the perception of business development managers who need to manage business functions that may be totally or partially outsourced and managed on behalf of their clients.

The critical success criteria which include perception and evaluation of return on investment, cost savings, increased flexibility through business re-engineering, increased access to specialized skills, improved marketing strategy, re-assurance that risks are being managed professionally, and, learning through the specialist expertise of the outsourcing provider.

The expected outcome is to identify a model for performance criteria which are used to engage prospective customers, which can be reliably measured by the provider of an outsourced function and reviewed by the client organization.

Increased awareness of the advantages of engaging specialists are meant to create business development opportunities within the small to medium enterprise market, which within the European Union make up 99% of the total number of enterprises, with a total turnover of 22.1M EUR, according to Eurostat (2019).

# 1.3 Project Structure

**Chapter 1: Abstract** which introduces the operational and environment within which outsourcing operates.

**Chapter 2: Literature review** is a summary of various journals and books reviewed as part of this study. The *references and bibliography* section of this document lists the relevant sources of reference used. historically relevant research, consisting of books, journals and articles on trusted media publications.

**Chapter 3: Research methodology and design** outlines the research objectives, approach, methodology used throughout this study.

**Chapter 4: Conceptual Framework Model** outlines the critical success factors upon which the author derives hypotheses used for the survey, as a theoretical deduction of the literature review and the references mentioned in the *references and bibliography* section of this document.

**Chapter 5: Research findings** summarizes the findings from the survey using statistical methods to deduce whether the hypothesis derived from the conceptual framework model are valid in the opinion of the researcher.

**Chapter 6: Analysis for hypothesis** delves into more detail based on in-depth analysis of the practices in use, providing insight to the research findings.

**Chapter 7: Conclusion** summarizes the main findings, and, includes deductions, recommendations for business consultancy for outsourcing providers, and, for the management of outsourcing.

**Appendices** are also available providing additional documentation used throughout this research.

# Chapter two: Literature review

## 2.1 What is outsourcing?

**Outsourcing** refers to the contracting out of a business process to a third party. Willcocks, Cullen and Craig (2011) state that organizations are choosing to outsource more and more and for a variety of reasons, for example to get more quickly to market, to cut internal costs, or to leverage the increasing capabilities of external services providers.

Outsourcing strategies can vary from total outsourcing to selective outsourcing.

## 2.2 Critical success factors for outsourcing

Brown and Wilson (2005) outline the critical success factors, after analyzing outsourcers based on a study of 700 business professionals.

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | **0%** |  |  |  | **50%** |  |  |  | **100%** |
| Cost Savings |   |   |   |   |   |   |  |  |  |
| Operational expertise |   |   |   |   |   |  |  |  |  |
| Staffing issues |   |   |   |   |   |  |  |  |  |
| Flexibility to decrease or increase IT Capacity |   |   |   |   |   |  |  |  |  |
| Reliability |   |   |   |   |  |  |  |  |  |
| Support for internal users |   |   |   |   |  |  |  |  |  |
| Support for customers |   |   |   |  |  |  |  |  |  |
| Knowledge transfer |   |   |   |  |  |  |  |  |  |
| Industry specific expertise |   |   |   |  |  |  |  |  |  |
| Increased volume of IT projects |   |   |   |  |  |  |  |  |  |
| Speed to market |   |   |  |  |  |  |  |  |  |
| Standardization |   |   |  |  |  |  |  |  |  |
| Budget restructuring |   |   |  |  |  |  |  |  |  |
| Innovation and cutting edge technology |   |   |  |  |  |  |  |  |  |
| Board or steering board committee directive |   |  |  |  |  |  |  |  |  |
| New revenue opportunities |  |  | less than 10% |  |  |  |  |  |
| Other |  |  | less than 10% |  |  |  |  |  |

Figure 1 - Information Week research (November 2002): What are the most important factors driving your company's ongoing relationship with an outsourcer?

2.2.1 Cost savingsgenerated from outsourcing a business function are the main motivators of outsourcing a function, which finds it roots in the theory of transaction cost (Williamson 1975), where decision makers seek to take advantage of economies of scale achieved through specialization, rather than re-inventing the wheel. Williamson (1975) states that the transaction is the basic unit of analysis, and, is thereafter dimensionalized with emphasis on asset specificity. Cost management can be guided using techniques such as investment appraisals, budgeting, variance analysis which may be included as part of project management formal methodologies, activity based costing and total cost of ownership as a way of quantifying enterprise cost, in order to guide the make vs. buy decision.

Willcocks et. al (2012) broadly categorize supplier configurations. Outsourcing may be contracted in agreement with a sole supplier (vendor) who is responsible for co-coordinating all aspects of the outsourced function(s), or, a prime contractor tasked with managing work activities possibly done by the resources of the same firm and those of other firms that are subcontracted to the prime contractor. Alternatively the client organization might seek to manage vendors within a multi-sourcing and multi-vendor arrangement, where the organization has a number of suppliers and thus is managing the contractors itself. This low-risk option has been adopted by 75% of UK and 82% of US organizations (Willcocks et. al 2012). Another option consists of a panel arrangement where preferred vendors are working in continuous competition; interactions are many and short-term and work is not guaranteed, and, this makes for a relationship which may be perceived as instable by executive representatives of the vendor.

Willcocks et. al (2012) states that a prime contractor represents a "half way house", but it is unlikely to achieve significant cost-savings, process standardization or innovation compared to a bundled outsourcing arrangement.

Outsourcing promises cost savings as high as 50%, according to research.

2.2.2 Operational expertisecan be accessed by client organizations without having to engage in employing experts in the field. Operational expertise leads to specialization that is expected to result in increased efficiency and productivity. Willcocks et. al (2012) clarifies that the application of know-how can be outsourced to experts.

 2.2.3 Staffing issues may be compensated by the vendor in view of in-house shortages of staff (Willcocks et. al, 2012).

Torrington, Hall and Taylor (2005) contend that recent decades have seen the growth of contractual arrangements. Willcocks et. al (2012) clarifies that closer control comes at higher management costs adding that leadership is required as increased complexity require a higher degree of orchestration and stakeholder management.

Subcontractors might be difficult to monitor from a human resources perspective, since their obligations towards the client are those that are bound by contract, and, the possibility of long-term employment may no longer be an incentive, particularly during an economic recession.

Along with humanistic factors, cultural factors outlined by Trompenaars, and, Hofstede may influence vendor and people management.

2.2.4 Flexibility to increase or decrease IT capacity is brought about by engaging in contracts with vendors that provide resources that can be requested on a need basis by client organizations, thus reducing the risk of employing idle resources upon the client organization.

Atkinson (1984) outlines that flexibility can be achieved by a firm if it utilizes resources according to the needs of the organization and therefore engage in contracts which allow the organization to increase flexibility by adjusting its resources focusing on its core competencies.

Benefits include taking advantage of numerical flexibility and financial flexibility by utilizing outsourced resources instead of employees and this underpins the Flexible Firm outlined by Atkinson (1984).

Nowadays pressure is upon business organizations to place importance on social, environmental (e.g. the increased use of Green IT) and ethical responsibilities. This is underpinned by theories portrayed by Porter (1997).

On the other hand, Friedman (1962) clearly argued that the only social responsibility of business is to use its resources and engage in activities designed to increase its profits as long as it stays within the rules of the game, which is to say engages in open and free competition, without deception or fraud.

Diligent risk management is recommended by various researchers, including Ciborra (2004) and Gonzales, Gasco and Llopis (2008). Using formal methodologies such as PRINCE2 and Probabilistic Risk Assessment Method might be adequate for managing projects of a considerable value and involving extensive co-ordination.

Rodney Turner (1999) outlines specific techniques on managing projects and ensuring that the stakeholders' expectations are managed accordingly within the timeframes, quality and budget stipulated, whilst managing change effectively within the implementation. Frameworks such as Information Technology Infrastructure Library (ITIL) - which is based on ISO/IEC 20000 standard for IT service management, have the goal of ensuring that IT capacity planning meets current and future organizational requirements effectively.

IT Capacity management involves monitoring performance and load on servers, performance analysis and tuning of technical parameters, analysis of expected growth in service demand for workload growth and how they influence present and future demand for computer resources.

Professional human resources management influences the quality of the service delivered and therefore vendors need to be managed and their performance needs to be measured as well. The Balanced Scorecard, originally outlined by Kaplan and Norton (1996), outlines that performance metrics are based from different perspectives including financial measures i.e. how the organization appears to shareholders, on customer service i.e. how should the organization appear to customers to achieve the vision?, learning and growth i.e. how will the organization sustain the ability to change and improve, and, by analyzing internal business processes, re-engineering them as and when it fits the needs of the organization.

Knowledge management is supported by change management, involvement and participation of key users, and, using the appropriate strategy for implementation that fits the mutual interests of the client and the vendor(s) involved, thus forming a strategic partnership, over and above the contractual agreements.

Strategic alignment is not only relevant to the implementation of a project, it needs to be brought about since the planning stages, where Rodney-Turner (1999) recommends eliciting political support on the project. One of the ways this can be achieved is by having the role of a champion i.e. a key role within the project whose main objective is to identify obstacles on the progress of the project and to liaise with the project executive team and the relevant stakeholders to ensure that the obstacles are managed.

Amongst other forms of obstacles to a project, Lawrence (1969), states that one of the most baffling and recalcitrant of the problems which business executives face is employee resistance to change.

“You can see the computer age everywhere but in the productivity statistics.”

 Robert Solow, New York Review of Books, July 12, 1987

Actually, findings made by Brynolfsson (1993) indicate that the alarming correlation between higher IT spending and lower productivity at the level of the entire US economy is not compelling because other factors affect productivity, including mis-management.

Boselie et. al (2005) argue that there is an obvious and direct link between human resources management and performance management, in particular in relation to employee involvement and internal regulation, although critics base their assumptions that there is no quantifiable direct link, but there is an 'indirect' relationship between individual human resource management practices and organizational performance.

*Willcocks (2011)* outlines the requirement for managing quality within different time zones, since vendors may be expected to be flexible to meet the needs of customers.

Near shoring refers to the practice of outsourcing part of your business to a nearby country. The advantage of establishing a relationship with vendor(s) within the same time zone is that working patterns of the client organization might fit those available by the personnel of the vendors' organizations.

Willcocks et. al (2012) states that the transaction costs involved in offshore outsourcing are considerably higher than those related to domestic outsourcing. Offshore outsourcing refers to relocation by a company of a business process from one country to another.

Empirical evidence indicates cost cutting needs to be balanced with the benefits of retaining the current resources and planning long term viability.

Ciborra (1994) presents us with the concept of improvisation which refers to the day to day situations where solutions are created. Therefore the configuration of the service may have to prepare the necessary technical and logistic infrastructure to allow technical experts to work and prepare solutions as clients' needs arise and may require situational tinkering and configuration.

**2.2.5** Reliabilitycan be defined as the extent to which a project yields consistent and coherent results, based on the outcomes to be achieved by outsourcing a (business) function, from conception, to operation. Brown and Wilson (2005) outline the process for vendor selection which may help build trust and confidence in vendors, and, build upon foundations of a healthy business to business or business to government relationship with the vendor(s), which starts off from organizing a committee or selection team who outline and communicate the policies and objectives of a tender, optionally issue a request for information, issue a request for proposals, and, select the appropriate vendor(s), monitoring their performance and ensuring that the value and support is delivered according to the expectations of the client organization.

2.2.5.1. Convene the selection team by selecting appropriate qualified persons to review the proposals, and, to carry out initial research on potential vendors. Calls for tendering may be open or restricted to a number of pre-qualified vendors.

Empirical evidence shows that the practice of pre-qualifying potential vendors is used by the public administration, and, by a number of corporate entities. Funding regulations such as those issued by the European Commission and other administrative bodies have criteria which prescribe regulations relating to the approval process itself, in order to minimize the risks involved.

Rodney Turner (1999) broadly defines quality as including delivering what is fit for the customer's purpose, and, that quality concerns continuous improvement, in the context of project management. Nevertheless it is implied that quality needs to be planned for to be available during the project and after the handover to the operational managers of the client organization.

Contractually, a *project initiation document* kicks off the project within a project managed within the formal PRINCE2 methodology. A *service level agreement* is drawn up to establish the contractual and transactional relationship between the client organization and the vendor(s). The *references and bibliography section* of this document includes an example of a service level agreement used by the European Medicines Agency.

Willcocks (2011) outlines various options for the structure of managing vendors, including the client organization managing the vendors using its own resources or outsourcing the project management function altogether and thereby being held accountable and responsible for co-coordinating the projects, in a similar fashion that turnkey solutions are provided in the construction and property development industry.

Willcocks and Lacity (2011) - suggest that the IT outsourcing and Business Process Outsourcing markets are expected to continue to grow through multi-sourcing. The benefit to the client organization is that it gives them the opportunity to use an appropriate selection of vendor(s) to suit their requirements.

It is possible that outsourcers are asked to bid for each request, as is shown to happen within the public sector, the private sector for contracts of considerable monetary value, and, where the executives of the client organization deem appropriate to make the most efficient combination of outsourcers.

Willcocks et. al (2012) explains that multi-sourcing implies that vendors incur more transaction costs. Vendors have to bid more frequently because contracts are shorter, suppliers face more competition because deals of lower monetary value indicate that more vendors can bid and vendors require to attract more customers in order to meet growth targets.

Willcocks (2012) states that greater control comes at higher management costs. Transaction costs, incurred upon the vendor(s) in bidding for tenders with a strict "best of breed" call for ongoing competition-based tendering process, and, in this regard, Tanti (2011) highlights the importance of partnership based obligations by confirming the hypothesis that trust and mutual flexibility allow the relationship to go beyond the contractual fulfillment of obligations.

Tying in closely with project management is risk management, which Ciborra (2004) explains are not limited to credit and financial risks, as per guidance documents issued by the Basel Committee on Banking Supervision.

Statistics provided by the Police of Malta (2013) indicate a high increase in computer misuse (which includes cybercrime activities known as hacking), and, a 32-fold increase in insults, threats and private violence which includes defamatory acts when taking into consideration the number of cases dealt with by the Criminal Investigations Department, in Malta from 2003 to 2012.

Amongst other critics, Slozberg (2013) points out that any sort of information can leak out. Zammit (2013) confirmed that a typical case investigated by the Criminal Investigations Department consists of a typical employee who had hacked the database and application of the company that he used to work for. Recent cases include a report made on the media whereby whistleblower Edward Snowden, previous employee of the National Security Agency, USA, lay bare classified details of the US government's 52.6 Billion USD budget. Wall street (2013) confirms that the annual cybercrime costs are estimated at USD 100 Billion.

 2.2.5.2. Gather vendor information, issue requests for information (RFIs), optionally carrying out background checks on pre-qualified vendors. A request for information (RFI) can be issued to potential vendors and this allows them to participate in an invitation to tender (ITT) process.

Brown and Scott (2005) contend that vendor evaluation is conducted from both a tactical and strategic perspective with a focus on functionality and cost as well as vendor viability, service and support capabilities.

Raja outlines the fine balance to be achieved between aligning the functions with the strategic fit of the organization, and, functional integration by way of tactical operations and objectives to be met by the outsourced function.

Malta Information Technology Agency publishes its tendering process on the world wide web, and, is being provided as an example in the *references and bibliography* section of this document.

