What is the influence of Project Management Office in regard to client expectation in IT industry, Ireland?

Dissertation submitted in part fulfilment of the requirement for the degree of masters in business administration (MBA) at Liverpool John Moore’s University in conjunction with Dublin Business School

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Abstract

The primary objective of this study was to understand the role of PMO and examine its impact on project performance. The adoption of the project management methodology and practices among IT companies has proven to be very popular with the advancement of IT in one’s life. In this age, globe looks to be one single entity because of the globalisation and the role IT plays in one’s life. IT plays a lead role in the world in each and everything from environment to technology.

Since the use of the word project has been used significantly, everything is projective in the modern world. Then comes the Project and the management of the Project.

The objective of this research paper is to examine impact of PMO practices and methodologies.
Chapter 1:
Introduction
1 INTRODUCTION:

“Project in a business environment is a finite piece of work, undertaken within defined cost and time constraints and directed at achieving a stated business benefit” (Buttrick, 2005). Moreover technical organisations are increasingly becoming project based. The operational activities within present-day organisations are being split onto programmes of project aligned to achieve the organisation’s strategy. This present the growing importance of managing programme(s), which indirectly involve managing the portfolio of projects. Organisations invest significant resources in their projects to meet the business objectives. However a KPMG survey (2007) reports that despite the significant resources invested in projects, companies still lose millions of capital each year through poor project performance and jeopardise their reputation as a result of significant project failure. The report also suggests that the majority of organisations, who experienced a project failure, could not determine the magnitude of this failure. These findings emphasise the need for organisations to focus on consistent project/programme management success and on greater transparency in project reporting & governance.

In response to this growing demand in project and programme management success, many organisations are establishing a central unit, which manages organisational project knowledge and possesses expertise related to project & programme management practices, techniques, and standards (Latavec, 2006). These centres are referred to in many ways such as programme management office (PMO), Project management office or project office. Irrespective of the reference term, these centres serve important functions within a project oriented environment.

This research explores various models, roles and functions of this central Programme management office; investigates its role in aligning project activities with business strategies; and evaluates its impact on project performance.

The programme management office is referred as ‘PMO’ throughout this dissertation.

There is enormous literature available on project and programme management, including numerous models and concepts documented on organisational structure and project & programme governance framework. However, there is a gap in the literature, with respect to the exact linkage or relationship between the PMO functions and project success criteria. A majority of the pre-existing literature does not appropriately explore the role of the PMO in aligning projects with the business strategy. The question that then arises is that, ‘what
Influence does PMO have on the key performance criteria / knowledge areas (PMBOK, 2008) of project management such as cost, time, quality, resources, procurement, planning, risks and communications? the ensuing research investigates this area by exploring the role of PMO in technical organisations and examining its impact on IT project performance. It also investigates the role of PMO in aligning IT projects activities to the organisation’s strategic objectives with success.

1.1 Research area
How Project Management Office can meet the client expectation with successful project delivery?

What kind of techniques Project Management Office would use in order to meet the client satisfaction in IT Industry?

1.2 Research objectives
Saunders et al (2009) defines research objectives as clear, specific statements that identify what the researcher wishes to accomplish as a result of doing the research. Objectives are more generally acceptable to the research community as an evidence of the researcher’s clear sense of purpose and direction.

The following objectives have been focused upon in this research exercise:

- To analyze how Project Management Office can meet client expectations as detailed by IT professionals. (Research will not be done at the client side).
- To discover the impact of Project Management Office in IT projects as perceived by IT professionals.
- To assess client satisfaction as end users of IT projects.
- Generate theoretical propositions to Project Management Office on how they can improve their performance with regard to IT projects.

The research focuses on exploring the influence of PMO on project delivery. The objectives of this research clearly outline the scope of the research and hence no separate discussion about the research scope was necessary.
1.3 Research question
The research question is the most critical part of any research. It is essential to develop a research question that the researcher is interested in so that the researcher can completely focus on the research. Choosing the appropriate question is important, a question that is neither too broad nor too narrow. Research questions that are ‘just right’ are those that are just right for the investigation at the given time, in the given setting (Clough and Nutbrown, 2002).

As a result of interest in the project management field, the researcher was inspired by the PMO concept and hence has undertaken this study.

The primary research question that motivated the researcher towards this study was:

*What is the influence of Project Management Office in regard to client expectation in IT industry, Ireland?*

The purpose of this research is to understand the role of PMO and its impact on the project outcomes and the project team from the project management perspectives.

The above question led the researcher to further research the role, models, structures, and concept of PMO and to subsequently examine the PMO’s impact on the project delivery success in IT industry.

1.4 Researcher suitability
The researcher holds a degree in engineering. The researcher has successfully completed all the relevant courses modules in MBA programme at Dublin Business School and will use the knowledge gained in these course modules, specifically the modules such as Project Management, Managing Information Systems for this research.

The researcher has successfully complete all the relevant course modules in MBA Programme at Dublin Business School and will use the knowledge gained in these courses modules, specifically the modules such as Project Management, Managing Operations and Managing Information systems for this research.

Having good knowledge and enthusiasm in Project and Programme management area, the researcher is confident and well suitable for this research.
1.5 Recipient of the research
This dissertation title is submitted as part of the curriculum of Masters in Business Administration programme at Dublin Business School in Association with Liverpool John Moore University. The principal recipient of this dissertation will be Dublin Business School and Liverpool John Moore’s University. The primary recipient will be Mr. Paul Taaffe and Gary Bernie.

As the research is intended to perform a detailed investigation to understand the role of PMO and its impact on project performance, many of the respondents of the survey questionnaire and semi-structured interviews have shown an interest in the outcome of this research. A copy of the survey results will be made available to the respondents interested in this research area.
Chapter 2:

Literature review
2. LITERATURE REVIEW
The aim of literature review is to demonstrate primary and secondary research skills; to show that the researcher understands the research subject; has studied existing works in relation to the research objectives, design and methodology (Hart, 1998). This review is not simply a description of what others have published, but is a critical discussion, showing insight and an awareness of differing arguments, theories and approaches.

Kumar (2011) suggests a number of steps in reviewing literature, such as searching for existing literature, reviewing the selected literature and using it to develop a theoretical and conceptual framework for investigating the research topic(s).

The researcher has searched and carefully selected the literature on IT project, programme management that are relevant to the research topic. Being interested in the project and programme management area, the researcher was motivated, focused and thoroughly enjoyed doing literature review on the programme management office (PMO) domain. As the future of many organisations depends on their ability to harness the Power of Information technology, and good Project Manager continue to be in high demand.

Project managers are continually challenged by complex client expectations due to the belief that IT projects can improve the way organisations works. However, Lientz and Rea (2001) believes that the level of standards and expectations from business clients has increased, and technologies must not only be implemented correctly but also, must be integrated to the overall business objectives. This suggests that the criteria for assessing the success of a project should include expectations of different people involved in the project.

There is a plethora of books, articles, journals and associated documents available in the project and programme management area, but narrowing down the selected literature to the key focus areas was a crucial element in this literature review.

2.1. Project management
Cleland (1999) refers to ‘projects, as building blocks in the design and execution of organisational strategies, with the means for bringing about realizable changes in product and processes’. Similarly, the project management institute (PMBOK, 2008) defines a project as a ‘temporary endeavour to create a unique product, services, or result’. Projects have constraints such as ‘scope, time and cost’ in which project ‘quality’ is ultimately affected by
the balance between these three elements. In order to meet these constraints and to accomplish project successfully.

PMI (PMBOK, 2008) affirms that the process of project management by undertaking multiple stages such as project initiation, planning, execution, control and closure.

![Project Management Phases](image)

**Figure 1: The different project phases:**

Maylor (2006) emphases the project as a vehicle for the execution of organisational strategy and argues that the strategic consideration was missing from the subject of project management in the past. Successful projects contribute to the organisational objectives. Leintz and Rea (1995) list the important elements that affect project success. They are:

- Clarity of project objectives
- Integration of project objectives and scope
- Interaction between the project and the organisation’s strategy
- Skills of the project management team in implementing the project’s objectives

According to kerzner (2009), companies such as Nortel and Hewlett-Packard view project management as a competitive weapon. Project driven companies that survive on constraints (i.e. income) from external companies market their project management skills through virtually every proposal sent out of the house. The difference between winning and losing a contract could very well be based upon a firm’s previous project management history, in terms of project successes and failures.

### 2.2 Programme Management

Most of the definitions of the term ‘programme management’ refer to the coordinated management of a collection of interrelated projects. PMI (PMBOK, 2008) defines programme management “as a centralised, coordinated management of a group of projects to achieve the programme’s strategic objectives and benefits”. Through the programme management, organisations can be able to achieve strategic benefits that cannot be reached through managing projects individually.
The contraction PMO can be used for three altered types of offices within an organization:

- Project Management Office
- Program Management Office
- Portfolio Management Office

However globally it is known as Project Management Office. Programme management referred as a strategic activity because it includes all or set of projects and programmes undertaken by the organisation to achieve strategic objectives (Boznak, 1996; Morris and Jamielson, 2005).

Gardiner and Gallo (2007) emphasises that programme management helps the companies to introduce a wider organisational context into their project management culture. Ongoing programme governance facilitates organisations meeting their strategic objectives, focuses on their customers and at the same time managing projects at a tactical-level. Boznak (1996) recognises the need for new organisation wide programme governance framework to respond to the challenges in the competitive markets. Further information on programme governance structure that relates to PMO is discussed in section 2.6.

