

Implementing Outsourcing for Project Management in Information Technology

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ABSTRACT

Organizations have started outsourcing complex activities, however, at the same time very little research has focused on the incorporation of multiple aspects that affect the overall success, compilation of outsourcing from small to large scale. However, an idea has been contributed in this paper focusing on the lacks of terminologies and limited scope of integration of approaches to achieving maximum efficiency in balancing the scale of outsourcing. The idea is then broken down into the major points which are then concluded in an integrated form to produce a viable approach to achieving the desired results. We discuss the implications of proposing such an idea and promoting it to various stages invalidating the proposed overall theoretical system.

Keywords: *Software Project Management, Outsourcing, Risk Management*

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1. INTRODUCTION

Advancement in the field of the generic project development and project completion requires a proper way of managing these projects. All types and categories of projects require management from idea elicitation and processing to project completion. Naming this entire routine as project management and describing it in literal terms as the methodology in which a team's work is initiated, planned, executed, controlled, and closed for achieving specific goals and meeting particular success criteria [1]. Project management came into being from numerous field of applications namely engineering, and defense activities, as a discipline. Project management is basically the integration of different expert judgments of providing and delivery of quality goods or services that are on-time, in-budget, as promised and perceived. All-in-all it is the implementation of the knowledge areas, tools, skills, and techniques to different project phases for meeting the project requirements.

Discussing further, project management can be termed as a methodical approach for planning and guiding all the processes of the project from their initiation to closure. In light of the Project Management Institute (PMI), processes have to be guided across five stages:

initiation, planning, execution, control, and closure. It is the versatility of project management that it can be applied to almost all sorts of projects, given that it is any field of study that requires management and has a start and finish date. But most widely it is used to control, contain and manage the complex processes of software development projects. Applying software project management to software projects specifies the terms of many techniques of the overall process of Project management and elaborates many stages in terms of software related domains. Applying project management gives a wider scope in managing projects associated with the field of software; which is basically very vast and thus, time, cost, workload, labor, and investments (emotionally, mentally, physically and money-wise) along with many other costly investments are saved.

Project management in itself is a vast field with specifications of majors into all the categories where a working project, its idea, its essence can be perceived. Any field concerned with developing a project deals and introduces project management as part of the completion of the desired project. A project is unique in the sense that it is not a monotonous operation, but instead is a particular set of processes intended to achieve a predefined goal. Hence, a project team often tends to include people who do not necessarily work together – they may sometimes belong to several organizations and may also be across several geographies.

The development of software for improving a business process, or infrastructure construction, the efforts targeting relief post a natural disaster, or the enlargement of sales into a new market. Taking along the importance of Project management in the specific field of software related projects. Some of the routine based stages stay the same especially the essence of project management which can be described as a five-stage process, each process leveling and linking with the next or previous one and many times iteratively throughout the process of project development till its completion. There are multiple approaches to managing projects, depending on the nature of the projects and the priority nature of the project in question, all of which are carefully designed and selected by the project manager after careful analysis of the nature of the project and determining which approach suits it best. The approach can be sequential or iterative in nature.

After deciding the nature of the approach that is to be used and implemented to achieve the required amount of efficiency or level of satisfaction, the next step is to determine the type of model associated with that approach. Then again, there are multiple types of models that have come into existence with the advancement in management techniques regarding projects and their rate of success. Some of the most famous, widely standardized and accepted project management models are OPM3 and the CMMI (capability maturity model integration; although for process-based management which is discussed further in detail ahead in this paper). Considering the OPM3 model which illustrates the ways of how to

enable project management processes to perform effectively, reliably, and tritely for enacting an organization's strategies [1].

There are multiple approaches, steps, processes or stage associated with project management but it is not the major focus of this study. The entire focus of research and study is on the term outsourcing and the tools, techniques and approaches associated with it.

Project management consists of specific knowledge areas that deal with the management of different aspects and stages throughout the development till the completion stage of a project. There are nine knowledge areas introduced by PMBOK. The focus of the study is recently added area that deals with the whole aspect of stakeholders, their needs, their demands etc. The basis and center of our study is the ninth knowledge area called Procurement Project Management, also called "Outsourcing" in literal terms. This area deals with the advancement of going outside the whole project family and asking for paid services and goods or products from outside vendors to either limit the project budget, avoid unnecessary development of need-based products or services or just to stay within deadline by acquiring an already established, developed and tested module of a part of the project.

The aim of this research is to study the limit to which there should be allowance of outsourcing in projects, advantages and disadvantages of outsourcing in projects and the impact/dependence of success of projects on outsourcing. Global trends of outsourcing, outsourcing trend and the impact of outsourcing on the success of projects, and how project managers can deal and control outsourcing/level of outsourcing are also part of the study.