2.2.5.3. Set realistic schedules which are based on activity plans and aiming to achieve the strategic objectives for the function being outsourced. Project management principles can be used to monitor the delivery of the expectations, whilst managing the performance of stakeholders' expectations holistically, depending on the size, nature and complexity of the project. Doran (1981) contends that objectives need to be written for a specific purpose, and also require to be measurable, achievable, realistic and time-bound. Work activities and schedules are based upon the original objectives, which outline the scope of a project, work activity or task.

Although sociological theory and the history of mankind underpins that time is a perceived and subjective, Meilan (2012) outlines important reasons for tracking time nowadays, which include ensuring that the client is satisfied with the timing of the project, ensuring that the manager overseeing one's work is satisfied with the timeframes of the project, as a way of aligning to strategic objectives.

Empirical evidence confirms the importance of punctuality in British and Maltese management cultures at the workplace, since the early days of industrialization (1500 to 1950). From a financial perspective, late delivery may result in penalties - and this would be agreed upon contractually or by failing to meet legally binding deadlines.

Transport Malta imposed various penalties on the company managing the public transport service within the Maltese islands, following various complaints from the general public in 2013, as reported by timesofmalta.com.

The Telegraph (UK, 2007) reported that a 20 Billion GBP computer system was doomed to fail according to a top executive presumably representing the National Health Service, UK.

Such headlines place a negative public perception - given that taxpayers are assumed to have a political interest in public sector spend; negative perception and speculation may generate mistrust in the eyes of stakeholders.

**2.2.5.4**. Develop a term sheet, which outlines the objectives to be achieved from the relationship with the vendor(s).

 A term sheet consists of high level objectives which describe the clients' expectations from the vendor(s).

Brown and Wilson (2005) propose examples such as the provision of 24/7 hours monitoring and support to respond to critical system incidents and exceptions within a service management model, such as that outlined by ITIL.

**2.2.5.5.** Develop and evaluate current objectives and operations, by carrying out further analysis on the objectives, and, outlining the plans in detail. For example, if the client organization were to request technical support to be available on a 24/7 basis, it would prepare draft contractual terms and conditions that have to be met by the vendor(s), and, it might also engage in specifying a statement of works.

**2.2.5.6**. Define evaluation criteria and weights before issuing bid requests, which can be materialized by defining the qualitative and quantitative metrics related to performance management and vendor management - possibly including contract management and relationship management of the vendor(s), or delegation to the prime contractor to manage the project.

**2.2.5.7**. Prepare requests for proposals (RFPs) which clearly outline the purpose of the proposal, background information about the client organization, technical and non-technical requirements and performance measures which are expected to be met by the proposal, an overview of the selection and adjudication process and review criteria, and, contact information, along with other terms and conditions related to the invitation for tender. Corporate and public entities additionally ask for monetary deposit to be enclosed along with sealed tenders delivered to their offices, for the relevant committee to review and adjudicate, in order to cover the costs of the evaluation process. The *references and bibliography* section includes a link to a template used by the Government of Saudi Arabia.

**2.2.5.8**. Evaluate the bids by having the bids go through a screening and evaluation process by the committee against the criteria set out within the objectives stipulated.

Pricing scheme - for example fixed charging based on total cost of ownership, or, time-based pricing - influences the outcome of the evaluation of the successful bid, along with factors such as whether the vendor is proposing bundled products/services, standardized products/services, or a proposal that seeks to fit a customized strategic alignment tailored to the needs of the client organization.

Willcocks et. al (2012) outlines the benefits of marketing using bundled products and services which is supported by behavioral theory, and, these include: the simplification and harmonization of procurement, reduction of duplicate processing, limitation of points of failure which reduce operating risks, standardization of operations, mitigation of delivery risk through simplification of points of contact and provision of customer support, reduction of costs through economies of scale and simplified management, and, support of existing technology rather than 're-inventing the wheel'; the latter approach might have a considerable impact on the timeframe of delivery, that is perceived to be critical in an increasingly competitive and globalized business environment. Bundling can act as a stimulus for process re-engineering, and, identification of further opportunities for using technology.

The strategy used for outsourcing is relevant to the nature of the contract. Willcocks et. al (2012) show that collaborative innovation is required if sustained, significant IT or back-office and innovations are to be achieved, based on the lessons learnt from the building of Heathrow Terminal 5.

**2.2.5.9**. Select a vendor or a combination of vendors depending on the criteria defined by the organizational policy or the particular requirements emanating from this particular proposal. The tendering process remains subject to scrutiny by an internal auditor since unqualified vendors or even qualified vendors who feel that they might have been judged unfavorably may raise justified questions that may require professional replies based on the criteria set forth during the adjudication process.

The Government of Malta has inquired into the tendering process through its Attorney's Office, whereby the construction of a power plant at Dellimara was awarded to BWSC. The board of inquiry are investigating the procedures carried out during the adjudication process as reported by the media.

2.2.6 Support for internal users is expected to be provided as part of a service level agreement during the implementation in the form of information intended to dispel fear and uncertainty along with training that may be provided to the client organization in order to manage the outsourced function knowledgeably.

2.2.7 Support for customers is expected to be provided over and above the provision of the product or service, and, this has to be catered for contractually, usually within a service level agreement that stipulates the financial, logistic and other terms and conditions related to the provision of customer support.

Customer support commonly includes to supporting the end user for example through the provision of documentation and training material. Training services may be provided at a charge, and, as a matter of fact vendors such as Microsoft, Oracle and many others have adopted vendor-specific training certification programmes that promise to deliver expert knowledge to the student when the certifications have been completed and certified.

Gartner's (2012) estimates that the average spend on IT services as a proportion of the total budget ranges between 1.1% within the Energy industry and 7.6% within the software publishing and internet services industry. The average spend per employee on IT services in 2011 ranges between $4,589 within the construction, minerals and natural resources industry, and, $28,390 within the insurance industry.

2.2.8 Knowledge transfer involves retaining sufficient documentation to enable other vendor(s) to be able to carry out the same function that was outsourced to the vendor(s), thus reduce the risk of depending on a sole vendor. Willcocks (2005) contends that knowledge transfer has to be taken into consideration within the contract of service since there is a risk that the vendor behaves opportunistically by charging additional. Switching costs might be prohibitive.. Willcocks et. al (2012) contend that in sourcing external skills, if properly managed, can release valuable transfer of learning effects.

Amongst many anti-competitive practices that vendors might engage in - whether these are legal or not, including price fixing or taking advantage of monopolistic or oligopolistic market share within the industry, the dependency on the vendor may be detrimental to the client organization and its business.

Brown and Wilson (2005) propose that responsibilities allocated during vendor switching is to be agreed upon in a legally binding contractual form.

An article on thefreelibrary.com indicates that price fixing scandals are common in the LCD panel industry.

### 2.2.9 **Speed to market (time to market**)

Time to market is expected to decrease with the rapid acceleration of technological development available, including cloud services, flexible programming interfaces, which allow IT/IS specialists to work more quickly when building, customizing or changing information systems.

In a case study carried out by IBM Corporation, executives forecasted improvements within the efficiency of the IT development process by 10%,reducing the time to market from approximately 14 months to approximately 9 months, through integration of the development process with technologies offered by IBM Corporation, use of CMMI to measure the maturity of development projects, and, adoption of Agile-based SCRUM, and, extreme programming (XP) practices. Willcocks et. al (2012) confirms that traditional waterfall systems development methods are not appropriate for implementing IT-based projects constituting real business innovation. For the vendors, time boxing offers a clear association between deliverables and rewards. Within projects further time boxing can occur in relation to different parts of the development to reduce the drift from the overall business delivery target. (Willcocks et. al, 2012).

### 2.2.10 **Standardization** is expected to lower the costs of production. Begg, Fischer and Dornbusch (2005) state that the advantages of increased scale and specialization can bring about economies of scale as fixed costs can be spread over more units of output or else on the volume of sales.

**2.2.11** Budget restructuring refers to the re-allocation of resources when the outsourced function has been implemented successfully thereby offering the opportunity for re-investment and business growth.

2.2.12 New revenue opportunities may be seen to be available to potential clients as a result of increased awareness of opportunities for increased effectiveness, efficiency, and increased technological advancement.

Unfortunately the study quoted by Brown and Wilson (2005), seems to indicate that the executives questioned are not fully aware or willing to exploit opportunities for technological advancement and maturity (see figure 1), and, this may imply increased marketing budgets bearing upon vendors and IT/IS specialists, which taken from an economic perspective could be potentially used to increase funds allocated to research in the medium to long-term.

E. M. Rogers (2003) outlines the perception of technological innovation based on research on various technologies, that is purported to have started during the 1940s , and, perceives conceptual models of innovation from the eyes of its adopters. Rogers (2003) states that the recognition of the existence of re-invention brings into focus a different view of adoption behavior than that originally held by diffusion scholars, adding that instead of simply accepting or rejecting an innovation, potential adopters are on many occasions active participants in the adoption and diffusion process, struggling to give meaning to the new idea as the innovation is applied to their (local) context.





Figure 2 - Decision of Innovation Process and theoretical distribution of market share (theoretic).

"While the survey did not focus exclusively on digital technologies, the conclusions may partly reflect the increasing adoption of information technologies, like Enterprise Resource Planning (ERP) systems, which make data collection and processing much cheaper, easier and more effective. Structured Management scores for data use have improved the most, according to the data. Presumably this reflects the growing use of IT in modern firms."

One of the challenges with big data — or with most data analytics efforts over the years — is that it has typically been relegated to analysts and holders of PhDs in mathematics or statistics. Thus, it's been highly intimidating territory for most business decision-makers, according to Tom Davenport.

Organizations are striving to compete on analytics, and hiding the processes and management of data analysis in a back room isn't going to cut it anymore.

Tom Davenport (1990), portrayed the roadmap for the transformation of organizations, where information technology has a key role, and, this is thought that it can be brought about by computers, software applications, telecommunications and business process re-design.

In preparation for the Gartner Business Intelligence and Information Management Summit 2013, research has shown that worldwide business intelligence, corporate performance management and analytics applications and performance management software revenue totaled 13.1 Billion USD in 2012, a 6.8% increase .

Revenue opportunities based on trends outlined by the media include cyber-physical systems such as anti-lock brakes, cloud storage, industrial internet, 3G/4G/5G, advanced manufacturing that may be supported by material resource planning and enterprise resource planning enterprise-wide applications, big, cyber security and augmented reality which includes the increased use of 'virtual worlds', for example Second Life, and, massive open online courses or virtual learning environments such as community based tools based on [Moodle platform](https://moodle.org/) that has been adopted by Maltese-based affiliates of the London School of Economics and Political Science.

Empirical evidence indicates that the availability of information on the world wide web with the increase in popularity of Web 2.0 and the increased popularity of weblogs (blogs), might have encouraged subsidiary service industries to compete with established manufacturers.

## 2.3 Benefits and risks of outsourcing

Outsourcing promises business opportunities as they benefit from access to specialist skills, and, relying on the expertise provided by these organizations to benefit from economies of scale and therefore cost-savings, when compared to managing a particular business function in-house, since it may include recruitment, management control and investment that may be out of the capabilities of the organization requiring specialist resources.

IT Infrastructure may nowadays may be highly influenced by social and environmental pressures in utilizing engineering to build an IT infrastructure - for example a data centre - that utilizes alternative energies and uses environmentally friendly practices.

Efficiency and improved economies of scale are foreseen to bring about an improved time to market and possibly an increased return on investment - typically through the re-engineering and automation of business processes, and, through the clever utilization of innovative technologies that are professionally evaluated as being fit for the purpose of the client.

Benefits may be brought about by near shoring, and, thus taking advantage of providers offering lower costs within the same time-zone, however that does not guarantee that the quality of service does not depend on the capabilities of the individuals tasked with delivering, along with the capacity management and assessing the organizational maturity of the outsourcing firm.

Although jumping on the bandwagon may be considered to lack foresight, empirical evidence indicates that making extensive use of outsourcing might be beneficial to the organization, however, one needs to keep the tabs on management controls, to avoid vendor opportunism, anti-competitive practices - such as agreeing to sign up for contracts that bring about high costs of switching vendors when the deal turns sour, or the full benefits of outsourcing are not being received by the client organization. This may result in increased legal provisions, and, increased management control costs.

When managed holistically, communication, professional training and customer-support can improve the knowledge management capabilities and the time required to troubleshoot uncommon problems within the client organization where expertise in the particular function business function is not present. Nevertheless it would be beneficial for the client organization to plan to smoothen the learning curve in adopting an 'alien' business function and gradually takeover sufficient knowledge to manage and have control over the outsourced function, to avoid unnecessary risks and giving away too many business secrets, amongst other reasons.

Structured approaches to vendor selection may give the client organization more control over the assessment and the performance management of outsourcing functions, and, thereby increase commitment to the importance of quality management within the client organization.

Empirical evidence indicates that organizations nowadays need to be flexible, dynamic and lend themselves to adept to the needs of the external factors affecting it, along with gaining sufficient resources internally in order to be able to compete in an increasingly globalized market, with the exception of firms that cater for niche markets.

Organizations and outsourcers whose resources align closely to the needs of its partners may be seen to provide added value in delivering products and services that meet quality standards expected.

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# Chapter three: Research methodology and design

## 3.1 Research Objective

Research comprises creative thought which is structured in a systematic manner, with the intention of increasing knowledge. Within this document we are tackling the critical success factors which influence the success of an outsourced organizational function, with a particular focus on small to medium enterprises.

## 3.2 Research approach

Quantitative analysis along with interpretative analysis of interviews were perceived to provide the right balance between understanding how stakeholders interpret the success achieved through outsourcing, including the evaluation of the monetary value of cost savings and return on investment and the other factors mentioned in the literature review and the hypotheses generated as a deduction of the literature review. The main tenets of scientific research are aligning research, findings and analysis and validating the content to be coherent thus allowing for internal validity, ecologically valid within the global environment, and, maintaining reliability, through an extent of standardized questions used as part of the survey used to analyze prospective corporate customer opinion. This was supplemented by in-depth interviews made with experts having considerable experience in IS/IT management, that are available within the Appendices of this document.

## 3.3 Research methodology

We intend to carry out a sample survey amongst industry experts and stakeholders who have an influence in the decision making of the outsourcing of an organization or its management or administration. We shall also carry out in-depth interviews with decision makers and people who are involved in managing risks relating to outsourcing.

A survey was carried out online using www.surveymonkey.com, whereby respondents were asked a set of open-ended questions. The questions mentioned in the hypothesis statements were sent to a sample of 200 respondents, who were asked to provide their opinion on the validity of the above hypothesis. A non-deterministic approach is being taken to arrive at conclusions as to their validity, due to the fact that the sample of respondents which answered the survey was considered as insignificantly representing the views of the global business community. Such significance would be achieved with the availability of resources such as access to professional research resources, and, funding that would provide the basis for professional research.

Furthermore, selected respondents that met eligibility criteria were asked whether they would like to engage in an in-depth discussion outlining their views on best practices in managing outsourced functions professionally. The transcripts of these interviews are available within the *Appendices* of this document.

## 3.4 Sample population

The sample population for this survey was made up of entrepreneurs and officials having decision making, entrepreneurial and management duties globally, or relevant influencing skills leading to policy decisions within a number of organizations including small to medium enterprises and larger organizations.

Economies of scale theory leads us to understand that the same hypothesis may apply, having different orders of magnitude, causality and influence depending on factors relevant to the organizations, including business environment, politics, and, other micro and macro management issues which apply on a larger scale

We are relying on the information provided by the interviewees themselves as being reliable and valid. A budget was not available to sponsor this research project, unfortunately.