2.3. Project Management Office
The PMI (PMBOK, 2008) defines a programme management office (PMO) as “an organisational unit to centralise and coordinate the management of projects under its domain. PMO oversees the management of projects, programmes or a combination of both”. This centralised office facilitates the management of a programme or programmes which can utilise the sharing of resources, methodologies, tools and techniques and focus on the high level project management activities. However this definition illustrates the PMO as an administrative function and hence KPMG (2007) suggests the role of PMO as strategic function in co-ordinating, prioritising, planning, overseeing and monitoring projects to achieve business objectives and benefits. According to Duggal (2007), PMO operates at different levels in organisations. A PMO can be for a particular project or programme, for department such as human resources or information technology, or it can be at the organisational level. In large organisations, there can be multiple PMOs at different level.
PMO is also referred as ‘centre of excellence’ or ‘centre of expertise’ (Letavec, 2006, ward, 2000). As a centre of excellence, PMO assists project managers, project teams and various management levels on strategic matters and functional entities through-out the organisation in implementing project management principles, practises, methodologies, tools and techniques. It is referred as an ultimate authority to develop project management competency within an organisation.

Although there are many advantages of project management that are documented in various literature, the organisations are still suffering from a high rate of project failures. Garies (1990), and Lundin (1990), Dai and wells (2004) advocates the exploration of new process models and organisation structures to nurture strong project performance and recommends the importance of establishing a centralised PMO to broaden the project management awareness across the organisation.

In retrospect, red and Levin (2002) highlight the significant growth in the project management field, they emphasise on the difficulty that organisations have in determining if their projects are truly contributing to the corporate success and growth. Their findings suggest that stakeholder’s perception have been a major contribution to the project successes and failures.
2.4. Project Success Rate
According to Standish survey report on the triple constraints of being on time, within the budget and functionality delivered on average. Figure 2 shows graphical representation of Standish survey results.

Figure 2 – Standish survey report on project success/failure rate


Comprising the Standish CHAOS study report shows some dip in the project success rate yet the impact of the project failure are still significant. According to Standish research report of the year 2009, the reason for most of the project failure was not due to a lack of money or technology, but rather a lack of skills in project management and an executive support. It’s a “recipe for success” findings shows the importance or project management and how skilled project managers can bring success to a project and effective project management in organisation. The report also reveals the shortage of project management skills in organisation.
Figure 3 shows a comparison of the project failure rate for the years 2000 and 2009.

<table>
<thead>
<tr>
<th>Project Category</th>
<th>Project Description</th>
<th>2000 Results</th>
<th>2009 Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Project Success</td>
<td>The project is completed on-time and on-budget, with all features and functions as</td>
<td>16.2%</td>
<td>32%</td>
</tr>
<tr>
<td></td>
<td>initially specified</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Project Challenged</td>
<td>The project is completed and operational but over-budget, over the time estimate,</td>
<td>52.7%</td>
<td>44%</td>
</tr>
<tr>
<td></td>
<td>and offers fewer features and functions than originally specified</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Project Impaired</td>
<td>The project is cancelled at some point during the development cycle</td>
<td>31.1%</td>
<td>24%</td>
</tr>
</tbody>
</table>


Organisations have varying levels of expertise in the project management functions. To become successful, many organisations realised the need to improve the project management skills and competency across organisation (Kerzner, 2009). Cooke-Davies (2002) recognised that the critical factor for project management success for an organisation is the level of maturity of their project processes, project management education such as risk management, documenting organisational and project team responsibilities, developing maturity in scope management processes and maintaining the integrity of defined plans, so that the accurate projects performance can be measured. However, Rankins (2006) argues that although the project success rates are moving in a right direction, their success can be regarded by business as a failure from business point of view. It brings up the point that the root cause of this problem is an inappropriate connection between effective governance and a measurement (Gareis, 1990 and Lundin, 1990) of the rate of project success or failure.

Duggal (2007) refers that many organisations claim they have high rate of project success, however their emphasis should be on whether indeed they are well organised, or whether there is a cost of successful project delivery or whether the successful delivery is s result of heroics. By actual observations within various organisations, Duggal (2007) provided reasons behind the need for a centralised project/programme management office.

These reasons are summarised below:

- Organisations are inconsistent in managing and reporting on projects
People waste a lot of time in finding out how to get the things done and often find them they are reinventing the wheel.

- Documented processes are only on paper and often not followed.
- Too much bureaucracy creates a lot of bottlenecks and slows down delivery.
- No mechanism to improve business processes.
- No structural governance or checkpoints for projects.
- Few opportunities to share information, ideas best practices and lessons learned.

2.5. PMO Models

In many literatures, the definition of PMO representation varies in the name, model and by functions, but it is essentially a centralised office that coordinates and oversees the management of projects and programmes (PMI network, June 2011).

Gartner analyst in their survey report of 2000 identified three main models for PMOs (kendall and rollins, 2003):

- **Project repository** – a library of templates, guidelines, and project histories and serves as a source of information on project methodology and standards.
- **Project coach** – acts as a trainer, consultant or mentor, a source of information on project processes and helps in project setup and post-project deliveries.
- **Enterprise project office** – provides direct management, oversight of projects throughout the organisation and acts as a contracted project manager, assessing scope, allocating resources and verifying time, budget, risk, and impact assumptions.

Based on specific roles and functions, Letvec (2006) suggests the following models for the structure of a PMO.

- **Storing PMO model** – serves as the central project programme management body in the organisation to influence over the standards and processes that govern projects in the organisation. Acts as a knowledge organisation that maintains project libraries and lessons-learned, and builds knowledge-bases of organisational best practices.
- **Consulting PMO model** – plays a mentoring role by assisting with troubled projects, providing training and development opportunities for project managers and project staff, or publishing best practices throughout the organisations. Acts as consulting...
organisation to establish standards for project management processes, managing PM software, managing staff augment staff for certain project efforts.

**Blended PMO model** – plays a more active role with direct responsibility for managing the execution of some key projects within organisation. In addition, it also provides consulting services, training, standards-setting activities and project support services as mentioned in other two models.

According to Duggal (2007), organisations implement PMO model based on their contextual suitability and objectives. If the emphasis is on governance, wherein decisions are controls from top-to-bottom, then the PMO may refer as a ‘control tower’. However, if the primary purpose is for information and reporting then PMO model would be like an ‘information Bureau’ and on the other hand PMO ‘consulting and supporting’ model will provide training, coaching, mentoring, tools and templates.

No one PMO model fits all organisations and the model which an organisation selects can be solely dependent on the type of programme/business that it has to manage. However, choosing a right PMO model will depend on needs of the project/programme and to the extent project data collect, assess and report on project progress in meeting customer expectations and successful project delivery (Dai and wells, 2004). Improving project success rates is often a top goal of setting up a PMO- central organisational entity. However, the question that arise about how do organisations know if their projects are truly contributing to the success. Goldratt and Cox (1992) recommend having a centralised office in getting all project metrics, project status that can provide evidence of project successes or failures and ultimately measuring organisations performances as a whole.

The PMO as a central organisation entity, having knowledge about what is important to the organisation as a whole, can ensure that the projects are meeting their priorities and guide projects teams towards successful project delivery. However, Simon (2006) warns that PMO accountability reduces business unit control over projects that are important to them. According to Simon (2006), many projects are done for the benefit of business units, not the organisation as a whole. Business units need to be able to prioritise their own projects and manage their execution without interference and competition externally. They need their own resources, funding and freedom to use that investment in the best interest of the business unit meeting its strategic goals.
Despite its several benefits, one of the biggest challenges for the PMO is to demonstrate its value (Duggal, 2007). PMO is often referred as the project management ‘overhead’. The value of PMO is perceived as hidden, intangible and hard to qualify. Cappels (2004) argues that if the PMO cannot be expected to save more than its own cost, it should not be implemented.

In that context, Duggal (2007) suggests that the tangible value of the PMO needs to be measured in terms of its contribution towards increasing revenue, reducing project costs, increasing customer satisfaction, increasing team moral, improving project quality and enhancing effectiveness.

Gagon (PMI NH Journal, Mar-Apr 2007) lists the real and tangible benefits of the PMO as the following:

- Aligning of people and projects with strategic objectives,
- Continuous process improvement
- Faster, up-to-date, business evaluation and judgments,
- Improved customer satisfaction, and
- Collaboration leads to empowerment.

Similarly, Goldratt and Cox (1992) also highlights that the value of PMO as a central office is not easily measurable in the company’s financials; however having an effective PMO as part of a proper governance structure can increase the predictability and control over projects.

2.6 PMO as an element of the project & programme governance structure

“project governance is the process of developing, communicating, implementing, monitoring, and assuring the policies, procedures, organisational structures, and practices associated with a given project programme” (PMI, 2006). Governance plays a key role in fostering project success and delivering value to the organisation (Krezner, 2003). It is important for successful organisation to closely align their projects with their business strategy.

According to KPMG’s global project management survey (2007), PMO as a central office can play an effective role in projects & programme governance. The survey shows an increased trend in organisations towards implementing PMOs and at the same time shows a stronger focus on project governance. From a strategic point of view, the effective
governance over projects cannot occur in isolation and needs to be an integral part of an organisation’s overall governance framework.