Outsourcing and the terms attached to it are still in the research area in the field of software project management. This study intends to emphasize and point out the success, dependency, limitations of outsourcing on projects during their life cycles, including the risk factors involved in acquiring goods and services from outside parties. The explanation of the term Outsourcing (in literal terms) or as procurement project along with the technicalities associated with this term is discussed in this study to provide another view of what it entails for projects, project managers, team leaders, customers or stakeholders.

To the best of our knowledge, the trends of outsourcing are being followed in Information Technology (IT) industry currently and all the organizations, companies and individuals keep up-to-date with these trends and especially in standards. Our study gives forth the idea of incorporation, the integration of multiple approaches that should be kept in mind to achieve the most efficient balance in the area of outsourcing. The idea itself is a new approach, contributing towards many knowledge areas related to outsourcing or procurement project management. In this paper, outsourcing and the terms associated with it are further approached, researched and analyzed.

2. RELATED WORK

There are multiple approaches on the view of outsourcing in IT projects and through which most suitable way or technique to approach these views is researched, discussed and concluded. Large companies and organizations have their own agenda in leveling to outsourcing, though it is not a must approach. It depends upon the reach, scalability of the party requires and resorting to the method of acquiring goods or products from outside vendors. Outsourcing has been termed something which can help organizations perform well in their main competencies and alleviate the scarcity of expertise in areas which are desired to be outsourced [2]. With rapid advancements and evolution of technology, processes, introduction of new tools and techniques, a recent inversion of outsourcing tendency has developed. The newest drifts in offshoring and outsourcing are on complete contrary due to the fact that companies are trending back to do tasks themselves and progress facilities back in their western positions. These trends keep on changing, shifting and elevating with time and more advancements and researches.

Large companies including the public sector, are equipping a novel network of information system organizations, knowledge workers and technical professionals. We contend that the growth of the software vendor industry, inspired by the amplified demand for outsourcing, is making way for a new expert service firm relationship for the software-based functionality [3]. Thus, enabling the possibility of further relationships between the project managers and managers in the field of software-based outsourcing and benefitting both sides to accommodate the latest advancements.

Companies and organizations often limit their outsourcing, procurement management when the good or product they require is for a limited scope or is expensive. The level of outsourcing in projects varies from project to project. The scope of this research is limited to local case studies of companies, entrepreneurs, organizations seeking to implement the use of outsourcing in their methodologies and projects. On what basis do they feel the need to and when to outsource, when, why and what along with the benefits, disadvantages, limitations and then success and failures associated with this process are discussed.

3. OUTSOURCING PROPOSED THEORIES

Outsourcing began to become trendy in the later part of the 1980s, but it truly became a hit in the 1990s, and definitely became a characteristic portion of the corporate life by the turn of the century 2000. It is founded on: a) corporate emphasis on basic competencies, b) buy or make cost analysis and c) the favored provider notions of total quality management. Today, outsourcing globally is perceived as normal by everyone. However, there are at least two organizations in every outsourcing decision: What is perceived as a tactical decision for the buying organization, relating paybacks, organizational change and risks, is actually a

tactical opportunity for the selling organization, which has a related, but different, series of benefits, risks, and organizational implications. There has been a lot of study regarding nature, origin, and need for outsourcing in general. A book published by Jenster et al. [4] focuses on the nature of relationships regarding success and global impact of outsourcing. They conducted course studies among various levels of projects with different criteria of project managers and recorded their studies. Two aspects i.e. the global impact of outsourcing on project managers and the success of projects related to outsourcing are the main focus of the research conducted and then shaped into this survey which is a strong reference in our limited study but will be approached in our future work.

Several firms have started undoing their advancements in outsourcing due to unforeseen consequences. The conditions which enable organizations to unbundle the various stages of production processes to other locations could not entirely be determined. Along with the nature of the task which is quite significant in determining their linkages, innovation and novelty in the production or manufacturing process or development in communication technology and transport are factors which influence the requirement of direct communication among employees [5]. This means that the most important processes which are used to connect organizations intact are not vivid, and hence an extent of doubt, regarding which tasks should be clustered geographically, remains. It is also brought forth that in numerous cases organizations actually took a leap of hope and experimented by outsourcing without a reliable connection amongst its internal errands and spatial consequences [1]. It is a fact that outsourcing has helped firms when it comes to saving, but it has also resulted in the production of unforeseen drawbacks, for instance, miscommunication and bad quality contagious products, and hence ending up postponing the entire process of production.

This brings another point of our research into focus that how can organizations, companies or even individuals control the level of outsourcing. The limitations that should be placed in order to level these circumstances [1] [2].

The success rate of outsourcing of projects in our study is the hub which is linked to the remaining aspects of our research study. The local study conducted showed an increased amount of dependency on the outsourcing of goods and services (quoted as freelancing). Although the search was conducted locally and it cannot validate the global impact of outsourcing. The statistical data that is the next stage in our research study is gathered by performing case studies, collecting questionnaires. A lot of our research is local but focuses on the issues that have been less paddled into and even less incorporated as a whole.