## 3.5 Interview methodology

The survey is divided into two sections. The first section gathers information about the organization being managed, and, the second section asks the respondents to validate the hypothesis that are a logical deduction of the research project.

## 3.6 Research design

The research was sent out to over 200 different respondents, mainly through email, and, through the use of social media, using www.surveymonkey.com as the platform of choice for preparing the version of the survey that was to be launched through social media, namely, [Facebook](http://www.facebook.com/) and [LinkedIn](http://www.linkedin.com/). It is thought that some respondents were too busy to respond.

Within 3 weeks, 21% of the respondents filled in the survey, and, two of the respondents were approached and asked for an interview, based on the questions formed during the research, and, were invited to confidentially discuss in-depth information on the practices used to manage outsourced business and non-business functions.

## 3.7 Hypothesis statements

A hypothesis is a proposed explanation for a phenomenon. Within this document, the author is outlining hypotheses which outline the critical success factors for outsourcing to be successful.

**H3.1** Outsourcing improves the short term and long term bottom line, ranging from cost savings for re-engineering and automation of processes to increased return on investment in technology as a result of re-engineering or innovation.

**H3.2** Outsourcing enables entrepreneurs to access specialist technical and management resources.

**H3.3** Outsourcing may reduce the costs involved in human resources management, management controls and may avoid the need to recruit specialists to manage all business functions required by their organization.

**H3.4** Total outsourcing is not recommended practice, since firms need to remain in control of their business, and, capably manage vendors and sub-contractors.

**H3.5** Outsourcing provides easy access to flexible services and products which can imply increased flexibility provided to the clients and stakeholders of an organization.

**H3.6** Outsourcing can provide organizations with additional marketing channels and public relations, through branding of best practices.

**H3.7** Outsourcing puts the entrepreneur's mind at rest that risks are being managed professionally.

**H3.8** Outsourcing gives insight to an entrepreneur that enables them to value expertise gained and gain further strategic advantage over competition, whilst monitoring performance of the provider transparently.

### H3.1 Outsourcing improves the short term and long term bottom line, ranging from cost savings for re-engineering and automation of processes to increased return on investment in technology as a result of re-engineering or innovation.

### Outsourcing functions can bring about short-term cost savings through business re-engineering and standardization of products and services, and, by availing from 'hands-on' business advice. Standard products and services are easier to compare when the client organization is faced with choice.

### Automation and re-engineering for automation, which takes advantage of the use of existing and novel technologies to bring about competitive advantage, in the medium term and in the long term. Research indicates that second mover advantage brings about more mature implementation, because client organizations learn from the mistakes of the first mover.

### H3.2 Outsourcing enables entrepreneurs to access specialist technical and

### management resources.

### Managerial and technical skills are subject to demand and supply, and, recruiting the right talent is a management science that deserves its own profession. Unfortunately, client organizations cannot always find suitable talent at a cost which results in a mutual relationship for the employer and the employee.

Client organizations have access to talent at rates which are agreed in advance contractually, and, therefore are able to utilize the skills on a need basis, which leaves training, and, human resources management capabilities to the outsourcing firm to manage.

### H3.3 Outsourcing may reduce the costs involved in human resources management, management controls and may avoid the need to recruit specialists to manage all business functions required by their organization.

### Outsourcing may meet the required criteria required by the client, and, the quality criteria that are established in advance during the planning process.

### Nevertheless, this does not indicate that client organizations can do away with managing an outsourced function altogether, since it is considered diligent practice to keep management control and communication with the outsourcing provider(s).

However the costs of recruiting a manager who is professionally qualified in managing a number of providers is less expensive than recruiting large teams of specialists, particularly for small to medium enterprises who might not avail from sufficient financial and other resources to manage teams of specialists.

### H3.4 Total outsourcing is not recommended practice, since firms need to remain in control of their business, and, capably manage vendors and sub-contractors.

### Outsourcing has been established as an accepted practice where authority and/or responsibility of a particular function is passed to another firm, and, outsourcing makes use of contractual agreements to engage vendors and sub-contractors, using the appropriate strategy for handing over management of the function.

### Nevertheless, the business needs to remain committed to overseeing that the benefits of outsourcing are being achieved, in a pro-active manner, and, can be reliably measured and understood by all stakeholders, particularly the client organizations, without negatively affecting the benefits achieved by the vendor(s), through a stable professional relationship.

### H3.5 Outsourcing provides easy access to flexible services and products which can imply increased flexibility provided to the clients and stakeholders of an organization.

### Flexibility and maturity can be achieved by an outsourcing provider with specialist capabilities, mainly due to the level of maturity and expertise that the provider has developed over the years in a particular line of business.

The appropriate marketing mix of products and services can be bundled to deliver what is right for the client organization, when considering its size, its location, its industry, and, the cultural factors within which it operates.

### H3.6 Outsourcing can provide organizations with additional marketing channels and public relations, through branding of best practices.

### Client organizations may adopt the best practices used by outsourcing providers, and, use their recommendations to learn and adapt their own business models and engage in business development, public relations and marketing practices which can add value to the branding of the client organization.

### H3.7 Outsourcing puts the entrepreneur's mind at rest that risks are being managed professionally.

### Client organizations are expected to be focused on their core business capabilities and in aligning their strategies to tactical decisions in achieving their organizational objectives, and, ideally working within the established vision and mission of the organization.

Outsourcing providers appreciate that support provided needs to be holistic, and meet the specific needs of the client organization, within the environment that it operates, and, to manage the business and technology risks professionally to avoid having unexpected gaps in performance, whilst appreciating the reality of the environment within which the outsourcing provider(s) and the client organization are operating.

### H3.8 Outsourcing gives insight to an entrepreneur that enables them to value expertise gained and gain further strategic advantage over competition, whilst monitoring performance of the provider transparently.

Performance management is made to assess effect of the achievement of benefits, and, the mitigation of risks within the client organization, and, this can be analyzed from different points of view including customer satisfaction, and, satisfaction of the client organization, financial performance, review of the business processes and how well they meet the demands of the market, and, the assessment of how mature the client organization and the vendor(s) are in providing a service that meets quality criteria that have been established along the way of building the relationship.

# Chapter four: Conceptual Framework Model

# 4.1 Outsourcing success factors

This section summarizes the critical success factors relevant to successful outsourcing, and, outlines the main factors summarized and outlines the conceptual framework suggested to be used.

Although the study focuses on the management of information technology and information systems, the concepts can be reviewed and applied within other industries as this section outlines guiding management principles that can be used by any professional with entry-level knowledge of management studies and principles.

Within this section the concepts discussed within the literature review are related within the context of providing outsourcing services for business and other organizations.



# Chapter five: Research findings

## 5.1 Introduction

A survey and in-depth interviews were used to collect information relevant to this research, as this was seen to provide a balance between statistical analysis and analysis of interpreted interviews. The subjects interviewed included a senior manager who has over 35 years of experience in managing outsourced functions, and, a manager who has over a decade of experience in project management, teambuilding and technical support.

**5.2** **Survey**

The survey is divided into two sections, the first section gathers demographic information about the organization about which the respondent is providing information, along with information on his/her role within the organization, and, the second section seeks to validate the hypotheses generated above. The survey is available within *Appendix C* of this document.

The survey was sent to over 200 respondents, with a response rate of 21%. Preliminary surveys seemed to confirm the expected response rate would be low. The majority of respondents were located in the Maltese islands, although the survey was sent out to entrepreneurs located throughout the globe.

## 5.3 Demographic analysis

## 5.3.1 Principal industry of respondents

## The first chart represents the principal industry within which the respondents operate.

Figure 3 - Principal industry of respondent

|  |  |
| --- | --- |
| Entertainment and leisure | 7% |
| **Financial services** | **14%** |
| **Food and beverage** | **14%** |
| **Non profit organizations** | **14%** |
| **Telecommunications, technology, internet and electronics** | **30%** |
| Construction industry and ancillary services to the construction industry | 7% |
| Professional services | 7% |
| Manufacturing | 7% |

Respondents within the telecommunication, technology, internet and electronics are the most responsive of the sample to whom the survey was sent out.

## 5.3.2 Position within the organization

The chart below shows the levels of responsibility of the respondents within the organization on behalf of which they are responding, according to the feedback of the respondents.

Figure 4 - Position within the organization

|  |  |
| --- | --- |
| **Senior management** | **36%** |
| **Middle management** | **36%** |
| **Leadership and supervisory** | 7% |
| **Administrative** | 21% |
| **Other** | None |

## It seems evident that respondents holding management positions had more time to respond to surveys, than respondents holding other positions.

## 5.3.3 Employees within the organization

The chart below depicts the organizations according to the number of employees within the organization.

Figure 5 - Employees within the organization

Although the definition for sizing enterprises includes information about revenue, it was noted in a preliminary survey that they majority of managers prefer to remain secretive about the levels of revenue within the organizations that they manage, as this would typically entail authorization from the board of directors. The *references and bibliography* section of this document includes links to the definitions of small to medium enterprises as defined by the European Commission.

|  |  |
| --- | --- |
| Less than 10 employees (micro) | 22% |
| Between 10 and 50 employees(small) | 36% |
| Between 50 and 250 employees(medium) | 14% |
| More than 250 employees | 28% |

## 5.3.4 Firm makes use of outsourcing or sub-contracting

The following chart indicates whether firms are making use of outsourcing or sub-contracting, and, there is a clear majority of affirmative replies.

## Organization makes use of outsourcing 78%

## Organization does not make use of outsourcing 22%

## 5.3.5 Which functions are outsourced?

## The following chart indicates the typical business functions which are outsourced.

|  |  |
| --- | --- |
| Sales | 7% |
| Marketing | 14% |
| Information Technology and Information Systems management | 57% |
| Accounting | 7% |
| Public relations | 15% |

## One respondent highlighted that the IT/IS function is partially outsourced, which indicates recommended practice, due to the fact that outsourced functions may have to be managed by a professional representing the organization outsourcing the function, to mitigate risks outlined throughout this document, such as opportunistic behaviour from vendors.

**5.3.6 Are the outsourced functions covered by a reliable contract?**

Yes 21%

No none

No answer 79%

The above ratio indicates that respondents may not be aware whether outsourced functions are covered by a contractual agreement, notwithstanding that the majority of respondents hold managerial or administrative positions. It is also possible that the respondent preferred not to respond to this question due to lack of specialization on outsourcing. No additional comments seemed to indicate the reasons behind this finding.

**5.3.7 Customer satisfaction is relevant to the management out outsourced functions**

Yes 21%

No none

No answer 79%

The above ratio may indicate that they do not have sufficient information to understand whether their customers are satisfied with services that are outsourced to sub-contractors or to outsourcing providers.

It was noticed that one respondent replied that s/he did not have enough time available to fill in the survey, and, this may confirm the author's impression that Maltese business culture places a high focus on the old business adage "time is money", which would indicate less time dedicated to business research and management activities, that may indicate the lack of insight entrepreneurs have in understanding the metrics of the businesses managed, and, this provides opportunities for information technology specialists to market their management skills.

High focus on the productive use of time seems to be confirmed by one of the respondents of the in-depth interview (see *Appendix C*), who clearly outlined that before taking into consideration external factors influencing an organization, a manager might give more priority to the internal organizational structure and the implementation of policy and day to day running of the firm, and, it is being concluded that this is inherently part of Maltese business culture, which is confirmed by the impression of the author who has been familiar with Maltese business culture for over 15 years.

# Chapter six: Analysis

Within this section we analyze the validation of hypotheses that were drafted by the author throughout the period of research.

|  | **Hypothesis** | **Mean** | **Standard Deviation** | **Result** |
| --- | --- | --- | --- | --- |
| **H3.1** | Outsourcing improves the short term and long term bottom line, ranging from cost savings for re-engineering and automation of processes to increased return on investment in technology as a result of re-engineering or innovation. | 4.36 | 4.51 | True |
| **H3.2**  | Outsourcing enables entrepreneurs to access specialist technical and management resources. | 4.50 | 4.52 | True |
| **H3.3**  | Outsourcing may reduce the costs involved in human resources management, management controls and may avoid the need to recruit specialists to manage all business functions required by their organization. | 4.36 | 4.52 | True |
|  |  | **Mean** | **Standard Deviation** | **Result** |
| **H3.4** | Total outsourcing is not recommended practice, since firms need to remain in control of their business, and, capably manage vendors and sub-contractors. | 4.57 | 4.69 | True |
| **H3.5** | Outsourcing provides easy access to flexible services and products which can imply increased flexibility provided to the clients and stakeholders of an organization. | 4.57 | 4.69 | True |
| **H3.6** | Outsourcing can provide organizations with additional marketing channels and public relations, through branding of best practices. | 4.00 | 4.17 | True |
|  |  | **Arithmetic mean** | **Standard Deviation** | **Result** |
| **H3.7** | Outsourcing puts the entrepreneur's mind at rest that risks are being managed professionally. | 3.14 | 3.46 | True |
| **H3.8** | Outsourcing gives insight to an entrepreneur that enables them to value expertise gained and gain further strategic advantage over competition, whilst monitoring performance of the provider transparently. | 3.85 | 4.03 | True |

Figure 6 - Statistical validation of hypotheses indicating variance and standard deviation

The x-axis represent H1 to H8

It is deduced that the hypotheses **were valid**, based on the sample gathered, due to the closer general agreement with the hypotheses proposed by this research. The statistical method of validation proves the hypothesis valid even during preliminary methods of validation based on simple calculation of standard deviation.

H7 seeks to validate whether the entrepreneurs' minds are at rest that risks are managed professionally by outsourcing vendors seems to indicate a highly controversial range of responses, with a high level of mistrust and a high level of trust shown by different respondents that risk management is being carried out professionally. Neutral responses might indicate lack of awareness on the importance of professional risk management within outsourcing projects, or a lack of bias in providing a judgement.

See *Appendix C2* for details on how the statistical computations were calculated.

Table 1 - Risk management frequency distribution

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 1. Strongly disagree | 2. Disagree | 3. Neutral | 4. Agree | 5. Strongly Agree |

Nevertheless there were exceptions worth highlighting, as the analysis within chapter six shall summarize. No further granular detail could be analyzed quantitatively, due to the lack of resources available, and, the fact that the majority of respondents did not seem interested in responding to this survey, unfortunately.

# Chapter six: Analysis

**6.1 Introduction**

The analysis seeks to delve the analysis of statistics into detail and provide explanations to the results.

**6.2 Qualitative concerns**

Outsourcing puts the entrepreneur's mind at rest that risks are being managed professionally.

This hypothesis seeks to confirm the re-assurance that risk management by outsourcing providers is managed professionally.

The respondent in question strongly disagreed that providers that s/he engages for the medical consultancy services provided are managing risks holistically, thereby due to the implying an increased need for management control of outsourced services, typically through the employment of a professional who seeks to ensure that the benefits are being actually availed of by the client organization. Retrospectively, it is hypothesized Medical professionals are expected to have a lower tolerance of risk when outsourcing services.

The salient concerns around outsourcing include increased overheads, the importance of written contracts to regulate the terms and conditions of the agreement, the need for management control, and, the requirement to implement best practices, based on the maturity level of the outsourcing provider. This included responses from six respondents, one of which stated that s/he is not directly involved in managing the outsourcing function, however, seems to have responded based on observation.