As a part of programme governance framework, PMI (2011) suggests that PMO can provide administrative and facilitative support for the organisational governance board by performing the following duties:

- Manage the collection of projects reports and other related documents for the governance board and the organisation.
- Manage the data repository of project-related information correlated to the fiscal year strategic plan.
- Prepare what-if analysis for new proposed projects.
- Facilitate the governance board meeting including scheduling logistics, report preparation and distribution, and meeting agenda.
- Prepare, publish and distribute in advance of the governance board meetings the operations plan status and forecasting reporting.
- Administratively manage the prioritization model on behalf of the governance board.

Figure 4 Programme governance frameworks
(Source: standards of programme management, PMI, 2006)
In agreement with the above, Hill (2007) suggests that PMO can serve the dual roles of ‘examinee’ and ‘examiner’ by providing guidance on project processes, standards and methods and at the same time examine how well the projects are adhering to these standards and methods. PMO can help in ensuring that the preferred organisational business practices are properly conveyed for use within the project management environment.

The PMO assisting in “project governance” function demonstrates to business managers across the organisation that they retain control and influence over their business objectives and interests (Hill, 2007). It means business managers can expand their control and influence into the project management environment to ensure that business interests are being achieved.

**2.7. Role and relationship of PMO with project and organisational strategy**

Although the standard set of role and functions of PMO has yet to be agreed upon in theory or in practice, the role depends mainly on the business of an organisation. The purpose of defining the PMOs role is ongoing (Dai and wells, 2004). The exact role of a PMO will depend on the needs and culture of the organisation (Hill, 2007).

However, within an organisation, it is essential that the role of a PMO be well defined and well understood by everyone (Kerbs, 2009). When a PMO’s role is poorly defined, either some jobs won’t get done, or there will be duplication of effort. A poorly defined PMO will result in an organisational perception that the PMO is either over-extending its authority or it is failing to perform. Letvec (2006) argues that there is a lack of understanding of PMO role by management. There is sometimes a perception that the PMO serves as an obstacle to timely accomplishment of project activities.

According to Duggal (2007), the primary purpose of establishing PMO is:

- To increase capability to execute and delivery successful projects (tactical)
- To strategic decision support – business alignment & benefit realisation (strategic)
- To provide a governance structure
In the tactical role, PMO helps realise business or strategic objectives, by translating strategic into portfolio or projects and programmes, and increasing the capacity to deliver successful project performance (cost, schedule, quality). On the other hand in strategic role, PMO helps provide vital information to top management for better decision making regarding projects/programmes in the portfolio. PMO provides a governance structure that focuses on achieving compliance, performance management and linking the tactical with strategic (Duggal 2007).

Rad and Levin (2002) maintains that the role of PMO is project-focused and is intended to have immediate impact on the performance of the project. PMO provides support to the project manager and the teams so that the project manager can focus on delivering the goals and objectives of the project. According to Maylor (2006), the PMO provides central facility with the skills and knowledge of how to run projects processes, provides project support and monitoring and ensures that the projects are given the best chance of success. Projects provide PMO with the information, knowledge and experience gained and other project
performance data. The relationship between the projects and the PMO is given below in figure 6.

Figure 6 – relationship between the project and PMO

Skills/Knowledge
Pool of staff/Resources
Support
Documentation
Check and Control
Mentoring

PMO

Information about project knowledge
Gained from projects staff project
Experience overhead cost

PROJECTS

(Source: Maylor, 2006)

PMO can establish a strong link between organisational strategy and the activities at the project level. From an operational perspective strategy formulation is carried out by senior management and inputs are provided from the project level such as project progress, workload/resources capacity, new development opportunities (Maylor, 2006). Organisations that employ project management as their strategic consistency produce better performance, more accurate cost and schedule forecasts, and early problem recognition. Subsequently, this strategic in turn provides the firm a competitive advantage.

Maylor (2006) makes a point that PMO’s support to project processes does not come free, it adds an overhead costs to projects. However, these costs can be compensated easily by increasing projects success.

PMI (PMBOK, 2008) mentions nine project management knowledge areas, namely managing project scope, cost, time, quality, risk, communication, resources, Technical integration and procurement. The project success depends on how projects are being managed in these PM knowledge areas. These 9 knowledge areas can also be referred to as critical success criteria for measuring the project success.
This research evaluates the influence of PMO on the project management performance/knowledge area. It means that the research evaluates the impact of PMO on each project success criteria mentioned above.

The research also analyses the other important project success indicators such as customer satisfaction, organisation/project teams, and PM knowledge & skills and projects alignment with organisation’s strategic objectives. While traditional triple-constraints deals only with the project performance related to on-time, on-cost or in-scope project delivery, Kerzner (2006) emphasis projects “on-strategy” and “customer satisfaction” performance criteria as more relevant to the project management success than the traditional constraints of project management.

As the role that the PMO is needed to perform in an organisation is different, Letavec (2006) classified PMO in three categories. These are:

- PMO as standards and methods organisation
- PMO as consulting organisation
- PMO as knowledge organisation

2.8. Functions of Project Management Office (PMO)
Although, the PMO functions differ in different organisations, some most common functions that the researcher analysed from many literatures are given below.

2.8.1. Project management standards and methodology
“Standardisation includes defining and enforcing uniform project management processes across the organisation, utilizing standard tools and templates to perform project management tasks” (Letavec, 2006). Bates (1998), Duggal (2007) explains the role of PMO to ensure uniform or common set of practices is available to guide project managers in successful project delivery of the projects. A project management methodology conveys to the project manager and project team member what to do and how to do it (Hill, 2007).

Some examples of standard methodologies are:

- BS 6079 – a guide to project management
- PRINCE2 – managing successful projects
- PMBOK – project management body of knowledge
- ISO 10006 – guidelines to quality in project management
By implementing standard methodologies, PMO can ensure the uniform data is captured from all the projects and reported to senior management. It facilitates management reporting and can help in accurately tracking the status of the projects across organisations.

However, Pharro and Bentley (2007) clarifies that none of the methods should be used blindly and no one method is a perfect solution for all organisations. However, any such method that suits a particular organisation should help to establish an environment that increases the chances of their project success.

According to Krzner (2006), consistent proven processes that include industry best practices are important for any project success. Successfully implementation and consistent use of best practices and project management methodologies within each and every project can assist an organisation in achieving project management maturity and significant improvements in projects success rate.

2.8.2 Project metrics and dashboard reporting
HP founder, Bill Hewlett summed up the organisation’s need for the metrics with the quote “you cannot manage what you cannot measure”, and its corollary “what gets measured gets done” (Eckerson, 2006).

PMO can assist in tracking organisation wide project performance metrics (Letvec, 2006). It can track the state of project management within organisation, project delivery, and measure the value that project management brings to the business.

Metrics, also called as key performance indicators (KPIs), comprising of indicators that show variance in cost, schedule, resources, etc. They are used to measure progress during the execution of projects, in improving development processes and to measure organisational efficiency. This function of PMO can be regarded as a part of organisational governance framework. Governance over projects seeks to provide answers to some of the keys organisational questions (KPMG, 2007) around alignment of projects with business strategy, value of project investments, key project risks and priorities, projects underperformance, etc.

“Dashboard is a performance management system that communicates strategic objectives and enables management to measure, monitor, and manage the key activities and processes needed to achieve their goals” (Eckerson, 2006). These measurement and metrics reporting
should be consistent, well analysed and administered by PMO to provide top management with the knowledge to make right decisions.

2.8.3. Project management Toolset and project management administration
In addition to managing project management standards and methods, PMO can be responsible for identifying and implementing useful PM Toolset such as PM software package, project models and templates across organisation (Letvec, 2006).

PMI (PMIBOK, 2008), states that a typical PMO is responsible for managing the project management system in order to ensure consistency in application and continuity on the various projects being performed. The project management system is the set of tools, techniques, methodology, resources, procedures and templates used to manage a project. Another role of PMO is to provide assistance to projects in project management activities when they are required. According to yeast and Cadle (2007), PMO is very valuable and cost effective as it frees the project managers from some routine work, like recording timesheets, and enables them to get on with actually managing the projects.

However Duggal (2007) indicates that the common myth about the PMO is to focus only on tolls, by implementing project, programme or portfolio management system. Tools applied without a roadmap do not result in significant payoff. Managing people, processes, knowledge, skills, training and mentoring are more important of the PMO.

2.8.4. Project and process consulting
Project and process consulting provides advice and guidance to project and programme managers and others in the organisation. Letavec (2006) mentions that the consulting role might include assisting with project workshops, assessing troubled projects and providing guidance to improve project results, and facilitating standards or general questions in the area of project and programme management.

Some of the consulting functions the PMO perform in project life cycle are (Letvec, 2006):

- Project initiation and planning consulting
- Proposal and business case development consulting
- Rationalise project priorities
- Project kickoff guidance/workshops
- Project execution consulting
- Project tracking and reporting consulting
Another function of PMO in the area of project processes consulting involves controlling and fine-tuning of the processes and providing the empowerment and support to continue what works and discontinue what does not work (Duggal, 2007).

2.8.5 Mentoring & Coaching
Letvec (2006) mentions that project management coaching and mentoring programs are invaluable in providing project teams with a clear, set-by-step direction towards solid project success.