Fig. 1 shows a statistical approach of determining the growth of outsourcing in the IT field (a variation from the specific field of software project management but still reliable in terms of our study to gain statistical analysis as an overview on dependency and then followed by

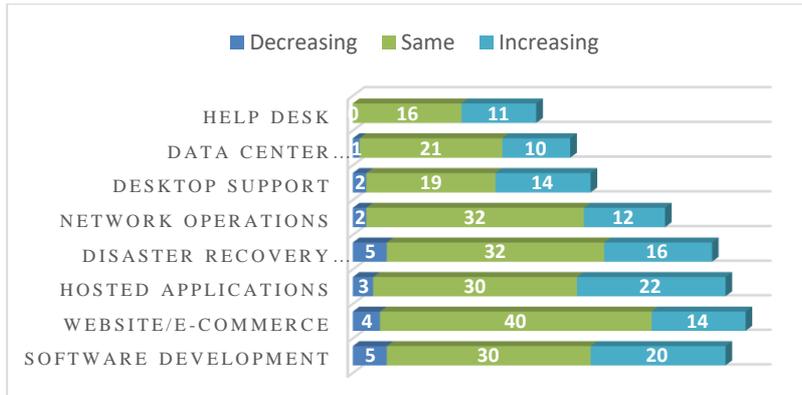


Fig. 1. Use and Growth of Outsourcing: All Sectors

success of outsourced projects) [6] [7].

This research also includes integration of the advantages and disadvantages of implementing outsourcing (local research result conclusion) that can contribute towards the success and failure of an outsourced project. The most common ones are presented in Table 1. This table showcases the five pros and cons and which was then incorporated into the study in determining the success rate of outsourced projects and then into the global impact of outsourcing. The study is an intricate work of point to point of matching up different aspects rather than focusing on the tools and techniques which has already been researched numerous times.

Table 1. Positives and Negatives of Outsourcing

Positives	Negatives
Outsourced project managers consider Planning, Scheduling, Controlling and Tracking with fresh eyes.	Internal sources can be used instead of external resources. Senior Managers must have buy-in.
Consultants help ensure that best practices are followed. ROI and overall outcome is better for projects that are kept in-house.	If no work is done on relationships, there may never be development of project management skills needed in-house.
Companies do wonders at productivity gains: Project managers perform sector-targeting research and converse the latest thinking.	Resources are not owned by you. Without investment from HR perspective, people can leave.
Clients can focus on core competencies.	Money can be wasted in case of miscommunication and mismanagement at the beginning of the project.
Better preparation for dealing with similar projects in future.	Higher risk of sensitive-company-information loss.

4. DISCUSSIONS AND LIMITATIONS

With relatively very few works done on the aspects approached in this research paper, there is much more to outsourcing than just a host and a dependent. Only outsourcing is not a key to success in order to achieve project management goals. It also takes other dependencies that too incorporate to lead to a successful project completion. When all of these aspects are thoroughly researched and incorporated, they can give a wider knowledge to observing the future trends in outsourcing of projects, how project managers deal with the effects of either success or failure.

For secure outsourcing, we suggest that the outsourcing party be aware of the risk that can hinder the outsourcing of their service. While outsourcing upon geographically far off separated platforms country's regulations and compliances should be kept in mind. Both the outsourcer and the outsourced should keep a viable transparency in monitoring the service progress and configuration changes. The vendors that provide the outsourcing services should ensure that the data they are provided with is kept reserved. The vendor and clients both should perform the risk management. This risk management should be performed on both ends individually as well as in a common share. It has been observed by our local survey results that outsourcing works best when parties at both the ends have a mutual understanding, that is, both the client and the vendors have been working together for long and they also share both the positive and the negative risks together in the process.

Many IT people do not know the variety of approaches and models that can be used, especially not undertaking the risk management in regard is a huge factor in the failure rate locally. Considering all aspects of outsourcing and then moving forward with the decision to undertake the responsibility of outsourcing especially when the project itself is a second or many times third-party hand down. Dependency is also an issue which should be avoided.

5. CONCLUSIONS AND FUTURE WORK

This research presents a culmination of multiple ideas but a new facet that has been introduced is the incorporation of all these major ideas into one for the success of projects.

Future work includes the statistical analysis, enhanced local as well as a global survey using questionnaires and then integrating the results obtained on choosing the most suitable models and approaches. Two points can be focused on for widening this research in order to support the proposed ideas.

- Statistical analysis of outsourcing (locally and then globally) keeping in mind the global impact, the success of projects related to outsourcing, varying into multiple fields of software project management and the limitations that should exist when

considering the notion of outsourcing.

- The integration of all the statistical analysis and the processed information into giving a detailed study on how to achieve the complete balance in outsourcing.

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