The author is under the impression that lack of trust and relationship building may lead to the increased focus on cost management, and, leading to the trend of outsourcing amongst enterprises. The economic conditions leading to the double dip seem to have triggered increased concerns which in the eyes of entrepreneurs and strategists seem to have shifted their focus on internal efficiency.

A private company which was under study since late 2011 was observed to have an reductionist strategy when it comes to providing holistic service to its clients. Rather than focusing on using innovative technologies and enhancing its business processes to seek to promote its technologically advanced services, the chief executive officer seems to have preferred reneging the introduction of processes which may have lead to improved delivery of service from the author's point of view. This deduction was based on a number of suggestions sent in writing to the officer involved, which seem to have been ignored. Similar attitude was perceived when proposing innovative solutions to other executives, within the private sector and the public sector, and, this seems to contradict the expectations of entrepreneurs being pro-active in seeking to improve their business processes with the help of technologies. The perceived apathy leaves room for further in-depth analysis, to understand the reasons why entrepreneurs might not wish to invest more time in complementing or improving their business models, during an economic recession, when business opportunity depends on the ability of maximizing sources of revenue, according to business consultants interviewed at the time of writing.

Similar reductionist strategies and an increasing need for hoarding of skills, under-utilization of human resources, and, the decreased evidence of ethical practices seem to indicate a declining perception of the quality of life being proposed by entrepreneurs, as they seek to safeguard their private interests, and, effectively overlooking social costs, and, the social consequences of their decisions on a macro-economic level and on a micro-economic level.

On the other hand the author's view might be perceived as negative, given that recent press releases made by bank executives in the Maltese islands, seem to indicate increased business growth, and, an increase in bank deposits, which overall confirms the social tendency to save more money during repressed economic times, which finds its roots in the very basics economic theory.

Online research indicates a global increase in demand for technology and technology professionals. From an economic point of view the use of organizations which already specialize in the provision of specialist services would be prepared more holistically in terms of organizational structure, preparation for the implementation of best-practices for industries within which their clients operate.

Nevertheless the implementation of technology should factor in the social factors such as the increased political awareness on the need for job creation, which creates opportunities for training persons who are already experts in their area of business to be trained to use automated tools such as robotics and technologies and make more effective use of technology improving the contribution that they can potentially make to their employing or contracting organization.

Positive thinking is perceived as a highly relevant factor in creatively aligning the needs of the market to the needs of the resources each and every organization is attempting to manage, and, this underlies the increasing importance of soft skills and speaking the humanitarian language of compassion, rather than perceiving industrialization as [post-fordism](http://en.wikipedia.org/wiki/Post-Fordism), since strategy perceived to be driven solely by economic objectives might instil fear and resistance to successful take-up of innovative technologies. Positive thought is seen to influence consumerism, therefore stimulate increase in demand for consumable goods and services at a profit that is healthy for every organization and this is the basic requirement for business growth within free market economies and controlled economies.

Outsourcing of information systems management services has triggered bank executives under study to strategically allow for and under-manned IT Department, which had been going through evident management problems during the period under study (1998 to 2007). Outsourcing had been perceived as a technically feasible manner of engaging in multi-tasking of different projects during a time when the human resources employed within the organization had their hands full, and, could not cope with the demand for integrated information systems within a highly sophisticated financial services industry, which seeks to compete aggressively with larger banks using business process re-engineering, competitive tariffs, and, lower profit margins to attract new customers away from competition. The strategy has been successful given that the profits of the financial institution in question have grown exponentially over the last decade. For example, financial year ending 2007 was represented by net interest income presumably from lending practices of 8% over the previous year. Without engaging in effective integration of IT/IS strategy, the extent of marketing is thought not to have been as effective.

Unfortunately, the author researched the impact on human beings on outsourcing, and, it transpires that more than one person who had to resign for health-related issues remained uncompensated notwithstanding that the financial institution boasts of a corporate social responsibility policy. This underpins the lack of severance packages as part of mandatory employment contracts, that are seen to be socially responsible during an economic recession where the perception of long term job security might have declined given the increased use of fixed term contracts and other cost saving measures which seek to maintain a lean business model, in order to engage in competitive pricing of services.

It would seem that such policies seem to have an expiry date, as their validity expires when the contract of employment between the organization and the aggrieved employee is terminated for different reasons, and, unfortunately, the Republic of Malta does not offer high end support for unemployed persons beyond basic subsistence, which seems to force unemployed persons to accept the jobs which are available on the market. This strategy seems to have worked in fulfilling the needs of the labour market within the Maltese islands, as unemployment rates are reported to remain amongst the lowest when comparing Malta to other countries within the European Union.

Business friendly policies are traditionally part of the Maltese business culture, as institutionalized by the Government of Malta, however, this does not mean that such policies make Malta the ideal location for setting up business, because:

a) Countries such as Vietnam markets are known to be more attractive to the manufacturing industry due to the low cost of labour and the lower cost of living. This is because they have low minimum wages. Nevertheless, it is common for manufacturing executives to authorize wages that are higher than the minimum wage to motivate employees in raising optimum levels of productivity.

b) Countries which attract low-cost labour may not be attractive to the investor because any manager who plans in the long term prefers to establish base in a country where the political scene is seen to be stable and have a positive outlook by investors. Therefore higher quality of life in a country would attract investors who are seeking to establish long term business relationships which are built on top of business continuity, accumulation of human intelligence for the benefit of the enterprise, and, harmonious employer-employee relationships.

One has to keep in mind that an unhappy workforce, protests and trade-union negotiation imply increased cost on the managers' time and decreased productivity rates; therefore amicable compromises provide cost-saving opportunities to the investors.

Historically, technology has proven successful over the last few millennia, since the times of the Ancient Greeks and the Ancient Egyptians, and, the study concludes that there is no reason to forecast that the double dip will cause the business trends to recede in the long term.

# Chapter seven: Conclusion

# Outsourcing is shown to be looked upon positively in the minds and hearts of the respondents surveyed and interviewed within this research, although it is clear that the focus of management is on results leaving the human management aspect to the specialists to criticize, particularly during the double dip.

# It is being concluded that by carrying out adequate evaluation of the business needs and being open-minded to outsourcing as one of the successful business strategies for delivering information systems capacity, building upon existing technologies, using best practices supported by other experts within the industry and taking advantage of expertise, are envisaged to reduce total cost of ownership, possibly increase the return on investment and increase the adoption of technology bringing about economies of scale as firms seek to integrate services as they collaborate, as an alternative strategy to competing within saturated markets where supply might be seen to exceed demand, thus deflating prices and decreasing profit margins.

# The response rate could have been higher if universities seek to establish meaningful business links with existing research providers rather than sticking to negative perception on the value of the research that is so promptly advertised by these education institutions.

# In order to carry out such professional and meaningful research and also to support the bridging of the income inequality through universal education that is available to everyone, more funding needs to be available to degree-level students in order to assist them improve the quality of their studies at the earliest possible stage of academic learning, as this is seen to improve the gap between the demand for labor for specialists, the demand of which is seen to increase, and, the supply made available by tertiary education institutions, who constantly need to improve the quality and effectiveness of the knowledge required by the needs of various industries and organizations, as they seek to compete to improve sources of research and the knowledge base available to the labor market, for which the education management industry has been successfully and profitably been rewarded since the existence of tertiary education.

# Economic growth and technological advancement clearly requires a commitment at strategic level, which seeks to counter-argue against the traditional "not in my backyard" approach taken by entrepreneurs when faced with business proposals to improve their business. Traditional management science uses scientific measurement criteria are used to measure performance. The small entrepreneur requires a substantial effort in terms of motivation and initiative to compete in an increasingly competitive market, using the appropriate technologies to sustain one's knowledge needs in a holistic manner.

# Nevertheless, one has to keep in mind the importance of taking decisions within the day to day operations, that has to be supported by integrated information systems, as this reduces the time to recall information. The main business justification for technological innovation is based on improved capacity to take instant decisions at the rate of thought. Within business environments decisions are seen to be more chaotic and dynamic as the number of decision makers and stakeholders increases as customers, managers, suppliers and other influencers bring to consciousness qualitative and quantitative information worth analyzing in order to remain competitive, within a global scenario.

# No business or non-business activity can start without taking the first step in putting one's money where one's mouth is. Sustainable business plans have to be proposed by entrepreneurs that encompass:

# diligent practice, controlling changes in a way that is acceptable within the boundaries of one's organization,

# assessment of the external environment to review risks and opportunities as they arise, and,

# increased business growth using long-term vision based on complete and accurate information to sustain your day to day decisions.

# “Right now, companies are so focused on cutting wages — by paying their employees as little as possible and replacing them with technology whenever possible — that wages as a percent of the economy are now near an all-time low (see chart below). And this weakness in wages is the big reason demand in the economy is so weak.”

# Eric Schmidt, Chairman, Google Inc

**Appendix A - Research proposal**

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| **Topic Area Proposal** |
| **Author**: Jonathan Camilleri**Student No**: **SRN 070404915** | **Date**: 29TH August 2013 | **Version**: 1.0 |
| **Working Title**: How can outsourcing be managed **effectively** within modern SMEs? |
| **Main theme**: The factors which attract SMEs and possibly other firms toward making use of outsourcing business operations.  |
| **Research Questions**:1. Which are the **critical success factors** that guide management in taking advantage of outsourcing to specialist firms?
2. Do SME managers/owners maintain a good relationship with the external vendors?
3. How do organizations define quality management in policy?
4. Which business standards are used for guiding IT/IS management?
5. What do entrepreneurs expect to achieve with the aid of information systems?
6. Are organizations strategically aligned to external factors influencing the organization?
7. How do firms go about making procedures guiding the tender adjudication process?
8. Is lack of IT expertise evident in small firms?
9. What are the benefits achieved by outsourcing, off-shoring or near-shoring?
10. What risks are taken by firms when outsourcing, off-shoring or near-shoring?
11. Should organizations outsource more than 80% of its business functions, particularly its core business functions?
12. How do culture and time zones influence the customer service policies, agreements, and, day to day management of outsourcing providers, such as call centers?
13. How do we manage contractual and business-to-business relationship risks related to vendors when we are business clients of outsourcing providers?
14. How do we manage contractual and business-to-business risks from the point of view of the outsourcing provider, which specializes in providing services to organizations who want to outsource business functions?
15. Is it redundant to interview staff of outsourcing providers of human-capital intensive firms, as they might be working for the client organization?
16. What makes a business-to-business relationship trustworthy and reliable?
 |
| **Outline of argument**Outsourcing of business functions, particularly outsourcing of technology support which may include hosting of business data requires a diligent approach to selecting the appropriate provider in order to ensure that the business ot business relationship delivers what is originally expected out of the relationship in terms of cost savings, improved organizational learning, expertise or access to expertise, and, other advantages which allow the client organization to focus its management activity on the core business model.  |

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| **Links to wider information systems issues**:* The impact of IT implementation on small firms
* Political and economic influences on SMEs.
* Vendor management and integrating technologies requires expert software consultants.
* The vision, risk aversion, and, IT knowledge of the entrepreneur
* Innovation for SMEs
* Economies of scale achieved by SMEs might add competitive advantage to keeping the spirit of a small firm, even when the business grows, to achieve greater flexibility in adapting to the wider environment.
 |
| **Links to syllabus of other units within the degree**:* IS1060 – Introduction to Information Systems
* IS2062 – Information Systems Development & Management
* IS2138 – Elements of Information & Communication Technology
* IS3139 – Software Engineering: theory & application
* IS2167– Management and Innovation of E-business
* MN1107-Business and Management
* IS1168-IS Architecture
* MN3075-Human Resources Management
* EC1022-Economics
 |

**Appendix B - Research motivation**

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| **Five keywords for use in an online search**:* Outsourcing
* Off shoring
* IT strategy improvisation
* Business Process re-engineering
* Small to medium enterprises
 |
| **Alternative ways to research the topic and collect data**: Government and regional statistics and existing academic research can be used for gathering information on the topic. Business research firms such as Gartner's provide this information as part of their business research services. |
| **What research framework (theory or set of concepts) do you propose to use in this work?**After the collecting relevant literature to the topic, a set of hypothesis statements will be derived. Later the hypothesis statements are validated through the use of a questionnaire survey. A conceptual model is refined from the literature review to guide the study. The results of this survey will then be analysed and interpreted using the necessary statistical methods. |
| **Required resources and issues of access**: The required resources are mainly journals, articles, books, access to Athens and access to St Martin’s Institute of Technology’s library. |
| **Assessment of required skills or techniques**: * Selecting the essential information from the gathered literature
* Designing an effective questionnaire and conducting a survey.
* Data analysis and interpretation from obtained questionnaire data, using quantitative analysis (statistics), interpretation of statistics and other information as interpreted or collected from survey respondents.
* Ability to use word processor and spread sheet applications.
* Ability to design frameworks and models using office tools.
* Planning and time management
 |
| **Reference to five articles or books relevant to the topic**:1. Leslie P. Willcocks and Mary C. Lacity, The New IT Outsourcing Landscape, published by Palgrave Macmillan (2012), ISBN 978-0-230-35881-2.
2. Leslie P. Willcocks, Sara Cullen and Andrew Craig, The Outsourcing Enterprise, published by Palgrave Macmillan (2011), ISBN 978-0-230-23191-7. Table 3.1 on page 82 includes benefits, risks and management issues for various supplier configuration options that may be a useful guide during the decision making process when deciding how to manage outsourced functions.
3. Mary C. Lacity and Leslie P. Willcocks, Advanced Outsourcing Practice, published by Palgrave Macmillan (2012), ISBN 978-1-137-00557-1.
4. Douglas Brown and Scott Wilson, The Black Book of Outsourcing, published by Wiley and Sons (2005), ISBN: 13-978-0-471-71889-5.
 |
| **Justification of interest to others**: Outsourcing is recommended by management consultants as a way to provide increased focus on the core functions of a business. Although outsourcing may provide managers with more flexibility, it does not exonerate them from ensuring that the strategic needs of the organization are being met, and, these are translated into healthy business operations. In order to make an outsourcing proposal attractive to a business client, a manager needs an academic framework to guide the delivery of business benefits, in order to enable managers to monitor performance of that proposal against this framework.  |

# Appendix C - Criteria for selection of expert respondents

With reference to the research methodology, the minimum criteria for qualifying as an expert for being interviewed for this research include:

* expert has passed an initial screening interview.
* 5 years or more in a management or senior management position within the IT/IS industry or within the specific subject matter.
* possess academic qualification with a specialization in a IT/IS management discipline.