However, Hill (2007) maintains that the project management mentoring & coaching programme should not lead to undue reliance on project management mentors or their availability. It should not be regarded as a spoon feeding activity. Mentoring should be regarded as only a temporary activity till the mentee becomes self-sufficient to perform his/her role independently.

Kendall and Rollins (2003) highlight the importance of having senior management team as a primary customer of this model of the PMO. Otherwise if a project is successful, the project manager, the team, and the functional sponsor grab the credit and the coach is often ignored. If the projects are not successful, the coach is given all of the blame.

2.8.6 Project Staff Management
According to Letvec (2006), the project staff augmentation role involves the temporary allocation of PMO staff members to assist project teams with specific project issues or to fill project member roles in the event of resource constraints within the organisation.

As PMO maintains a consolidated view of projects and its resources, they are in the best position to manage adjustments and changes to staff allocation and assignments in order to optimise the best use of organisational resources. Based on organisational or project needs, PMO can serve a range of resource management activities (Hill, 2007). It can provide guidance for utilisation of essential project resources, oversight on capability and standards of performance and/or it can collaborate with HR and business units to determine resource utilization requirements.
However, Simon (2006) identifies a problem that the project resources are not generally owned by the PMO, they are managed within their business units. Even with access to information about these resources, PMO cannot reasonably make resourcing decisions as they are not responsible for the staff. This situation can create confusion over authority and project could experience resourcing delays.

2.8.7 Project Management Training
Training and education are the underpinning of an effective project management environment (Hill, 2007). Training provides individuals with necessary skills, knowledge, and competencies needed to perform project tasks.

Dai and Wells (2008) indicates that the need for business and project management skills is growing and suggests that PMO can take a leadership role in working with human resource department in identification of relevant skills, training on project management and related software, financial support to conduct training and one-to-one coaching. By means of conducting training programs, organisation can improve the PM competencies.

Figure 10 shows areas of skills needed by the project team. PMI (PMBOK, 2008) advocates five areas of expertise that are required by project team to effectively manage a project. These five areas are:

- Project management body of knowledge guide (project management skills)
- Application area knowledge, standards, and regulation (functional skills)
- Understanding the project environment (culture, social, political environment)
- General management knowledge and skills (planning, organising, executing, controlling etc.)
- Interpersonal skills (communication, leadership, problem solving etc.)
Letvec (2006) states that PMO can play a significant role in project management training and education, such as developing quality training materials, identifying & specifying training and professional development opportunities and arranging training for project teams. Adequate training will enable those who receive the training to do their job more effectively and hence lead the team towards project success.

2.8.8 Knowledge Management

“If an idea’s worth having once, it’s worth having twice”- tom Stoppard (Englund and Bucero, 2006). Over time the amount of available knowledge and project assets can become large. Without some practical means of cataloguing and maintaining this knowledge, it becomes extremely difficult for an organisation to provide access to it in a way that provides project teams with the ability to find the specific type of information they are seeking in a timely manner. PMO can help in this area.

PMO can help to develop a knowledge repository to capture, catalogue, and maintain knowledge of numerous projects undertaken by an organisation (Letvec, 2006). Without a central knowledge repository, the knowledge assets can be lost overtime.

Rad and Levin (2002) emphases on the importance of maintaining the project knowledge base, so that the decision can be made based on knowledge rather than the opinion.
Letvec (2006) highlights that the knowledge in an organisation can range from internal project assets to organisational know-how and lessons learned to external knowledge sources such as books, externally provided training courses, and industry standards.

Hill (2007) summarised PMO role in knowledge management to include:

- Construct an effective project management information system.
- Facilitate collaboration among project managers, project teams, and project stakeholders.
- Manage activities of geographically dispersed project teams.
- Implement a robust project management knowledge reference library.
- Capture and utilize individuals wisdom, perspective, intuitions, and experiences.
- Promote a learning organisation among project managers.
Chapter 3:

Research methodology
3 RESEARCH METHODOLOGY AND METHODS

3.1 Introduction
The purpose of this study is to explore the influence of programme management office (PMO) and to examine its impact on the project delivery and satisfaction. The PMO is generally adopted by management as tool in providing wide range of supporting, monitoring and control activities for projects and programme within organisation. Plenty of literature is available on project and programme management including many companies are claiming to provide better PMO solution than others. However, the existing literature on this important subject is largely anecdotal. A majority of the available literature does not appropriately explore the exact relationship between the PMO functions and the project success criteria. The ensuing research investigates this area by exploring the role of PMO in organisations and examining its impact on the project performance.

The guide to the project management body of knowledge (PMBOK, 2008) published by Project management institute (PMI), USA is a collection off processes and knowledge areas generally accepted as the best practice within the project management discipline. PMBOK recognize 9 project areas (scope, cost, time, quality, risk, procurement, integration, resources and communication) can be treated as a critical success factors (CSF) in evaluating the performance of the project. Kerzner (2006) and many other writer emphases that project success criteria such as “on-strategy” and “customer satisfaction” are more relevant in evaluating project performance. This research uses all the above mentioned success criteria in systematically evaluating the influence of PMO on project performance.

3.2 Research Methodology
Methodology is defined as the way the knowledge is gained, how theories are generated and tested, and the relationship between theoretical perspectives and research problem (Blaikie, 1993). It refers to the procedural framework within which the research is conducted (Remenyi et al, 2005). The purpose of the research methodology is to assist the researcher in answering the research question by collecting relevant information about the researcher topic. There are many ways by which the researcher can carry put their research. However, the quality of the research depends largely on the method selected which suits the type of the research.
Saunders et al (2009) compared the different levels or layers of the research process as being similar to the layers of the onion. Each of the five layers is integral to the successful research. These are

- Research philosophy
- Research approach
- Research strategy
- Time horizons
- Data collection methods

![Research Onion Diagram]

**Figure 8: Research onion**  
Source: Saunders et al; 2009

### 3.3 Research Philosophy

According to Saunders et al. (2011), research philosophy refers to the development of knowledge and the nature of that knowledge. They examine three way of thinking about research philosophy: epistemology, ontology and axiology. Each contains important differences which will influence the way in which the researcher think about the research process.
“Influence of Project Management Office”

Epistemology concerns what constitutes the acceptable knowledge in the field of study (Saunders et al., 2009). It is the way the knowledge is gained in its reality and assumptions about what can be called knowledge rather than belief. Epistemology answers the questions – how can knowledge of this reality be obtained? (Blaikie, 1993). Ontology, the theory of being, refers to assumptions connected with a particular approach to social enquiry, and answer the question – what is the nature of the reality to be investigated? (Blaikie, 1993) axiology refers to a branch of philosophy that studies judgement about value. (Saunders et al, 2007).

Saunders et al. (2007) continues that the research philosophy selected by the researcher depends on the way the researcher thinks about the development of knowledge. The first layer of the onion represents philosophy (figure 8). There are three main research philosophies identified by Saunders et al (2009) that typically apply to the business and management research. These are: positivism, interpretivism and realism.

**Positivism**

Walliman (2006) defines positivism as an application of the natural sciences to the study of social reality. Remenyi et al (1998 cited by Saunders et al, 2003) adds that the researcher in positivist approach assumes to be an independent of and neither affects nor is affected by subject of the research. Positivism assumes the only authentic knowledge based on the actual sense experience. Such knowledge can come from affirmation of theories through scientific method.

Generally, positivism approach tends to use the deductive approach which involves in developing a theory and subjecting it to strenuous testing such as the case of testing hypothesis. Gill and Johnson (2002 cited by Saunders et al, 2009) advocate that positivist researcher is likely to use a highly structured methodology in order to facilitate replication. In contrast to deductive approach, the researcher who use inductive approach involve in building theory based on the information derived from the results such as data collected from questionnaire and focus group.

On these grounds, the predominant epistemological position applied in this research is positivism, however other philosophical positions are also applied and they are analysed further in this section.
Interpretivism

Interpretivism is an epistemology that advocates that it is necessary for the researcher to understand differences between humans in the role as social actors (Saunders et al, 2011). Interpretivism is defined as the ‘the recognition that subjective meaning play a crucial role in the social actions’. Saunders et al (2009) suggests that the need to understand the true reality of the situation is at the heart of Interpretivism and therefore ‘disregarding the requirement to make generalisations that are synonymous with the positivist approach’.

Saunders et al (2007) advocates that an interpretivist perspective is highly appropriate in the case of business and management research where the research is being conducted in the field to investigate the organisational behaviour, marketing and human resource management.

3.4 Research Approach

Inductive

In inductive approach, the researcher would collect data and develop theory as a result of the data analysis. (Saunders et al, 2003) this approach is likely to be particularly concern with the context in which such events were talking place. Therefore the study of a small sample of subject is more appropriate in inductive approach than a large numbers as with the deductive approach.

Deductive

Saunders et al (2007) states that the deductive research approaches involve developing a theory that is subjected to a rigorous test. Bryman and bell (2007) maintains that deductive theory represents the commonest view of the nature of the relationship between theory and research. Robson (2002, cited by Saunders et al, 2009) list five sequential stages in the research process:

- Deducting hypothesis from the theory
- Expressing the hypothesis in operational terms
- Testing the operational hypothesis
- Examining the outcome of the enquiry
- Modifying theory in the light of findings

In this study, the researcher predominantly applied the positivist paradigm and used a deductive approach to prove or disapprove the hypothesis. As the researcher aims to collect
data from the relatively large population and analyse the influence of PMO on the project performance across IT industries, which is more appropriate for an Inductive approach than a deductive approach. According to Saunders et al, (2009), an inductive approach is used for more exploratory researches where as deductive approach is more focus on testing and proving the hypothesis which is the case of this research. With this theoretical consideration, the researcher has developed research hypothesis to bring direction, specificity and focus to this research in understanding the role of PMO and evaluating the impact of PMO on project performance from the project management perspective. The testing of the hypothesis will prove in satisfying aa the research objectives and ultimately in answering the research question.