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| **Appendix D1 - Cybercrime statistics** |
|  | **2003** | **2004** | **2005** | **2006** |
| Adult pornography | 0 | 0 | 0 | 10 |
| Child pornography | 7 | 31 | 11 | 11 |
| Computer misuse including hacking | 7 | 16 | 18 | 29 |
| Counterfeit currency | 0 | 0 | 0 | 0 |
| Fraud, forgery and misappropriation | 16 | 9 | 25 | 40 |
| Trafficking in Human Beings | 0 | 0 | 3 | 3 |
| Illegal Gambling | 0 | 0 | 0 | 4 |
| Incitement of racial hatred | 0 | 0 | 0 | 2 |
| Information gathering on police reports | 15 | 37 | 28 | 14 |
| Information gathering on missing persons | 0 | 0 | 0 | 0 |
| Insults, threats and private violence | 5 | 6 | 9 | 38 |
| Intellectual Property Rights | 1 | 8 | 5 | 5 |
| Other Serious Crimes | 0 | 0 | 0 | 0 |
| Prostitution | 0 | 0 | 0 | 1 |
| Sexual offences including defilement of minors | 0 | 0 | 0 | 15 |
| Terrorism | 0 | 0 | 4 | 0 |
|  | 51 | 107 | 103 | 172 |
|  | **2007** | **2008** | **2009** | **2010** |
| Adult pornography | 1 | 10 | 3 | 4 |
| Child pornography | 5 | 23 | 29 | 17 |
| Computer misuse including hacking | 45 | 75 | 80 | 128 |
| Counterfeit currency | 0 | 0 | 2 | 1 |
| Fraud, forgery and misappropriation | 46 | 54 | 68 | 60 |
| Trafficking in Human Beings | 0 | 1 | 1 | 0 |
| Illegal Gambling | 2 | 2 | 1 | 4 |
| Incitement of racial hatred | 0 | 0 | 0 | 4 |
| Information gathering on police reports | 23 | 16 | 25 | 24 |
| Information gathering on missing persons | 0 | 5 | 4 | 4 |
| Insults, threats and private violence | 38 | 61 | 85 | 88 |
| Intellectual Property Rights | 3 | 7 | 0 | 3 |
| Other Serious Crimes | 0 | 4 | 5 | 20 |
| Prostitution | 1 | 0 | 0 | 0 |
| Sexual offences including defilement of minors | 6 | 18 | 12 | 10 |
| Terrorism | 0 | 3 | 2 | 8 |
|  | 170 | 279 | 317 | 375 |

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| --- | --- | --- | --- | --- |
|  | **2011** | **2012** |  |  |
| Adult pornography | 0 | 1 |  |  |
| Child pornography | 12 | 11 |  |  |
| Computer misuse including hacking | 134 | 219 |  |  |
| Counterfeit currency | 1 | 1 |  |  |
| Fraud, forgery and misappropriation | 67 | 133 |  |  |
| Trafficking in Human Beings | 2 | 1 |  |  |
| Illegal Gambling | 0 | 0 |  |  |
| Incitement of racial hatred | 1 | 2 |  |  |
| Information gathering on police reports | 23 | 46 |  |  |
| Information gathering on missing persons | 3 | 7 |  |  |
| Insults, threats and private violence | 91 | 97 |  |  |
| Intellectual Property Rights | 1 | 2 |  |  |
| Other Serious Crimes | 20 | 31 |  |  |
| Prostitution | 4 | 10 |  |  |
| Sexual offences including defilement of minors | 10 | 10 |  |  |
| Terrorism | 3 | 5 |  |  |
|  | 372 | 576 |  |  |
| **Sourced** from Criminal Investigations Department, Floriana, Malta (June 2013), and reproduced with kind permission. |  |  |  |  |

# Appendix D2 - Interview

Thank you for meeting me today.   The meeting lasted about 2 hours, and, I would like to thank you for the courtesy of paying my beverage.  This time taken to write this up was considerably longer, which means that the meeting has positively influenced my learning.

The exchange of information was insightful and interesting.

I am outlining as a transcript of our discussion your profile and the main points discussed during the interview, which includes some comments from my part that I feel fill in or clarify arguments that you brought forth today.

This transcript shall be used as part of my research for my thesis, which analysis the extent of outsourcing and the opportunities that it may offer to the business in the coming years.  I am also attaching an early draft of the literature review which I hope outlines useful information.

The following outlines my summary of your answers to the questions.

## 1. What do you consider to be the critical success factors that incentivize a firm's make or buy decision?

Cost, quality and timeliness of delivery are critical factors when considering the viability of an IS/IT project, with cost and time being increasingly important to client organizations in his experience.

Customers nowadays expect ongoing support i.e. beyond the delivery of the project, within a reasonable and adequate response time.  They also need to access resources (e.g. skilled technical persons) which they decide not to recruit as part of their in-house employees, as part of their core business (or organizational) functions.  Therefore they achieve access to specialized technical resources which they might not be willing or able to access, through the use of business to business services that may be outsourced.

Training and appropriate communication - both with internal resources and with customers and stakeholders' are important to enhance the perception of the service delivered, by involving the customer in the process and the decision making process, to mitigate or alienate the risks identified based on the policies and requirements outlined by the client and keeping the client aware and informed of the progress either on a regular basis or on a need basis.  He prefers to communicate weekly with customers that are considered to deliver considerable value to the outsourcing provider, in order to ascertain whether improvements can help improve the clients' perception of the service delivered.

Finally the client may decide on whether s/he considers a (business) function to require outsourcing based on perceived profitability (or cost savings) which can be measured with the estimation of the return on investment, and, based on his/her perception on whether the function needs to be managed closely as this is part of the core functions of an organization or whether it can be outsourced.  For example, a software development company would normally be expected to engage software engineers and professionals as employees, and, may outsource other functions such as administration, quality assurance and other work which may have temporary 'peaks and troughs' that require additional effort.

## 2. What are the major points to keep in mind when managing quality?

Quality management involves a holistic approach that is outlined by project management methodologies as one of the most important critical success factors.

In order to ensure quality is managed adequately, appropriate use of service level agreements that are organized according to the level of service to be provided to the client organization need to be defined contractually or otherwise in advance, to ensure that the client is aware of the risks - some of which can be mitigated - and that the project manager understands the clients' and stakeholders' views on the direction of the project, or support agreement.  For example, we might have the following hierarchy of service level agreements:

Service Level Agreement 1 (SLA1) guaranteeing a response time of 1 business day and providing first line of support, at pre-defined rates/charges.

Service Level Agreement 2 (SLA2) guaranteeing a response time of 4 hours and providing second line of support, which includes a guaranteed technical resolution, at higher rates/charges, which would be priced at 2.5 times the rates for SLA1.

Service Level Agreement 3 (SLA3), guaranteeing a response time of 2 hours and providing third line of support, which includes a technical resolution (workaround) and commitment to integrate incidents reports as part of analysis for a longer-term solution.

He highlights the importance of delivering workarounds, that are followed up with solutions to the problem, and, recommends adequate timeframes for guaranteeing such response times to be contractually binding, in order to satisfy customers' expectations.  Typically, an acknowledgement of the problem is given by the technical support team within 10 minutes, a workaround can be provided within 1 week of reporting the fault and a permanent solution - which may involve software engineering and other systems administration tasks - within 6 weeks that the report is provided.

Service level agreements may include financial penalties for non-delivery and may guarantee 24/7 support, having skilled resources on call and readily available to provide technical support.  Management includes the appropriate scheduling of shift patterns that are appropriate taking into consideration corporate culture, individual attitude and predisposition, and, general culture of the inhabitants of the country which may influence upbringing.

This underpins the appropriate leadership and human resource management skills that are highly relevant within all levels of the organization, particularly middle management and supervisory management who are expected to communicate effectively, and, provide adequate resources that enable the technical specialists to work effectively and efficiently, thereby supporting the service level agreements - and other urgent requests and expectations such as customer satisfaction - to be met effectively.

This implies important resource management - including human and technical infrastructure amongst others, that need to be addressed by the firm(s) providing technical services to client organizations who have chosen to engage a specialist IT/IS service provider to take care of their technological requirements.

It was highlighted that requirements may consist of prepared requirements, or else, elicited requirements, and, organizational skills are required to ensure that meeting agendas are prepared in advance leaving room for 'out of topic' questions, and, having headings that include the issues to be discussed, action to be taken, and, the responsibility for addressing the issue, and, preferably an agreed deadline.

The interviewee also highlights the importance of customer relations by being professional, following up regularly with the customer on specific aspects affecting the progress, and, keeping agendas that are appropriate for purpose.

A sample agenda is available at <http://www.docstoc.com/docs/7055519/SUMMARY-OF-ACTION-POINTS-PAMS-MEETING-ON-22-MAY>.

He highlighted the importance of a clear and complete handover, in his experience of overseeing technical support provided on a multi-national basis, to cover 24/7 support.  This should cover the tasks being handed over in the appropriate level of detail to enable another person carrying out similar duties to work effectively.  This may be followed up with a 30 to 40 minute handover session, to outline and summarize the work and to highlight the most critical and urgent issues to be resolved, as this is common within an environment that provides technical support.

On the other hand, he understands that physical and psychological stress require appropriate people management including allocation of work breaks and an opportunity to raise issues that might not have been clearly articulated or misunderstood by some team member, as we are all human beings.

This does not discount on the quality of service that needs to be delivered to the client, however, as he seems to highlight customer satisfaction as a personal driving force in determining business relationships.

The interviewee adds that handovers and documentation can highlight many areas for improvement that might not have been immediately evident during the planning process, or simply to indicate shortfalls in individual, team or process performance within any organization i.e. whether it is the client organization or the organization that an IS/IT manager is overseeing.

Samples are being attached to illustrate possible templates that are used, as are being suggested by the author.  Some ticketing software allows for the integration of a detailed handover and appropriate 'flags' to indicate whether a handover has been detailed for record keeping, workflow and for follow-up reasons.

It is critical that business continuity is given high priority when working within an organization that provides technical support to client organizations who rely on the technological infrastructure for their business needs.

The author realizes that this might be a critical factor that might discourage a client from outsourcing technology services, therefore trust needs to be built from both parties.  It is noted that relationship building - similar to time in attending job interviews - is commonly non billable, therefore a cost to the persons meeting the prospective client(s) or employer in their own time or in the time for which they are paid by their employer in the case of the project manager or the customer relationship or account manager.

## 3. How do you engage in vendor management?

It is important that deliverables are highlighted in detail, in terms of the software functionality, non-functional requirements such as expected response time and hardware specifications that need to be specified in clear terms for the purposes of specifying the technical parameters by which the vendor organization is made aware that they need to deliver.

The respondent highlights the importance of looking beyond the immediate requirements, and, analyzing metrics such as the expected transaction and data volume, which is expected to impact the capacity required in the medium to long term.

Expected transactions can be measured by analyzing historical data within similar organizations or within the same industry or may be asked of the client to estimate amongst other methods, although it needs to be clarified that the past is not a guarantee of future performance.  Increased transaction volumes in the long term have an impact since they can lead to higher infrastructure costs (e.g. storage, systems administration), beyond the technical implications on the analysis in the case of software development projects.

The respondent tells us that common sense is not so common by highlighting a few humoristic examples that he experienced throughout his career, which underpin the importance of due diligence, customer relations and professionalism throughout the relationship where he outlined that the theories provided to us about culture might not be sufficient information to evaluate the specific needs of the client, which implies additional communication needs.  He also adds that company culture may imply rigid standards, or, being flexible towards the terms of delivery and expectations, and, this commonly this boils down to the decision makers.

For example, he outlines the difference between cultural and individual perceptions related to the delivery of service, which are not necessarily related to the country of origin but may be related to the personality, mood and environmental factors of the decision makers and the organizations that they represent, amongst others.

The respondent outlines that although cloud computing (e.g. Software As a Service) is highly promoted as an effective service that can be managed by providers, vendors commonly use specific wording in their adverts to entice customers in perceiving advantages that are not necessarily guaranteeing a high standard of information systems security when these technologies are evaluated by IT professionals.

For example, it was discussed that the appropriate and professional use of [subnetting](http://en.wikipedia.org/wiki/Subnetwork) and other professional network design methodologies within the internal network where the services are hosted may be intelligently used to guarantee that each client might make appropriate use of dedicated server pools as is commonly advertised by providers.  Unfortunately,  adverts made by IS/IT providers may be misleading or make use of smart wording to mislead the customer.

According to the Maltese [Commercial Code](http://www.justiceservices.gov.mt/DownloadDocument.aspx?app=lom&itemid=8578) 1933, Article 32B, misleading advertising is in breach of the law.  It may be good practice to stipulate the appropriate jurisdiction(s) for seeking legal damages within a contract of service that is deemed to be legally binding.

This implies the need for IS/IT professionals who may be engaged in monitoring the delivery and viability of a project.

## 4. With your experience in managing quality which methodologies would you recommend using for IT/IS management.  Why should firms take advantage of established standards?

The respondent outlines that methodologies including [ITIL](http://www.itil-officialsite.com/) [Microsoft Operations Framework](http://technet.microsoft.com/en-us/library/cc506049.aspx) for service management, [PRINCE2](http://www.prince2.com/), [PMP](http://www.pmi.org/) as formal project management methodologies have to be implemented to fit the needs of the client and vendor organizations, and, at times to fit particular projects, suggesting that clients can opt for consultancy, and, may require training in order in the above frameworks in order to be able to manage the technical infrastructure themselves.  Budget permitting, the best practice suggested is a hybrid approach that makes use of an experienced consultant, and, training provided to persons who have less experience in delivering projects and providing services using industry-standard methodologies.

Businesses may seek to get a hybrid approach by taking advantage of the right balance between the use of established frameworks that are adequate for their needs, as this would have a considerable positive impact on their time to learn the fully-blown framework or methodology and to acquire expertise on the matter.

This ties in with a quote read on social media from a renown ITIL and business continuity consultant

"if you are afraid of the costs incurred when you hire a professional, wait till you see the costs of hiring an amateur"

Source: [facebook.com](http://facebook.com/), September 2013

The respondent recommended the use of [Agile-based methodologies](http://www.agilealliance.org/the-alliance/what-is-agile/), for software development, also highlighting the importance of appropriate change management, that can be addressed using prescribed methodologies such as ITIL that need to be adapted to the needs of the organization.

It was also discussed that project plans are to be followed up with appropriate service agreements to ensure that the client realizes the full benefits of technology in the short term and in the longer term, as technology requires frequent training which is commonly the responsibility of the outsourcing provider amongst other reasons.

Common sense is not so common according to Mr. Agius and established frameworks provide a basic guideline to help organizations manage their (IT/IS) resources holistically and professionally.

## 5. How do you feel that global economics and politics influence your decisions as a project manager?

There is an increased need to adapt the expectations of the client, to the proposal that one is providing to the client organization, and, to demonstrate sound management, customer relations and a pro-active approach in resolving technical problems.

The respondent helpfully advises to ensure that deadlines and important information relevant to promotions and funding relevant to a proposal are to be outlined clearly and in writing to the client 'a priori', and, one should seek to clearly establish deadlines for accepting proposals, deposits, and, promotional offers, in order not to end up making a loss.  For example, if Microsoft offer Windows 8 for free on 4th July 2013, then complete information needs to be documented within the proposal, otherwise, if vague wording is used, the client may be mislead into thinking that the offer is open 'ad infinitum', as we humoristically assume that the client seeks to interpret in the manner that best suits his or her interests.  As a matter of fact EU funding is bound with deadlines as well.

A project management needs to be smart enough to propose products and services at the right time, in the knowledge of budgetary constraints or other constraints that may put a proposal in different light in the customer's frame of mind, and, decision making strategy.

The respondent suggests that in order to reduce total cost of ownership, one may adopt a 'train the trainer approach' or through the use of computer-based training, as this may save on the training costs that are commonly required by the client in order to understand the basic implementation details of a project - which would enable them to manage the technology more effectively.

More often than not, failure to undertake proper training may result in tinkering that may result in higher costs to repair the problem, than the cost incurred when adequate training allows the client to troubleshoot the problem effectively prior to escalating the problem, or, tinkering with the technology without appropriate technical guidance.