3.5 Research Strategy
A research is normally classified by the research strategy that is used. Many commentators would agree that in student research work, the frequently used strategies are case studies, field experiments, surveys and archival methods. According to Jankowicz (2000), each strategy has its own advantages and disadvantages but the choice of a particular strategy is determined by the following:

- Nature and scope of topic and dissertation
- Sources of data the researcher is using
- Purpose the researcher has in gathering the data
- Degree of assumption in analyzing the data

In this research, the strategic question revolves around what project management office (PMO) can do, to enable success of IT projects. According to Marschan-Piekkari and Welch (2004), there should be a link between the type of data collected, the data collection process, the interpretation methods and the chosen strategy in any research process. Table 3.1 shows relevant situations for different strategies.
**Table 1- Relevant situations for different strategies**

**SOURCES: YIN (1994:6)**

<table>
<thead>
<tr>
<th>Strategy</th>
<th>form of research question</th>
<th>require control over behavioural events</th>
<th>focus on contemporary events</th>
</tr>
</thead>
<tbody>
<tr>
<td>Case study</td>
<td>How, why?</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td>Experiments</td>
<td>How, why?</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Surveys</td>
<td>Who, what, where, how many, how much?</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td>Archival analysis</td>
<td>Who, what, where, how many, how much?</td>
<td>No</td>
<td>Yes/no</td>
</tr>
<tr>
<td>History</td>
<td>How, why?</td>
<td>No</td>
<td>No</td>
</tr>
</tbody>
</table>

A case study is not appropriate as the research is not posing the when and how question. Also, because of the nature of IT projects, a single case study would have meant generalising events as applicable to different project setting. Although a multiple-case study would have given more robust conclusions, the researcher believes that the financial resources and time demands are beyond the means of a single student (yin, 1994). Experiments are argued to yield better and often less expensive data than most approaches (baker, 2001) but, the dynamic and complex nature of most IT problems are readily against the experimental approach which requires control of behavioural events. Archival analysis and histories were also not favoured because they lack focus on contemporary events, which is key to this study.

According to Baker (2001), survey approach should be used for “gathering information from (a sample of) respondents for the purpose of understanding and/or predicting some aspects of behaviour of the population of interest”. He believes that surveys are concerned with the following:

- Fact finding
- By asking questions
“Influence of Project Management Office”

- Of persons representative of the population on interest
- To determine attitudes and opinions; and
- To help understand and predict behaviour

Based on our strategic research question, the researcher is seeking to find the facts, by asking questions to a representative sample to determine attitudes and opinions in order to identify and explain complex relationships in finding the influence of project management office in managing IT projects for success. Therefore, the researcher has selected the survey strategy because it is most suitable research strategy for this study.

However, the researcher is aware of the pitfalls of survey study and is not taking the strategy at first glance. For example the accuracy of the data can be distorted if respondents give answers they think the researcher will want to hear (baker, 2001). The researcher may counteract this weakness by doing both a qualitative and quantitative surveys, to enable triangulation of the research result. “The principle is that if different research approach leads to the same conclusions our faith in the validity of those conclusions is increased”, said Partington (2002).

3.6 Research Choice
Saunders et al. (2009) suggests that quantitative and qualitative research choices are widely used in business and management research to differentiate both data collection techniques and data analysis procedures.

Saunders et al. (2009) recites Tashakkori and Teddlie (2003) mentioning two advantages associated with mixed methods of research. Different methods can be used for different purposes in a study. This enables the researcher confidence that he is addressing the most important issues. It enables triangulation wherein data can be triangulated against each of the data collection technique employed to get a satisfactory outcome.

In this research, a mixed method for data collection and analysis techniques is applied. The researcher’s choice is to use both qualitative and quantitative data collection techniques. The research consists of 2 stages of data collection:

Semi structured interview with 5 senior manager of PMO from well established organisations. This is to understand/explore the role of PMO and its benefits from management perspective. The inputs from the interview also assisted the researcher in designing survey questionnaire to collect data from wider PM community.
A self-administered survey questionnaire was carried to collect data/responses from project management community of the IT organisations. This provides quantitative data which the researcher analyse statistically to analyse the influence of PMO on the project performance.

The advantage of using the mixed method is that it enables ‘triangulation’ to take place (Saunders et al, 2009). When using two or more independent sources of data collection method in one study it helps to ensure that the data from one source is being verified with other data source. In this research, semi-structured interviews were valuable in triangulating data collected by a questionnaire.

**3.7 Time Horizons**

Two predominant time horizons have been identified, that of the cross-sectional (i.e. ‘snapshot’ time horizon) and the longitudinal (‘diary’ perspective) study (Saunders et al, 2009; Bryman and Bell, 2007). If the research is done as a ‘snapshot’ taken at a particular time then it is called cross-sectional research. In contrast to cross sectional research, longitudinal research is conducted as an event over a given period of time by maintaining a diary of events during the research. (Saunders et al, 2009). The researcher employed cross sectional method for this research. The research based on survey strategy for data collection and uses 2 methods- a) survey questionnaire and b) semi-structured interviews. The researcher will use both of these data collection methods at a particular time and hence considered to be a ‘snapshot’ or cross sectional time horizon. Brief explanations on time horizons are given below:

**Cross sectional**

Cross sectional method is usually carried out once and essentially represents a snapshot of particular event at a particular point in time (Sanders et al, 2009, Cooper and Schindler, 2000). Cross sectional studies often employ the survey strategy (Easterby-Smith et al, 2002, Robson 2002, Saunders et al, 2009).

**Longitudinal**

In contrast to cross sectional studies, longitudinal studies are developed over a period of time and therefore the main strengths of this type of research is that it has capacity to study change and development (Saunders et al, 2009). Bryman and Bell (2007) highlighted that this type of research is useful in providing data on processes and mechanism in organisation through which change is created. However, partly because of the time and cost involved, longitudinal design is relatively little used in business and management research.
### 3.8 Data Collection

According to Hair et al. (2003), survey data falls into two categories: interviewer-administered and self-completion. They believe that self-completion method include mail surveys and electronic surveys (through questionnaire), while interviewer-administered method include personal interviews (either face to face, telephone or computer dialogue). In Table 3.2 below, an overview of these two sources of evidence is presented together with their comparative strengths and weaknesses.

**TABLE 2- SOURCES OF EVIDENCE**

<table>
<thead>
<tr>
<th>Category</th>
<th>Sources of evidence</th>
<th>Strengths</th>
<th>Weaknesses</th>
</tr>
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</table>
| **Interviewer-administered** | interviews         | Feedback: instant feedback during the interview  
Insightful: they provide perceived casual interfaces  
Rapport: interviewer encouraged to create relaxed atmosphere for the interview  
Quality: fewer misunderstood questions and inappropriate responses | Bias: due to poorly constructed questions  
Response bias  
Inaccuracies: poor recall  
Reflexivity: interviewee gives what interviewer wants to hear |
| **Self-completion**    | questionnaires      | Costs: less expensive than interviews  
Skills: do not require a large staff of skilled interviews  
Administering: can be administered in large numbers all at one place and time  
Anonymity: it encourage more candid and honest responses  
Bias: lake of interviewer bias  
Pressure: less pressure on respondents | Control: loss of research control  
Non-responsive: no interviewer to encourage response  
Quality: on one to correct errors  
Slow: process to get research data |
Interviews

Hair et al (2003) believes that “an interview is where the researcher ‘speakers’ to the respondent directly, asking questions and recording answers”. They can vary from being highly unstructured to highly structured. According to Saunders et al (2009), structured interview questions are detailed and developed in advance of the interview usually with pre-recorded answers. Saunders believes that the opposite of structured interviews is the non-standardised interviews which include semi-structured interviews and unstructured interviews. In semi-structured interviews, a list of themes and questions are prepared in advance to guide the direction of the interview. Depending on the interviewee, some questions may be omitted or additional questions asked to help explore the research question (Saunders et al., 2003). On the other hand, Saunders et al. (2007) posits that unstructured interviews are informal and in-depth. There is no predetermined list of questions to guide direction of interview and normally this situation is useful in exploring a general area of interest.

The researcher found out that interview gave an opportunity to gain practical industry-based knowledge that was not available through secondary research. Such knowledge helped the researcher to fulfil the purpose of this study and to be able to answer the research question. The interviews in this study were face-to-face and interviewees were sent sample interview questions in advance of the interviews in order for them to prepare for the interview. According to Saunders et al. (2009), tape-recording interview has associated benefits such as getting a permanent record that can be re-listened to or used by other at a later date and also allows the interviewer to concentrate on questioning and listening. The interviewer was aware of the drawbacks of tape-recording interviews, such as the additional time required to transcribe the tape before analyzing the data and possibility of a technical problem. Therefore the interviewer also took notes during the interviews and used the tape record as a source of confirming the notes taken and showing what may have been missed.