A number of companies provide the services of an account manager who is engaged to look into the specific needs of the client as part of the service provided to the customer, although different criteria are used to decide on the number of hours that an account manager dedicates to clients.  The interviewee highlights with this example the importance of monitoring the account and liaising effectively with the technical parties involved.  For example, he mentions a case where an account manager might need to go beyond the contractual agreement and liaise with a technical support manager to ensure that the client is satisfied with the approach or the impression that the decision makers might have of the project manager(s) making the proposal, and, the account manager diligently highlights relevant information that may be of benefit to show respect and understanding of the clients' culture and their background.

The author is assuming that this may be based on the contractual value of the contract or portfolio, although this is not necessarily a golden rule.

The interviewee confirms that [return on investment](http://en.wikipedia.org/wiki/Return_on_investment) is key financial metric that is sought to be quantitatively compared when evaluating the economic feasibility of a (technology) project.

Therefore, financial metrics seem to have a high priority when reviewing proposals, in view of the fact that they can lead to cost savings, or, profit, and, this is addressed by quantifying the return on investment over the span of an outsource function.

For example, in the author's experience, traditionally firms would typically outsource when the rate of hiring outsourced resources is lower than that if they seek to engage employees.  The client organization might realize that there is a long term benefit which affects the bottom line by re-engineering the business process with the underlying improvements brought about with investment in technology.

The author feels appropriate to add that this needs to take into consideration the viability of the investment in the particular technology.

Individual and corporate policies and culture is dependent on the individuals concerned, the culture in which they are brought up, and the diversity of cultures within which they are working (e.g. teams made up of people with different nationalities as is common within the iGaming industry in Malta with the increased influx of foreign direct investment in the Maltese islands), as IT/IS has become predominantly an example of how diversity and globalization has influenced commerce in the Maltese islands. This has been confirmed by a manager working for an iGaming provider, who confirms sales revenues in excess of 300M EUR generated by the company.

## 6. Do you take into consideration time zones to ensure that client organizations avail from 24/7 support?

Yes, for example, a typical setup might consist of establishing an office in Malta and an office in New Zealand with appropriate technical human resource capacity to be able to provide support round the clock.  Moreover, it is important to ensure that sufficient flexibility is available so that technical support is available 'on call' when particular expertise is required to troubleshoot incidents.

## 7. How do you go about managing culture?

Mr. Agius discussed culture as being influenced by the environment, country where the client and vendor(s) or outsourcing providers are established, and, on psycho-social factors influencing the people that need to be coordinated professionally.

## 8. Risk management is important in pre-empting possible issues ahead of time and their mitigation.  Ciborra recommends risk rating can be quantified as probability x likelihood.  We also mention the possible use of methodologies such as PRAM. How do you go about risk management?

The interviewee highlights the importance of proactive communication i.e. keeping the client in the loop as highly important, since this way a project manager has the client's direction on the risks that the client is prepared to take and the risks that the client is prepared to mitigate, as this frequently affects the cost, timeframes and other delivery criteria.

The client needs to be kept in the loop of actions to be taken in mitigating risks, whether it is feasible to mitigate risks in order to establish a conscious awareness during the implementation.  It is also possible that risks are not planned for upfront, and, contingencies allowed for to allow for such risks for which there is not sufficient depth of information to specify the impact of a particular risk.  The client is required to accept, refuse or provide feedback on the risks and issues arising throughout the implementation, as this gives the project manager background information on evaluating the risk appetite of the client organization or their representatives (decision makers).

\* Cloud computing with its popularity may have given rise to fears - some of which may be real about clients' concerns whether their data is secured, and, this gives rise to the risk of unauthorized access to data.

Informed sources had confirmed to the author that the incidence of computer crime had increased over the years, and, clients need to be educated in taking basic measures such as changing their passwords regularly - whether this is enforced by policy or not and managing information security policies effectively, rather than reactively.

The media reported the case of Edward Snowden, a previous security administrator at the US National Security Agency ([NSA](http://www.nsa.gov/)), who leaked documents exposing the that even though information security practices are implemented to secure access against unauthorized access, some hacking methods can bypass these protection mechanisms.

Mr. Snowden has been nominated for the [European Sakharov prize](http://www.ndtv.com/article/world/edward-snowden-named-for-european-union-s-sakharov-prize-417437) (Sept 2013).

## 9. What are your views on outsourcing as a business opportunity in the Maltese islands?

The interviewee stated that mentality and attitude are influential factors to reach a satisfactory level of mutual trust between potential business partners, which can also be influenced by the generation and the exposure to technology of the individual.

To clarify this argument, the author underlines that baby boomers may require more background information than persons who are more technologically savvy, although this is not necessarily the case, depending on the educational background, attitude and exposure to technology that the individual has had over the years.

He further recommends that competitor analysis may lead potential customers to 'jump on the bandwagon' and implement technologies that are being implemented by their competitors, amongst other motivations.

## 10. How would you break down quality management in action?

Quality management and the subsequent performance monitoring may be managed by:

* meeting clients' requirements and ensuring that internal and external stakeholders' requirements are met, using appropriate change management professionally.
* acceptance of proposals needs to be prioritized and formalized to avoid misunderstandings on decisions taken
* performance measurement and monitoring to evaluate whether results are being achieved and whether clear progress is being reported to the client organization.
* usability and evaluation of acceptance, learning and satisfaction from end users or their representatives
* monitoring of the delivery of the business requirements stipulated with the client organization.  For example, if the original statement of works outlines that cost savings is expected to be achieved through decreased time to process the payroll, then, a proportionate equivalent of the cost savings can be quantified and reasonably estimated to evaluate whether the technological implementation has been successful.

**11. What factors influence recruiting the right candidates when managing an IT/IS company or acting as a recruiter?**

The interviewee recalls that he had been responsible for recruiting several times, including when he worked for Lombard bank plc and decided to move on to fulfil career ambitions at APS Bank Limited; he outlines us his views on attracting the right talent.

The interviewee underlines the good practice of matching the right level of skill with the right level of service agreement i.e. if your IS firm provides solutions through software development services, then the firm needs to engage competent software engineers who can fix real world problems within reasonable and commonly contractually binding timeframes.

Amongst other reasons recruiters might not give enough importance to seeking a positive balance between qualifications and 'hands-on' experience.

The interviewee perceives that experience is very important in determining - at interview stage - whether a job is fit with the candidate.  Unfortunately it is common to specify inappropriate specifications for a position, and this may attract the inappropriate candidates, highlighting the importance of educating or training human resources professionals and recruiters to understand the specific needs of the IS/IT industry.  Exposure to practical IT experience is looked upon favourably during short-listing.

The interview was concluded on a humoristic note about the practice of matching requirements 'by the letter' rather than 'to the spirit' of the job description, and, that this may result in lost opportunities for either the company seeking talent, or the job candidate who might lose an opportunity due to misunderstandings or communication shortfalls.  This can be seen as similar to 'rubber stamping' in bureaucratic organizations, where the rationale behind reaching a decision might not be transparent to the stakeholders.

The requirement for training might imply the need for certification and education to be availed of by persons who are seeking to make a career out of IT, as this provides evidence to potential employers that candidates are skilled in a particular area.

When asked about his views on training hours and research, Mr. Agius states that allowing for the fact that workload has to be respected and that the employee is engaged to fulfil duties towards the employer as stipulated by business-driven priorities, research which is related to the work at hand is reasonably allowed to be carried out during working hours, although it may be implicitly expected that IT/IS professionals seek to take the initiative of carrying out independent research and self-training to improve their skills and gain better career opportunities, since at the end of the day it is within the person's interests to manage their careers, not just in the interest of the employer.

Nevertheless, some business to business partnerships, such as having vendor partnerships may require IS/IT providers to engage vendor-certified staff as employees of the company, and, it seems logical to think that employers might favourably look upon job candidates who are already certified and specialized in technologies that they seek to support and use as part of their core business activity.  Additional academic research and training is highly encouraged by the interviewee.

Giving us a word of caution, supervision may help reduce the risk of the 'odd' case (hopefully) where employees make inappropriate and unproductive use of their time at work, which are in breach of the duties stipulated by their supervisors.  From the point of view of culture, some companies might have 'relaxed' supervision where employees are not monitored, whilst on the other hand, tension may arise when employees are monitored too closely, as this might be seen as an invasion of privacy.  The interviewee seems to agree on an appropriate and ethical balance between productivity and learning for the sake of improving organizational and individual skill, knowledge and expertise.  He explains that beyond the legal responsibility of the company, managers and leaders need to align themselves to their stipulated responsibilities and objectives given to them by the management team of the company, and, this commonly imposes policies and practices on their subordinates that require appropriate leadership and management.

The interviewee gives us his advice on human resources management, outlining that technical support personnel need to be provided with appropriate resources to enable them to work effectively including remote working, remote connections through mobile connections with sufficient access to enable them to access the technological infrastructure, the use of mobile phones and technology to support the technology implemented.   Human beings are also subject to temporary absence and emergency situations that need to be addressed with appropriate contingency planning.  For example, business continuity needs to be taken care of when one of the technical specialists calls in a being 'sick', and, this may require the planning of prescribed and documented standard operating procedures within a professional IS/IT environment.

Nevertheless, recent statistics published by the Malta Chamber of Commerce indicate an increased pattern of sick leave occurring regularly every Monday, which provides the sound argument for management control to be in place within organisations.

As far as personal characteristics are concerned, he outlined that although supervision is still perceived as an important management/leadership control, this can be supported by establishing collaborative teamwork and genuine conscientiousness of individuals working in the interest of the organization for they are employed or subcontracted.

**Would you like to add more tips on time management, or any other topics that you would like to highlight?**

There are no additional comments to add.

**Disclaimer**

The information shall be used as part of my thesis, which I shall subsequently provide you with a copy, when it has been finalized.

# Appendix D2 - Interview

# 1. Which are the critical success factors for outsourcing and make vs buy decisions?

# What we outsource in terms of information systems and information technology depends on the application system that is going to be outsourced. In our firm we have a small IT department, including two software developers, however, if the firm does not have the expertise to develop the application, we embark on outsourcing the information system. The reason is that top management cannot afford to keep abreast of technologies and they would prefer to transfer the burden. However we do not exonerate our responsibility from managing the application or from managing the outsourcing providers.

# Just to give you an example, a year ago, we implemented a handheld system for our sales representatives. Since we have strong skills in technology and information systems, we prepared a request for proposal delineating all the important aspects of the system that we wanted to outsource.

# Then we sent the request for proposal to three providers, and, once we received the proposal, we evaluated each proposal and we shortlisted two of them and subsequently selecting one of them.

# Since we were not conversant with the technology it seemed like a logical decision to take. Since we have strong skills in information systems, the providers were clearly aware from the first day that we “would not be taken for a ride”, and they tried to be as proficient as possible, because they realized that they would not stand a chance to behave opportunistically, in a way that negatively affects the interests of our firm.

# I hope to have answered your question.

# 1a. Amongst other success factors that you might have considered which other criteria were relevant for you to take the decision, such as cost, return on investment etc?

# First of all the main concern is expertise, as we cannot keep abreast of technology.

# Secondly, and this does not only apply to IT; our company is also outsourcing most of its non-core activities and it seems to be logical nowadays that companies are not replacing IT staff when they leave the company, and, this is a clear sign that they would opt for outsourcing ventures in the future.

# It seems that the traditional IT department is on the way out for small to medium enterprises. These decisions imply added responsibilities, because when an off the shelf package is selected, there has to be a working relationship with the providers. Trust is a very important aspect and a relationship not grow overnight it takes years to cultivate.

# Finally, our company is trying to invest in information systems specialist to serve as a bridge between the users and the providers. This would make the outsourcing venture successful.

# 2. How would you break down quality, for example when evaluating the technical proficiency of the system?

# By quality such as enterprise resource system the following aspects are important:

# 2.1. Ease of use i.e. user friendly including help facilities within the screen

# 2.2. Includes simple screen layout

# 2.3. Documentation is important, although you might have the impression that we find most of the documentation online. Documentation adds to the quality of the delivered information system.

# It is expected that when we are going to outsource, especially an off-the-shelf package especially if it is used by different companies in the same industry, the probability is that the system is almost if not totally bug-free. What worries me is when you are sub-contracting the development of tailor-made software. That would mean that during the first three to six months, bugs would be expected to be detected. I have a preference for an off the shelf package, which may not meet all the requirements, although 80% of the requirements would be met, and, the remaining requirements are developed as an external module. This is done so that if software updates are made in a modular fashion that makes it easier to identify the 'culprit module', rather than having a development integrated within the original off-the-shelf package.

# To a certain extent there is a risk here, in the sense in the sense that if you are engaging a software house, the risks of having bugs amongst others. What is also noteworthy is that usually commercial off the shelf packages denote best practices, within the sector the firm is operating and this may impact the way the organization will start carrying out its tasks. This will inherently create change in the organizational structure, and these are issues that have to be addressed when outsourcing is not available.

# 3. With your experience in managing quality which methodologies would you recommend using for IT/IS management, for example PRINCE2 for project management, since nowadays bureaucracy tends to extend the delivery time-frame of projects.

# I have never used accredited methodologies mentioned such as PRINCE2, since I have found simpler methodologies to be effective just the same. I communicate with providers using a request for proposal, prepare milestones for delivery using spreadsheets as an executive tool, rather than sophisticated tools. I make extensive use of mind-maps to keep the technical jargon out of the communication with the user.

# 3a. How about technical communication, do you stick to simplicity as well e.g. flowcharts for software developers?

# For technical people, since we are very conversant with information systems, we write high level specifications and we communicate with providers in a typical way. On the other hand, we communicate with our users trying to use prototyping tools such as screen layouts, output from screen, report layouts, because these serve as a communication tool with end-users. Experience shows us that the more we leave out technical jargon out of the matter means that communication is better.

# Finally, I always try to involve users from the early stages, and during the initial stages of an outsourcing project, I would try to plan strategies for managing human resistance to change.

# 4. How do you feel that global economics and politics influence your decisions as a project manager?

# Before looking at what is looking outside the organization, what is happening nowadays is that firms are assessing the cost of labor including the cost of IS professionals. Given that we live in an age where search engines provide access to any product we want, this is an advantage to what resources we could access when I started my career 35 years ago, when no software packages were readily available off the shelf. Nowadays even enterprises such as Oracle, and, SAP have addressed the needs of the small business organizations because the software depends on the users that would be using the package.

# There is also the question of how much the package costs. If the total cost of outsourcing is less than the total cost of developing and administering the IT function, then it implies that outsourcing is financially feasible. Business secrets used in the sales process are preferred not to be disclosed by top management to outsiders in the company I work for, therefore they are outsourcing all the modules except for the sales module.

# 5. Do you take into consideration time zones to ensure that client organizations avail from 24/7 support?

# What issues other than scheduling of working shifts does one need to take care of when off-shoring is required?

# When we needed third party support from Oracle, which operate from the USA, as they are 9 hours behind us, and, it obviously affects us since my staff and myself have to stay longer to adapt to their working hours, staying beyond office hours.

# 6. How do you go about managing culture when you have employees from different countries working for you?

# Top management should ensure that the organizational structure requires employees to adhere to the company policies in my organization. This approach dominates the humanistic approach of focusing on the various cultures, because the organizational culture imposes the way by which people undertake their tasks, whether you are Maltese or not. This is in my view very powerful.

# In my experience I have always tried to resolve the issues emanating from organizational culture, because you might have an environment where training requirements are not addressed, this will bring about a (perceived) disaster when you are trying to implement an off-the-shelf package. My focus would be on addressing organizational culture rather than individual issues. The interviewer clarifies that this would imply standardization, and, clear communication of expectations.

# Besides the organizational culture, there is also the individual aspect. There is also the proverbial resistance to change from an individual perspective, and in this case one has to prepare the path of implementing the information system project. Workshops are organized with all the users, including users who shall be using the system directly and stakeholders who are affected by the use of the system. The deployment of the information system is very important and has to be taken into consideration seriously.

# 7. Risk management is important in preempting possible issues ahead of time and the mitigation of these risks. We talked about opportunistic behavior and the technical risk of bugs, would you like to mention your view on risk mitigation.

# In my view, risk would be minimized if the outsourcing venture is undertaken professionally. By this I mean that first of all there should be a feasibility study, including the economic, legal, organizational, social and technical aspects to be taken into consideration.

# Requests for proposals should be drawn up and distributed to the providers (or prospective providers).

# It is important that key users are involved from the day one of the project. The IT function in this case serves as a support function that acts as a 'go-between' the users and the outsourcers, to ensure that the implementation is deployed successfully.

# 8. What are your views on outsourcing as a business opportunity in the Maltese islands, from the point of view of the client and from the point of view of the entrepreneur?

# Outsourcing, in my view, nowadays is a very attractive opportunity, however, like any other project not only IT, one has to carry out market research to assess the target market. It is only then that one will come up with strategic objectives, such as an objective to focus on the IT infrastructure, including the server administration that forms part of the setup of an organization which represents foreign-based Enterprise Resource Planning systems or an accounting system. There is a 'go-between' the foreign business organizations and the local business, who provides local-based support.

# There is the challenge of keeping abreast of technology, which presents the professional with a possible risk, otherwise, in my view a business will not survive (competition).

# E-commerce is a technology which most enterprises based in Malta are outsourcing, because they do not have the technological know-how.

# 9. How would you break down quality management in action, when it comes to measuring it on a day to day basis?

# When it comes to managing information systems being outsourced, information that is generated from the system is expected to be accurate, and, timely. Information that is generated is expected to be analyzed (by a senior manager), so that effective decisions can be made to improve response to customers, increased quality of management information, increase in market share, better productivity, and, operating with the least cost possible. This would include the integration of the functional areas of business.

# If these objectives are met quality criteria is met. It is noteworthy that system fragmentation creates fragmentation of data.

# 10. What factors influence recruiting the right candidates when managing an IT/IS company and vetting personal profiles (curriculum vitae) of sub-contractors?

# In my view, the trend is go for outsourcing, however, this does not mean that business organizations should not employ professionals to manage the IT function, at least a person. When a professional is lacking the result is that systems are fragmented due to the fact that users develop custom applications using Microsoft Access.

# Besides technical skills confirmed by qualifications and work experience, communication skills, positive attitude towards work, and, team-building skills are expected of people working as professionals.

# 11. What makes a business relationship trustworthy?

# A business relationship based on trust may take time to build, and, this implies the managerial need for a tightly specified contract to be prepared to stipulate the conditions regulating lack of agreement or delivery.

# 11 December 2013 between 16:00 and 17:15 [GMT+1](http://www.timeanddate.com/worldclock/)

Planned duration: 45 minutes Actual Duration: 38 minutes

**Disclaimer**

The wording in the actual recording might vary as the transcripts were structured and in some cases additional comments were clearly included by the interviewer where annotated as part of the transcript, to clarify assumptions that were mutually understood. An audio copy of the transcript was held within a folder hosted by www.dropbox.com.

#  Appendix E1: Survey

 The following survey was sent out to a sample of over 500 respondents, as part of the research.

Dear *[survey respondent]*

We are doing research as part of my thesis in connection with *B.Sc Information Systems and Management*, that is to be awarded by the London School of Economics and Political Sciences.

The thesis tackles the question on how effective outsourcing services may meet the needs of small to medium businesses, and, micro-enterprises, which the European Commission defines as having less than 50 employees, less than 10 M EUR in turnover, and, a balance sheet total not exceeding 2M EUR. Offshore jurisdictions may have different parameters, and, this survey is not restricted to companies within the European Union only.

 **Section A: Demographic information**

 1. Which describes the principal industry within which the business you manage operates?

 2. What is your position within the organization?

 a) Senior management

 b) Middle management

 c) Leadership

 d) Administrator

 3. How many employees work at the organization you manage?

 a) Less than 10

 b) More than 10 but less than 50

 c) More than 50 but less than 250

 d) More than 250

 4. Do you make use of outsourcing?

 a) Yes

 b) No

5. Which business functions do you outsource?

 a) Purchasing (Yes/No/Partial)

 b) Sales and Marketing (Yes/No/Partial)

 c) IT/IS (Yes/No/Partial)

 d) Accounting (Yes/No/Partial)

 e) Public Relations (Yes/No/Partial)

 f) Other

|  |
| --- |
|  |

Comments

6. Are the outsourcing functions covered by a contract which you deem reliable?

 a) Yes

 b) No

Other comments

The following statement precedes the validation of hypotheses, where you are kindly requested to state your agreement with the statements on a *likert scale*.

7. Customer relationship management is relevant to managing outsourcing functions?

Strongly Disagree [ ] Disagree [ ] Neutral [ ] Agree [ ] Strongly Agree [ ]

The above question is only an example for illustration purposes, the hypotheses follow within the *section B* of the survey.

**Section B: Hypotheses validation**

The following statements are a logical deduction of research being carried out over a period of less than a year on outsourcing, and, we would appreciate your feedback indicating how far do you agree with these statements.

8.[H1] Outsourcing improves the short term and long term bottom line, ranging from cost savings for re-engineering and automation of processes to increased return on investment in technology as a result of re-engineering or innovation.

Strongly Disagree [ ] Disagree [ ] Neutral [ ] Agree [ ] Strongly Agree [ ]

9. [H2] Outsourcing enables entrepreneurs to access specialist technical and

management resources.

Strongly Disagree [ ] Disagree [ ] Neutral [ ] Agree [ ] Strongly Agree [ ]

10. [H3] Outsourcing may reduce the costs involved in human resources management, management controls and may avoid the need to recruit specialists to manage all business functions required by their organization (H3).

Strongly Disagree [ ] Disagree [ ] Neutral [ ] Agree [ ] Strongly Agree [ ]

11. [H4] Total outsourcing is not recommended practice, since firms need to remain in control of their business, and, capably manage vendors and sub-contractors.

Strongly Disagree [ ] Disagree [ ] Neutral [ ] Agree [ ] Strongly Agree [ ]

12. [H5] Outsourcing provides easy access to flexible services and products which can imply increased flexibility provided to the clients and stakeholders of an organization.

Strongly Disagree [ ] Disagree [ ] Neutral [ ] Agree [ ] Strongly Agree [ ]

13. [H6] Outsourcing can provide organizations with additional marketing channels and public relations, through branding of best practices.

Strongly Disagree [ ] Disagree [ ] Neutral [ ] Agree [ ] Strongly Agree [ ]

14. [H7] Outsourcing puts the entrepreneur's mind at rest that risks are being managed professionally.

Strongly Disagree [ ] Disagree [ ] Neutral [ ] Agree [ ] Strongly Agree [ ]

15. [H8] Outsourcing gives insight to an entrepreneur that enables them to value expertise gained and gain further strategic advantage over competition, whilst monitoring performance of the provider transparently.

Strongly Disagree [ ] Disagree [ ] Neutral [ ] Agree [ ] Strongly Agree [ ]

16. Would you like to add further comments?

17. Would you like to participate in an in-depth interview?

a) Yes

b) No

For the purposes of the [Data Protection Act](http://ec.europa.eu/justice/policies/privacy/docs/implementation/malta_en.pdf), data is being collected for academic research, and, may be shared with officials representing the [London School of Economics](http://www.lse.ac.uk/home.aspx) and its affiliates.



**Appendix E2: Statistical computation of survey**

The quantitative analysis within chapter six was based on the following statistical computation methods.

*Mean* is calculated as the score on the *likert scale* (see table 1 below) multiplied by the frequency of responses, and, divided by the number of respondents recorded.

Table 2 - Likert scale scoring sheet for quantitative analysis indicating frequency of responses

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | Strongly Disagree: **1**  | Disagree: **2** | Neutral: **3** | Agree: **4** | Strongly agree: **5** |
| H1 | 1 | 0 | 2 | 1 | 10 |
| H2 | 1 | 0 | 0 | 3 | 10 |
| H3 | 1 | 1 | 0 | 2 | 10 |
| H4 | 1 | 0 | 0 | 2 | 11 |
| H5 | 1 | 0 | 0 | 2 | 11 |
| H6 | 1 | 0 | 3 | 3 | 6 |
| H7 | **3** | **1** | **5** | **1** | **4** |
| H8 | 1 | 0 | 5 | 2 | 6 |

Table 1 - Risk management frequency distribution (scoring table below)

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 1. Strongly disagree | 2. Disagree | 3. Neutral | 4. Agree | 5. Strongly Agree |

*Variance* is calculated as the summation of the score on the likert scale raised to the power of two, and, divided by the number of respondents.

*Standard deviation* is calculated as the square root of the variance.

The *null hypothesis* is defined as the position where the respondents disagreed with the hypotheses proposed.

Therefore the benchmarks scores are defined as follows:

 **Standard deviation**

Null hypothesis <= 0.5 the hypothesis is not valid

Perfect correlation 5 all respondents strongly agree with hypothesis

Figure 7 - Validity of hypotheses

The hypotheses were deemed to be valid since the standard deviation is greater than 2.5 i.e. 5/2. The mean was also used to counter-check whether the hypotheses were valid.

**References and bibliography**

1. Leslie P. Willcocks and Mary C. Lacity, The New IT Outsourcing Landscape, published by Palgrave Macmillan (2012), ISBN 978-0-230-35881-2.
2. Leslie P. Willcocks, Sara Cullen and Andrew Craig, The Outsourcing Enterprise, published by Palgrave Macmillan (2011), ISBN 978-0-230-23191-7. Table 3.1 on page 82 includes benefits, risks and management issues for various supplier configuration options that may be a useful guide during the decision making process when deciding how to manage outsourced functions.
3. Mary C. Lacity and Leslie P. Willcocks, Advanced Outsourcing Practice, published by Palgrave Macmillan (2012), ISBN 978-1-137-00557-1.
4. Douglas Brown and Scott Wilson, The Black Book of Outsourcing, published by Wiley and Sons (2005), ISBN: 13-978-0-471-71889-5.
5. Data Protection Directive 95/46/EC of the European Parliament and of the Council of 24 October 1995 on the protection of individuals with regard to the processing of personal data and on the free movement of such data, available [online] at <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=CELEX:31995L0046:en:HTML>, last accessed 29th August 2013.

*Stress on data protection*, available [online] at <http://www.timesofmalta.com/articles/view/20131031/opinion/Stress-on-data-protection.492644#.UsLmOvRDub9>, last updated on 31st October 2013.