Questionnaire

As defined by hair et al. (2003), “a questionnaire is a predetermined set of question designed to capture data from respondents”. In this study, a written questionnaire will be considered more appropriate to help in triangulating the research data from interviews. Triangulation ensures “that the data are telling you what you think they are telling to you” (Saunders et al. 2003). The majority of the questions will be designed or refined in light of the semi-
structured interviews. Hair et al. (2003) recommends that the general design of the questionnaire should be consistent to avoid confusion and to ensure accuracy in the data. Therefore, most of the questions were statements and respondents were asked to indicate on a 4-point scale whether they strongly agree, agree, disagree or strongly disagree to each of the statements. Prior to the issue of the questionnaire, the questions were pre-coded and different codes allocated to identify various responses categories for easy of recording findings and analysis.

The researcher also piloted the questionnaire as well as referring it to the dissertation supervisor to enable clarification of questions before sending it out and to minimise the errors. To mitigate the weaknesses of non-responses, loss of control and slow responses, Hair et al. (2003) suggests that the researcher should make preliminary contacts, provide responses deadline and send follow-up reminders. The initial contacts were asked to circulate the questionnaire to a minimum number of project managers and in some cases provided a list of respondents that were used by the researcher to send the questionnaire directly. In order to increase the response rate, the researcher used an approach suggested by Lehmann et al., (1998), called “drop-off, call-back”. In this approach the researcher dropped-off some questionnaire to identified respondents and then returned to pick them up at an agreed later stage.

3.8.1 Secondary Data Collection
Saunders et al (2011) acclaim that Secondary Data can be a great tool to compare the findings of the primary data in a way that the researcher can place the primary findings within a more general context and triangulate it. Secondary data collection method will be books, journals, company reports, previous surveys as literature review. These all were as secondary source of information considered for this research.

3.8.2 Primary Data Collection
Self-Administered Questionnaires and mini groups will be used by the researcher for collecting the primary data. Bilateral communication, information exchange and pilot interviews with the project manager will facilitate the researchers to gain initial sight of issues and are helpful in fostering research questions.

The semi-structured interviews because this format allows gaining genuine understanding of the views of interviewees. With a more unstructured approach the researchers will less likely
to come at participants’ word views with presuppositions or expectations and are more likely to see things as the participants see them.

3.8.3 Techniques for Data Analysis

The way in which data will be analysed is very important for any research study. For this study, it will involve the analysis of interviews conducted as well as the review of the returned questionnaires. These multiple sources of evidence (i.e. triangulation) are what add to study’s validity (yin, 1994).

There are software’s which provide considerably more opportunity for interpreting and understanding qualitative data than a manual system. However the researcher believes that computer-based processes may detract from creative researcher input. As stated by Richards (1995) in Marschan-Piekkari and Welch (2004) “that analysis is ultimately the responsibility of the researcher, and the software is primarily a tool for assisting the process”. It was with this belief that the researcher wanted to retain the responsibility and advantages of increased researcher control by avoiding a sometimes lengthy process of preparing that data and entering into a software package. The researcher also declined from using software packages due to lack of training on the use of such software.

In doing qualitative analysis, the researcher will follow the advice from miles and Huberman (1994) of three concurrent flows of activity. These are:

- Data reduction
- Data display
- Conclusion drawing and verification

In Data collection the researcher selected, organised, summarised and paraphrased data in a way that allowed for conclusions to be drawn and verified. The researcher was able to make decisions about which data chunks provided initial focus.

Data display was the second major activity which the researcher went through. This involved taking the reduced data and displaying it in organised, compressed way so that conclusions could be drawn easily. Miles and Huberman (1994) believe that good data displays are “a major avenue” to valid qualitative analysis. In displaying the data, the researcher managed to further reduce it so that conclusions could be drawn.
Conclusions drawing and verification was the final analytical activity for the researcher. As suggested by Miles and Hunerman (1994), the researcher achieved this by combining patterns and explanations through cross tabulation of research variables. It was at this stage that the researcher was able to derive meaning from the data and to state conclusions for this research.

In order to analyze quantitative data collected from questionnaire, the researcher used the SPSS software package. The reason for using this package for quantitative data analysis was that the researcher has done his engineering in Information Technology (IT) so using software would not be difficult. The researcher had designed the questionnaire with all closed questions so that respondents were restricted to a set of answers to enable easier analysis.

3.9 Population and Sample
According to Bryman and Bell (2007) sampling techniques are relevant in research work, where it is not possible to survey the entire population due to time constraints or limiting resources. In most cases, researchers are able to draw conclusions about the entire population based on the selected sample. However, “in order to be able to generalise your findings from your sample to the population from which it was selected, the sample must be representative” (Bryman and Bell, 2007). In this study, it was highly unlikely that the researcher was going to survey the entire population due to time and resources constraints, therefore sampling was considered necessary.

According to Hair et al. (2003), a sampling process involves the following steps

- Defining the target population
- Choosing the sampling frame
- Selecting the sampling methods
- Determining the sample size
- Implementing the sample plan

When defining the target population, Hair et al. (2003) believes that the research objectives and scope of the study are critical. They consider a target population as a complete group of objects or elements that possess relevant information the research is designed to collect. The criteria used to selection the target population for this research are;

- Individuals in IT project management
- For companies within the Irish software industry
“A sampling frame is a comprehensive list of the elements from which the sample is drawn” (Hair et al, 2003). The sampling frame for this study is a list of IT consulting companies drawn from the Yellow pages directories in Ireland. The top 5 IT software companies based on result shown in Yellow pages Ireland for technology companies 2011 accessed on 08/07/2011 is regarded as the sampling unit. According to hair et al. (2003), “elements or objects available for selection during sampling process are known as the sampling unit”.

Bryman and Bell (2007) believes that the selection of a sampling method is determined by various reasons. These include the scope and objectives of the study, time and budget available. The two categories of sampling are probability and non-probability. According to hair et al. (2003), where there is need to generalise findings from the sample to the population, probability sampling is used and non-probability sampling where there is not.

Therefore, based on the exploratory methodological stance in this research, hair et al. (2003) argues that such stance is suitable for non-probability sampling. Considering our research strategy which is both qualitative and quantitative, the sampling techniques selected for this study are snowball sampling for qualitative and stratified random sampling for quantitative.

Snowball sampling “is one where the initial respondents typically are chosen using probability methods” (Hair et al. (2003). In snowball sampling, the initial respondents are used by the researcher to establish relevant additional contacts. According to Saunders et al. (2011) this process is continued until the required sample size is reached. In this study, initial contacts were identified, and research access requested using the letters in appendix 1 and appendix 2. The contacts were than interviewed and requested to provide further contacts within the target population. These initials contacts were also asked to forward questionnaire to other IT project managers within their organisations. The researcher found out that this method was an effective way to collect data quickly and inexpensively.

Stratified random sampling is a technique that “partitions the target population into homogeneous sub-groups that are distinct and non-overlapping, called strata” (hair et al. (2003). This technique was used to divide the sampling unit into a number of non-overlapping sub-groups from which a random sample was drawn. The initial contacts were asked to select at random individuals from these sub-groupings for questionnaire circulation. The researcher was confident with selected sample because it was representative and reflected the characteristics of the overall population.
In the case of this research, collecting data from the entire population was too large and impractical. The samples of 90 respondents who work in project management field/or the respondents who have experience working with PMO were selected. This sample was selected from the population of the employee working on projects in different organisations from various industries. The researcher will request to complete questionnaire from the respondents who are actively working on project and programme management field. The researcher will publish web based questionnaire only to those websites that are referred mainly by the people working in the project management area. The researcher will put the posting on many project management community web based forums with the link requesting to respond to the questionnaire survey, so that a large number of responses can be gathered. The majority of respondents will be project managers, PMO staff and employees related to project management area. According to hair et al. (2003), “elements or objects available for selection during sampling process are known as the sampling unit”.

Therefore, based on the exploratory methodological stance in this research, hair et al. (2003) argues that such stance is suitable for non-probability sampling. Considering our research strategy which is both qualitative and quantitative, the sampling techniques selected for this study are snowball sampling for qualitative and stratified random sampling for quantitative.

Snowball sampling “is one where the initial respondents typically are chosen using probability methods” (hair et al. (2003)). In snowball sampling, the initial respondents are used by the researcher to establish relevant additional contacts. According to Saunders et al (2009) this process is continued until the required sample size is reached. In this study, initial context were identified, and research access requested using the letters. The contacts will be interviewed and the request will be made further to provide the contacts within the target population. There initial contacts will also be asked to forward questionnaire to other IT project managers within their organisations. The researcher is sure that this method will be effective way to collect data quickly and inexpensively.

3.10 Research Ethics

Research ethics means ensuring the design of your research is methodology sound and morally defensible to all those involved (Saunders et. al., 2009). It is clear that ethics is something that must be taken in an account during your research process. However focusing on the data collection element (Saunders et. al., 2007), this states that the participant has given permission on the information provided by the researcher, if this information will be
changed it will be considered as covert and unethical behaviour. The participant must have the option to withdraw at any time which must be respected by the researcher (Saunders et. al., 2003).

Objectivity is another ethical issue which can be considered. This relates to the collecting data in an accurate and precise way that will not compromise the data and also recording the data without excess subjectivity (Saunders et. al., 2009).

3.11 Research Limitations
According to Bryman and Bell (2007), the research findings from the selected population sample can be generalised only to the population from which that sample was taken. Hence, this is an inherent limitation to any research of this kind and is not particular to the methodology used. So, a large scale research covering enlargement of population sample across several industry sectors would be more representative and would also increase the quality of the study.

In context to the semi structured interviews conducted for this research, it is necessary to consider the level of bias during the process (Hinds, 2000). The researcher took every precaution in recording the responses as accurately as possible; the perception during this period might have some interference in analysing the data collected during the interviews. Despite these limitations, this study would have valuable contributions in extending the literature in the programme management office discipline.
Chapter 4:

Data Analysis/ Findings
4. DATA ANALYSIS AND FINDINGS
This chapter outlines the Data analysis and reports on significant findings. Data analysis considers the data collected from both sources – primary and secondary data sources. The secondary data source, i.e. literature review, is already illustrated in chapter 2. This secondary research data is referred in conjunction with the primary sources of data collected to report on the research findings.

There are two research methods applied to gather primary data in this research:

- Qualitative research method (semi-structured interviews)
- Quantitative research method (survey questionnaire)

4.1 qualitative research method
The qualitative research method employed for this research was semi-structured interviews. The researcher carried out 5 interviews with senior managers specifically working in PMO from five separate organisations. Out of five interviews three of them were face-to-face interviews and 1 interview was conducted through web based responses and another interview could take place over the telephone.

The researcher also distributed 80 questionnaire and 65 of them were returned. This likelihood of non-response from questionnaire was anticipated. However, based on the classification of questionnaire response rates, the researcher is still confident with a 75% response rate.

The researcher took notes during each interview, analysed the responses and after making some comparison with the responses, summarised the findings in this section. Hinds (2000) warn about the problem of ‘biases’ during interviews and suggest that the interviewer should accurately record the interview responses of what the interviewee said and not what the interviewer thinks should have been said.

The purpose of these was to understand senior management’s view point about the PMO, its role, benefits and how PMO impact on client satisfaction in organisational project management competence and project performance in IT industries. Saunders et al (2011) suggests that the qualitative research using semi-structured interviews cannot be used to make generalisation about the entire population that is based on a small and unrepresentative number of cases. However, these semi-structured interviews along the critical literature
review supplied sufficient information to the researcher to gain understanding about the PMO and its impact on the organisation especially in IT industry.

4.2 Interview topics and responses

1. How much experience do you have working with PMO?

Respondent Mr. A)........................over 7 years

Respondent Mr. B).......................over 5 years

Respondent Mr. C)......................over 8 years

Respondent Mr. D)......................around 3 years

Respondent Mr. E)......................around 10 years

2. How important role PMO plays in IT organisation?

Respondent A)

Role of PMO depends from organisation to organisation and projects to projects. In implementation of project management methodologies, PMO does play a very important role. PMO acts as a goal keeper in project reviews and assists project teams, enabling to follow standard template and procedures.

Respondent B)

PMO is important in managing change and facilitating standards and methodologies. The role of our PMO is to facilitate common practices. Controlling project knowledge and making sure that the standard project methodologies are used across the entire organisation.

Standardised project templates and procedures should be made easily available when they are needed.

Respondent C)

I would say the most important role of our PMO is to facilitate PM standards and methodological across organisation. It would not only make our team to speak in common language of project management but also help speed-up the process. PMO should act as a supporting function to projects which should ultimately support organisational strategies.
Respondent D)

PMO should not be looked down as office it should be as if the standard throughout the organisation. It plays many important role in my organisation basically with the help of PMO we are able to implement our strategic goals with integration. It assists in decision making throughout our organisation and can show us the roadmap for successful accomplishment of the project.

Respondent E)

In our organisation PMO behaves as a project management repository with ability to handle multiple projects at a time. Now days every organisation tries to behave as manage by projects system. So that is why now days PMO can be multi utility unit. Traditionally it is responsible for execution of the projects.

3. How do PMO assist in increasing successful project delivery especially in IT industry?

Respondent A)

The most important role of PMO in our organisation is to maintain a single project management methodology across entire organisation. Respondent A further discussed about how PMO ensures all the project team members, sponsors and stakeholders area aligned to the same project management methodology and practices. That makes everyone involved in the project well aware of the projects show-stoppers such as scope creep, risk management plans and act together to resolve any such issues. By learning how to overcome the project pitfalls is certainly the way towards project success.

Respondent B)

The main focus of having PMO is to provide single point of contact for project knowledge. Anyone in the organisation with questions about past projects, existing projects or even new opportunities can refer to the PMO as a single point of contact for information. PMO in turn uses its broad network of expertise in project & programme management to find the solution. Individual team members generally do not have such a broad network or contacts and PMO can certainly help project teams in this way. PMO facilitate common methodology, tools and process across organisation, which ultimately benefit improving project performance.
Respondent C)

PMO increases success rate by improving people, practices and systems. They provide training and development to project teams. Skills are important for any project success. We are a project-based organisation and for our company to become successful we have to improve our project management maturity level. PMO helps to achieve this. The PMO should set the standards and methodologies for managing projects at tactical-level and at the same time PMO should be accountable for managing projects as strategic-level.

Respondent D)

During the interview with the managers they said that PM knowledge is the very first issue they look during the hiring of the project team/members or even a PMI certification. May organisations do run the training programme in project management area. This helps them in managing and coordinating the things very well. PMO could help in leadership issue or technical issue or communication. For years IT projects have struggled to complete in time and within budget.

Respondent E)

PMO can help in many ways by providing the composition needed to standardise project management practices and assist IT project portfolio management, by determining methodologies for repeatable processes in IT organisation. PMO can help IT industries in delivering project on time. Establishment of staff who can manage multiple projects that are related to infrastructure technologies or desktop applications and allocating resources accordingly.

4. How is PMO accountable / responsible for the project success?

Respondent A)

PMO should be accountable for increasing in project management capability in the organisation. Project managers should be accountable for individual projects. PMOs should measure the project progress, report on metrics and assist project managers and teams in improving project performance.

Respondent b)
PMO is a facilitating organisational entity for project management practices. Its function is to assist project management teams. PMO should be autonomous and accountable for serving project management competency. PMO directs project managers, so indirectly it directs projects, but PMO should not be responsible for individual projects. PMO boost efficiency in organisation in terms of IT efficiency, budget, improved delivery system etc.

Respondent c)

PMO should be autonomous body. It should be reviewed as an internal consulting group and responsible for serving project trams and senior management in achieving organisational objects. However, I would like to point out that PMOs should not act as ‘project police’. PMOs should not act as auditors to audit any projects as they have to maintain good relation with entire PM community within organisation. Project managers should be responsible for individual projects and not PMO.

Respondent d)

PMO performs many activities but successful PMO assures the core activities as

1. Improves project management throughout the organisation
2. Standardisation of project management practices and methodologies.
3. Improves communication all over the organisation so the senior management & stake holder know project status.
4. Successful PMO will improve communication & decision making so that project can achieve strategic objectives.

Respondent e)

During the interview with one of the manager he said that resources do play a crucial role in IT organisations. PMO methodologies and methods help them in findings the things required. PMO some times behave as an integrator. It improves organisation effectiveness and efficiency in project management, thereby justifying its exisance. PMO can be involved in identifying problems & solution to those problems, updating stakeholder, it can also support in on going improvement in the projects.

5. What advice would you give for IT companies considering or starting a PMO?

Respondent a)
Do not attempt to improve every aspect of the project management at once. There are many tools and sophisticated systems available in the market, but do not go and start buying those immediately. First start with only few PMO activities, then improve and develop new functions to support the projects. PMO’s structure should be compatible with the company’s culture.

Respondent b)

Organisation structure will need to change to accommodate the new PMO structure. Organisational change will be required to become a project-based organisation first. Communicate clear roles and responsibilities on what the PMO will not do. Importantly, the PMO concept must be well sold to top management prior to starting or considering a PMO.

Respondent c)

Start with small steps, and then build up from here. Start with less PMO activities and allow some time for PM0 to establish in the organisation. Begin to create project-based culture in the organisation. Don’t solely be dependent of PMO success but involve PMO throughout project life cycle to improve project success rate.

Respondent d)

For the companies considering PMO there should be clear picture in mind related to the things requires and their accomplishments. Explore the critical activities at the organisation. What are the cracks in the current system and then decide if a PMO is the appropriate entity to take them on. Companies should also maintain effective centralised project functions and project administration activities. PMO success depends on integrated whole.

Respondent e)

According to PMI the ratio of informal project activities is going down as soon as the people are getting aware of it. Informal approach cannot take you to meet the market demands or goals. Now the need for a project office or programme management office so called PMO becomes more compelling. While implementing PMO communication, commitment and coordination are the areas one need to pay attention.

6. What other types of information about client’s role might be useful when evaluating project success metrics?
Respondent a)

I believe that the level of client participation in important at the early stages of a project, in setting-up the business case or objectives and clarifying business requirement that are used to develop the product. If the business requirements are not accurate, the consultant can develop a wrong solution that will not be accepted. The interview also believes that the role of the clients is also important at the later stages of the project to implement, market and support of the product.

Respondent b)

The role of the client is very important in agreeing on the key project metrics. The interviewee said that the client’s role is also important when discussing and agreeing on any project variances because any project variance can result in additional project costs to the client. The interviewee also said that the client’s role is important when evaluating how they (i.e. the client) are using the product and how satisfied they are from using the product. With the client you can also share lessons learned from the project and possibly actions for future improvement.