1. European Commission, Antitrust cases available [online] at <http://ec.europa.eu/competition/antitrust/cases/>, last accessed on 3rd September 2013.
2. The International Bank for Reconstruction and Development, Economy Profile for Mexico – Doing Business 2013.
3. Uday M. Apte and Richard O. Mason, Global Disaggregation of Information Intensive Services, published by INFORMS, within Management Science Vol 71 (July 1995).
4. Claudio Ciborra, Digital Technologies and the Duality of Risk, published by the Economic and Social Research Council and the London School of Economics and Political Science (October 2004).
5. European Medicines Agency (EMA), Framework Service Contract for Outsourcing (2009). The homepage of the EMA is available [online] at [http://www.ema.europa.eu](http://www.ema.europa.eu/).
6. Robert C. Feenstra and Gordon H. Hanson, Foreign Investment, outsourcing and relative wages, published by the National Bureau of Economic Research, USA (May 1995).
7. Robert C. Feenstra and Gordon H. Hanson, Globalization, Outsourcing and Wage Inequality, published by the National Bureau of Economic Research, USA (January 1996).
8. Prakash Hariharan, Getting Ahead of the Competition: Maximising SEPA Business Benefits through *order to cash* (OTC) transformation, published by GenPact, registered in Hamilton, Bermuda (2011).
9. Prasanna Tambe, Lorin M. Hitt and Erik Brynjolfsson, The Extroverted Firm: How External Information Practices affect Innovation and Productivity (June 2011), published within Management Science.
10. Julia Kotlarsky and Ilan Oshri, Country Attractiveness for offshoring and offshore outsourcing: additional considerations, published within Journal of Information Technology (2008).
11. Thomas Kern, Leslie P. Willcocks and Eric van Heck, The Winner's Curse: Strategies for avoiding relational trauma (2002).
12. Bryan Chojnowski, Director of Quality at Reglera, Off the shelf software: a broader picture (ref. 2002).
13. Jens Dibbern, Tim Goles, Rudy Hirscheim and Bandula Jayatilaka, Information Systems Outsourcing: a survey and analysis of the literature (Fall 2004).
14. R. Gonzalez, J. Gasco and J. Lopis, Information Outsourcing reasons and risks: an empirical study (July 2008).
15. Karthik Nagendra, Outsourcing Centre, Decreasing Delivery Headaches with outsourcing supply chain management (2013). Outsourcing Centre is available [online] at [http://www.outsourcing-center.com](http://www.outsourcing-center.com/).
16. The Outsourcing Centre, Seven ways to ruin an SLA discussion (2013).
17. Christina Costa, MCB UP Limited, Outsourcing. Title cannot be quoted. Referenced documents between 1993 and 1998.
18. PanGenesis: A creative Costa Rican Approach to the Persistent IT Labor Crunch. August 2007.
19. Michael J. Earl, London Business School, The Risks of Outsourcing IT (Spring 1996).
20. Jay T. Shah, Probabilistic Risk Assessment Method for prioritization of risk factors (December 2004).
21. V.T. Raja Ph.D, Oregon State University, Strategic Alignment Model presentation, originally sourced from Henderson and Venkatraman (1993).
22. R. Aquilina, Outsourcing Information Systems, published within *The Executive* (2012).
23. R. Aquilina, The value of IT in turbulent times (2012).
24. Andrew Kakabadse and Nada Kakabadse, European Management Journal, Trends in Outsourcing: Contrasting USA and Europe (2002).
25. Matt O'Keefe, Infotrends, US Document Market Forecast: 2007 to 2012, published June 2008.
26. Deloitte, 2012 Global Outsourcing and Insourcing Survey, published by Deloitte Consulting LLP (February 2012).
27. World Bank, Attractiveness by Country, available [online] at www.worldbank.org.
28. Rudy Hirscheim and Heinz K. Klein, Four paradigms of Information Systems Development, published by the Association of Computing Machinery (October 1989).
29. Erik Bryjolfsson, The Productivity Paradox of Information Technology: Review and Assessment, published by the Association of Computing Machinery (December 1993).
30. Oliver E. Williamson, University of California, Berkeley, Transaction Cost Economics: An Introduction (March 2007), published at www.economics-ejournal.org.
31. Sher Verick and Iyanatul Islam, The Great Recession 2008 to 2009: Causes, Consequences and Policy Responses (May 2010).
32. Solomon Asch Center, available [online] at <http://www.brynmawr.edu/aschcenter/about/index.htm>.
33. Prof. V. Ramachandran, Capital Budgeting and Investment Appraisal Methods, available [online] at [http://www.slideshare.net](http://www.slideshare.net/).
34. Colin Muir and David Widger, An Inquiry into the nature and causes of the wealth of nations, originally written by Adam Smith (1723 to 1790), available [online] at <http://www.gutenberg.org/files/3300/3300-h/3300-h.htm>.
35. Financial Times Lexicon, online reference for business terminology available [online] at <http://lexicon.ft.com/>.
36. University of Calicut, Cost Accounting Core Course for IV Semester - B.Comm available [online] at <http://www.universityofcalicut.info/SDE/BComCoreCostAccounting.pdf>.
37. Derek Torrington, Laura Hall, Stephen Taylor, Human Resources Management (6th Edition), published by Pearson Education. ISBN-13: 978-0-273-68713-9.
38. Julie Beardwell and Tim Claydon, Human resource management (sixth edition), published by Prentice Hall. ISBN: 978-0-273-72285-4.
39. Huei-Wen Lin, World Academy of Science, Elucidating the influence of demographics and psychological traits on investment biases. (2011).
40. The Hofstede Centre, available [online] at www.geert-hofstede.com.
41. Trompenaars Hampden-Turner, Management Consultancy Firm available [online] at www2.thtconsulting.com.
42. Milton Friedman, Capitalism and Freedom, published by the University of Chicago Press (1962). ISBN-13: 978-0-226-26421-9.
43. Office of Government Commerce, Planning to implement service management, published by The Stationery Office (2002). ISBN: 978-0113-308774.
44. Office of Government Commerce, Best Practice for Service Support, published by The Stationery Office (2007). ISBN: 978-0113-300-150.
45. ITSMF International, chaired by Sharon Taylor, Foundation of IT Service Management based on ITIL, published by ITSMF-NL, and, edited by Jan von Bon, Mike Pieper, Annalies van der Veen, and, Tieneke Verheijen, published by Van Haren Publishing (2007). ISBN: 978-789077-212585.
46. Java Management Extensions (JMX) overview available [online] at <http://www.oracle.com/technetwork/java/javase/tech/javamanagement-140525.html>.
47. ManageEngine, application monitoring software available [online] at <http://www.manageengine.com/>.
48. GFI Software for systems, network and security administration software available [online] at <http://www.gfisoftware.com/>.
49. Balanced Scorecard Institute available [online] at www.balancedscorecard.org.
50. Merriam-Webster dictionary available [online] at www.merriam-webster.com.
51. Government of Saudi Arabia [online] at www.yesser.gov.sa/ar/Pages/Default.aspx, in the native language of the country. **Template request for proposal (RFP)** available [online] at http://bit.ly/18vwzH4. Other templates are available [online] at http://bit.ly/17eFkE8.
52. J. Rodney Turner. The handbook of project-based management (2nd edition), published by Mc Graw Hill. ISBN 0-07-709161-2 (1999).
53. S. Meilan, The importance of meeting deadlines available [online] at <http://www.helium.com/items/2109808-the-importance-of-meeting-deadlines>, created on 7th March 2011.
54. Ministry of Finance of the Government of Malta, Press release on the Freedom of Information Act, available [online] at <http://mfin.gov.mt/en/epd/Documents/foi/foi.pdf>. The Freedom of Information Act of the 1st September 2012, applicable within the Republic of Malta, is available [online] at <http://www.justiceservices.gov.mt/DownloadDocument.aspx?app=lom&itemid=8962&l=1>.
55. Banks should reduce lending rates to businesses, Central Governor says, available [online] at <http://www.timesofmalta.com/articles/view/20131129/local/banks-should-reduce-lending-rates.496837#.UqrqxfRDub8>, updated on 29th November 2013.
56. Banks defend rates of interest, available [online] at <http://www.timesofmalta.com/articles/view/20131205/local/Banks-defend-rates-of-interest.497610#.Uqrr1fRDub8>, last updated on 5th December 2013.
57. T.H. Davenport and James E. Short, The new industrial engineering: Information Technology and business process redesign, published within Sloan Management Review Summer 1990, Vol.31, Issue 4.
58. University of London research and study resources, available [online] and through other means. Websites include www.londoninternational.ac.uk, www.intranet.stmartins.edu - Intranet available for students of St. Martin's Institute of IT, Malta, and, available until academic year 2012/2013, https://mylondonexternal.ac.uk/london/portal/login, www.external.shl.lon.ac.uk, https://moodle.stmartins.edu/login/index.php - made available for students of St. Martin's Institute of IT, Malta, and, www.lse.ac.uk, along with file sharing communities used amongst study groups amongst full-time and part-time students attending St. Martin's Institute of IT, Malta (2011 - 2014).
59. Maltese Parliament website, available [online] at <http://www.parlament.mt/home> and media reports available [online] at www.timesofmalta.com amongst others that summarize news and decisions taken at the Parliament of Malta through the write-ups of professional journalists. Times of Malta is a newspaper available in print and [online] available, distributed by Allied Newspapers Limited.
60. European Commission. Enforcement of practices which may be considered anti-competitive available [online] at <http://ec.europa.eu/competition/international/overview/>.
61. WedgeWood Museum available [online] at www.wedgewoodmuscium.org.uk. WedgeWood (England 1979) website advertised to be available [online] at www.wedgewood.co.uk, homepage of Josiah Wedgewood, a British potter (1730 to 1795).
62. Jack E. Triplett, Brookings Institution, *The Solow productivity paradox: what do computers do to productivity?*, available [online] at <http://www.csls.ca/journals/sisspp/v32n2_04.pdf>, last accessed on 4th September 2013.
63. B. Carruthers and W. Nelson Espeland, Accounting for rationality: double-entry book-keeping and the rhetoric of economic rationality, available [online] from [http://www.jstor.org](http://www.jstor.org/). Online journal is available at <http://www.sociology.northwestern.edu/people/faculty/documents/Carruthers-Accounting.pdf>.
64. The World Bank. Doing Business 2013: Smarter regulations for small and medium sized enterprises, available [online] at http://www.doingbusiness.org/~/media/giawb/doing%20business/documents/profiles/country/MEX.pdf.
65. E. M. Rogers, Diffusion of Innovations (5th Edition), published by the Free Press (2003). ISBN-13: 978-0-7432-2209-0.
66. L. Willcocks, I. Oshri, J. Kotlarsky, J.W. Rottman - Outsourcing and offshoring engineering projects: understanding the value, sourcing models, and, coordination practices, published to London School of Economics and Political Science Online Research - available online at http://eprints.lse.ac.uk.
67. R. Tanti B.Sc Information Systems and Management, Critical Success Factors for exploiting the IT Outsourcing function: a client's perspective (May 2011), submitted to the London School of Economics and Political Science. Student ref: 060407687.
68. F. Zammit Cutajar B.Sc Information Systems and Management, IT Outsourcing in business organizations: benefits and risks (May 2011), submitted to the London School of Economics and Political Science. Student ref: 07039070.
69. Steve Verjans, Bricolage as a way of life: improvisation and irony in information systems, published within the European Journal of Information Systems (2005).
70. Prof. S. Freud LL.D, A General Introduction to Psychoanalysis, published by Horace Liverlight Inc. (1920), and, available [online] at <http://www.gutenberg.org/files/38219/38219-h/38219-h>.
71. M. E. Porter, How competitive forces shape strategy, available [online] at <http://prolog.univie.ac.at/teaching/LVAs/KFK-LM/WS07/Porter.pdf>, published by Harvard Business Review (July/August 1997).

E. Brynjolfsson (1993), The Productivity Paradox, available [online] at <http://ccs.mit.edu/papers/CCSWP130/ccswp130.html>, as quoted by Aquilina (2012).

Gartner IT Metrics Data 2012, available [online] at <http://www.softline.ro/wp-content/uploads/2013/03/ITKMD12ITEnterprisesummaryreport.pdf>.

IBM Corporation, Improved efficiency and faster time to market with agile development practices, available [online] at <http://www.ibm.com/smarterplanet/global/files/danske_bank.pdf>.

Information about Agile Methodology is available [online] at <http://agilemethodology.org/>, and at <http://en.wikipedia.org/wiki/Agile_software_development>.

Extreme Programming: A gentle introduction is available [online] at <http://www.extremeprogramming.org/>.

Introduction to Test Driven Development (TDD) is available [online] at <http://www.agiledata.org/essays/tdd.html>.

Article titled Federal medical research cuts decried at Hopkins, available [online] at <http://articles.baltimoresun.com/2013-07-08/health/bs-hs-medical-research-sequestration-20130708_1_research-funding-nih-hopkins-vice-dean>, updated on 8th July 2013.

1. Article available [online] at <http://www.zdnet.com/tom-davenport-big-data-is-too-important-to-be-left-to-the-quants-7000013317/>, written by J. Mc Kendrick, on 1st April 2013.
2. Article titled *Gartner Says Worldwide Business Intelligence, CPM and Analytic Applications/Performance Management Software Market Grew Seven Percent in 2012*, available [online] at <http://www.gartner.com/newsroom/id/2507915>, last updated on 6th June 2013.
3. Article titled *10 tech terms everyone needs to know for 2014*, available [online] at <http://news.yahoo.com/10-tech-terms-for-2014-142337446.html>, last updated on 14th August 2013.

Moodle Course Management System (CMS) is available [online] at <https://moodle.org/>.

Article titled *Annual US Cybercrime costs estimated at $100 million*, available [online] at <http://online.wsj.com/article/SB10001424127887324328904578621880966242990.html>, updated on 22nd July 2013.

Malcolm Gladwell, The Power of Thinking without Thinking, published by Penguin Books (2005). ISBN: 978-0-141-01459-3.

Dr. Vanessa Borg DBA MPHIL MBA (Maastricht) B.Com (Malta) MIOH MIM, whose [online] resume is available at mt.linkedin.com/pub/dr-vanessa-borg/7/816/a38, interviewed by the author during 2010.

*The Death of Outsourcing and IT Management Trends*, written by Jonathan Crane, and, available [online] at <http://www.forbes.com/sites/ciocentral/2012/12/28/the-death-of-outsourcing-and-other-it-management-trends/>, updated on 28th December 2012.

Harvard Business Review, How to Deal with Resistance to Change, available [online] at <http://hbr.org/1969/01/how-to-deal-with-resistance-to-change> (January 1969).

Jack E. Triplett, Brookings Institution, *The Solow productivity paradox: what do computers do to productivity?*, available [online] at <http://www.csls.ca/journals/sisspp/v32n2_04.pdf>,

Insp. Timothy Zammit, Criminal Investigation Department, Police of Malta, was interviewed by the author during July 2013.

 [Online] article at <http://www.sundaycircle.com/2012/07/the-computer-criminal-2/> (2012) outlines what the "average Joe" can do to avoid being caught up in a scam or being victim of cybercrime.

Article titled *The 7 Risks of Social Media* available [online] at <http://dashburst.com/social-media-risks/>, last updated on 23rd April 2013.

Sourced from an article titled *New Snowden leak reports ground breaking NSA Crypto-cracking*, written by Kevin Poulsen, and, available [online] at Wired.com. URL: http://www.wired.com/threatlevel/2013/08/black-budget/.

1. Article titled £20 BN NHS Computer System doomed to fail available [online] at <http://www.telegraph.co.uk/news/uknews/1542486/20bn-NHS-computer-system-doomed-to-fail.html>, last updated on 13th February 2007.

Sourced from an article titled *Annual US Cybercrime costs estimated at $100 million*, available [online] at <http://online.wsj.com/article/SB10001424127887324328904578621880966242990.html>,

updated on 22nd July 2013.

Economics of Information, an [online] blog available at <http://www.economicsofinformation.com/>.

Small to medium enterprises, available [online] at <http://epp.eurostat.ec.europa.eu/statistics_explained/index.php/Small_and_medium-sized_enterprises>.

Briony J. Oates, Researching Information Systems and Computing, published by Sage Publications (2006). ISBN: 978-1-4129-0223-6.

Malta Qualifications Framework (MQF) outlining recognition of qualifications, available [online] at <http://www.ncfhe.org.mt/>. MQF Level Descriptors, defining levels in the EQF and MQF, published by the MQF.

Project Initiation Document, available [online] at <http://www.mindtools.com/pages/article/newPPM_85.htm>.

Prof. E. DeBono, Six Thinking Hats, ISBN: 978-0-141-03305-1, published by Penguin Books.

Shift work outline available at <http://en.wikipedia.org/wiki/Shift_work>.

Ticketing systems as per article at <http://www.capterra.com/sem/ticketing-software?gclid=CJyOnYSsw7kCFYqR3godNEUAEw>.

Sample purchase order available online at <http://office.microsoft.com/en-001/templates/purchase-order-TC101877358.aspx>.

Top 77 Interview questions at <http://www.trainsignal.com/blog/it-job-interview-questions> as sub-contractors might require to be interviewed particularly if they are self-employed individuals.

Probabilistic Risk Assessment Procedures Guide for NASA

Managers and Practitioners available at <http://ntrs.nasa.gov/archive/nasa/casi.ntrs.nasa.gov/20120001369_2012001000.pdf>.

How to prepare for an interview at <http://jobsearch.about.com/od/interviewsnetworking/ss/job-interview.htm>.

 Half of all connections running on 3G/4G networks by 2017, available at <https://gsmaintelligence.com/analysis/2012/11/half-of-all-mobile-connections-running-on-3g-4g-networks-by-2017/359/>.

H. Hakansson, [University of Uppsala](http://www.uu.se/en/), IMP Project Group, International Marketing and Purchasing of Industrial Goods - An interaction approach, available [online] at <http://www.impgroup.org/uploads/books/InternationalMarketing.pdf>.

Small and Medium Enterprises, available [online] at <http://epp.eurostat.ec.europa.eu/statistics_explained/index.php/Small_and_medium-sized_enterprises>, last updated on 10th June 2013.

V. Wadhwa, *Why have I been pessimistic about Indian IT*, available [online] at <http://www.linkedin.com/today/post/article/20131229234111-8451-why-i-have-become-pessimistic-about-indian-i-t?trk=tod-home-art-list-large_0>, last updated on 29th December 2013.

2008 Financial Crisis and Global Recession, available [online] at <http://2008financialcrisis.umwblogs.org/the-recession/>.

Remembering the stock market crash of 1987, available [online] at <http://www.cnbc.com/id/20910471>.

List of recessions in the United States, available [online] at <http://en.wikipedia.org/wiki/List_of_recessions_in_the_United_States>, last updated on 26th December 2013.

Malta Chamber of Commerce Enterprise and Industry, *Monday is for sick leave*, available online at https://www.konnekt.com/Blog/News/69/Monday-is-for-sick-leave-A-Report, originally sourced from Commercial Courier (Nov 2013).

F.J. Riggins, DuPree College of Management, Georgia Institute of Technology, A Framework for Identifying web-based electronic commerce opportunities (2000).

Eric Schmidt Just Revealed A Key Truth About The Economy That Very Few Rich Investors And Executives Want To Admit , availalable [online] at <http://www.businessinsider.com/eric-schmidt-on-inequality-2014-1>, last updated on January 23rd 2014.

Economy minister stands by decision to re-rank legal firms, available [online] at http://www.maltatoday.com.mt/en/newsdetails/news/national/Economy-Minister-stands-by-decision-to-re-rank-legal-firms-20140308, last updated on March 9th, 2014.

Crown Commercial Service, *I am a supplier* available [online] at http://ccs.cabinetoffice.gov.uk/i-am-supplier.

D. Boddy, Management: An Introduction (second edition), published by Prentice Hall (2002).

ISBN: 0-273-65518-3.