Respondent c)

For any IT project to be successful, you need a clear business case and a strong business leader who believes in the business case and brings the organisation along with the consultants. The interviewee also said that client come with different expectations from a project. As a consultant you need to be able to manage these expectations by communicating project benefits and any change impacts before the project is implemented.

Respondent d)

The important role of client is to make the consultant aware of the client’s organisation culture or structure and its politics. According to the interviewee, a consultant should be able to understand these because they can work against a project if not incorporated. The interviewee also agrees with interviewee c that the client’s need to have “project champion” who can spearhead the projects to success.

Respondent e)
One needs to know how the organisation ranks the success metrics. The interviewee said that in some organisational schedule will be more important than cost. Knowing these in advance can mean that you are in a better position to manage the client’s expectations.

7. Please explain how PMO in the IT organisation might influence the interpretation of project success?

Respondent a)

The interviewee A is a project manager in systems implementation projects. The interviewee said that the project’s success is not about the completion of the task on time and on budget because priorities and scope can change during the project life cycle. The interviewee believes that the PMO experience gained over the years helps one to understand different success metrics from various stakeholders.

Respondent b)

Being a senior project manager with over 10 years experience in software developments projects, the interviewee believes that project experience (gained with PMO) increases the ability to clearly understand the customer’s goals and requirements and delivering what the customers wants.

Respondent c)

Interviewee c is a senior partner in project management with over 20 years of IT systems development and implementation. The interviewee agrees with interviewee B that a successful project is not just a technically sound solution delivered on time and budget but should be a solution that does not alienate the customer. This belief has gained through project experience according to interviewee.

Respondent d)

Being a senior project manager in implantation and support projects, the interviewee believes that the knowledge sharing and the methodologies gained by setting PMO in organisation helps in successful projects delivery. In IT organisation sometimes projects are measured from two aspects these could be commercial (how profitable the project is) and customer’s
side (how satisfied the customer is by the product). The interviewee adds that a successful project is one that you can use as reference to win more work.

Respondent e)

The interviewee said that the PMO governance experience gained over the years helps one to focus on the important project metrics. The interviewee also said that such experience helps a project manager to “home-in” on key issues, risks and milestone that might impact progress.

4.3 Questionnaire findings

The questionnaire results were primarily analysed for frequency analysis for each of the 11 questions. Total 65 respondents took part in the survey of the questionnaire.

All respondents were from IT industry. The graph for each question provides a synopsis for survey results in terms of frequency. Comparisons were also made to understand the impact of PMO in IT organisations.
When the respondents were asked about the project communication management in their organisation out of 65 respondents, 13 (20.0%) were agree with the fact that the communication level in their organisation was good. 26 (40.0%) respondent said that they were strongly agree with the communication level PMO bought to their organisation. 17 (26.2) were disagree with the level of communication during the projects. Out of 65 respondents 9 (13.8) were strongly disagree with the project communication part in the organisation. Communication could be dependent on the organisation culture, ethics of the work culture environment. So results were mixed on the communication question in the survey questionnaire.

![Figure 9: Project Communication Management](image-url)
Every project should have adequate resource throughout the project life cycle or in the development of the project. When asked respondent about the adequate resources being managed, researcher got exciting responses for the role PMO plays in their organisation in managing adequate resources. 36 out of 65 that is (55.4%) respondents were strongly agree, 10 (15.4) were disagree with the resources question. 11 (16.9%) were agree and 8 (12.3%) were strongly disagree with the resources question in their organisation. But majority of the respondents were strongly agree with the resources they were provided. During the interview with one of the manager he said that resources do play a crucial role in IT organisations. PMO methodologies and methods help them in findings the things required.

Figure 10
“Influence of Project Management Office”

“If anything can go wrong it will go wrong”. Identifying risks is very crucial activity during the project life cycle phase. In achieving project success or in fulfilling high customer satisfaction risk should be well identified. Researcher asked respondents about the project risks well managed in their organisation out of 65 respondents 29 (44.6%) respondents were strongly agree with their risk management and 13 (20.0%) were agree, again 13 (20.0%) disagreed and 10 (14.4%) were strongly disagree with the issue of risk management in their organisation. Here researcher noticed that PMO do help in carrying risk management to the project in IT organisations.
Good Project planning is essential in IT organisations because the projects goes through different phases eg.

- Conception stage
- Operation stage
- Definition stage
- Execution stage

So well planned projects with clients often tend to provide customer satisfaction with successful achievement projects. Out of 65 respondents 24 (36.9%) respondents were satisfied with the project planning they had in their organisation. With them 17 (26.2%) said they agree with whatever planning they had in their organisation. 7 (10.8%) were strongly disagree with the project plans and 17 (26.2%) were disagreeing on the plan or the projects. Project management methodologies do set standard for planning. If Planning is good rest goes on the execution, if planning is not good then the execution couldn’t do much. So having PMO in IT organisation does have good impact on the project success by identifying risks.

Figure 12
Projects cost is very and most important thing in making projects success. In 1994 cost overrun rate for projects was 180%. In 2004 it came down to 56% according to Standish Group’s CHAOS report cited by Schwalbe 2010. Out of 65 respondents 34 (52.3%) respondents strongly agree with the cost of the projects. 12 (18.5%) disagree with projects cost and only 8 (12.3%) strongly disagree despite of 11 (16.9%) were agree with the cost of the projects. Cost overrun is the major problem in IT organisation. To estimate the right cost of the IT projects PMO standards and methodologies help in estimation the right cost to make projects successful.
When the respondents were asked to give their feedback on quality management on the projects, feedback was unanimous on the quality issues. 39 (60%) strongly agree with the quality work that is imposed with the help of PMO. 10 (15.4%) said they do not have any issue with quality. 10 (15.4%) were disagree and 6 (9.2%) were strongly disagree with the quality management standard in their respective organisation. Now day’s quality of the projects can satisfy clients or their expectations. “Professional certification is an important factor in recognizing and ensuring quality in a profession”, (Schwalbe, 2010). Setting very good quality standards will result in satisfaction of the clients, which will bring them again and again. Setting quality standard is something brought by PMO. PMO methods have strong focus on quality standard. So 60% respondents were unanimous on the quality standards in their organisation with the help of PMO.

Figure 14
When respondents were asked to comment on the PM knowledge and skills there were mixed comments. During the interview with the managers they said that PM knowledge is the very first issue they look during the hiring of the project team/members or even a PMI certification. Having a sound knowledge about PM standards and methodologies will provide them edge over others. 24 (36.9%) were strongly agree over the PM knowledge topic with that 18 (27.7%) respondents were agree with the current PM knowledge and methodologies. Out of 65 respondents 14 (21.5%) were disagree and 9 (13.8%) said that they were strongly disagree. PMO in IT organisation insist them to have PM knowledge and skills. This knowledge brings them to use best practice in making project successful.
While examining the project scope being managed in the IT organisation, the researcher analysed responses from the 65 respondents and found that 35 (53.8%) were strongly agree with the scope management in their organisation. 16 (24.6%) respondents disagree and 13 (20.%) were agree. Noticeable fact was that only 1 (1.5%) respondent was strongly disagree with the scope statement in his respective organisation. The figure clearly shows that PMO methodologies are helping in figuring out scope statement of the project clearly. According to shwalbe (2010) one of the most important and most difficult aspects of project management, therefore, is defining the scope of a project. Scope generally refers to all the work involved in creating the product of the project and the processes used to create them.
When asked respondent to rank how project schedule are being managed in their organisations, the researcher received mixed responses on this question. Project schedule management is another project performance indicator. Especially in IT projects schedule is given prime importance. Out of 65 respondents 22 (33.8%) respondent were strongly agree. 19 (29.2%) were agree and 14 (21.5) were strongly disagreeing with the schedule of the projects being managed in their organisation. 10 (15.4%) respondents were disagree on this issue. The researcher had noticed that the schedule management is well managed in the IT organisation by looking at the percentages respondents answered in agree and in strongly agree sections.

Figure 17
The success of many information technology projects that use outside resources is often due to good project procurement management (Schwalbe, 2010). Procurement is the foremost thing that any IT organisation has to do effectively. Without good procurement means no projects in pocket. So procurement plays a crucial role in IT organisations to keep the balance sheet on the track and on positive node. Ranking the survey result answers was unanimous like 35 (53.8%) respondents strongly agreed which is more than 50%. 17 (26.2%) respondents were agree and 8 (12.3) were disagree. Only 5 (7.7%) respondents were strongly disagreeing on the procurement subject. This shows that PMO plays critical role in project procurement management in the IT organisation where every project comes through procurement which they have to have.
Repetitive success can come through only when there is complete customer satisfaction. It takes a lot to satisfy the customer if the organisation is product based. Especially the IT companies because the end product has to desirable according to the customer. Customer satisfaction is the penultimate performance indicator for any project success. If customer is satisfied with the work done or the product, then there is likely chances of achieving repeat business from that customer/increasing reference ability. Similarly, repetitive project success shows a high level of maturity of project management organisation. When researcher asked respondents about the question 21 (32.3%) respondents were strongly agreed. 17 (26.2%) were agree and 19 (29.2%) ranked as disagree. Only 8 (12.3%) respondents were strongly disagreeing with whether the customer satisfaction can deliver repetitive success in their organisation.

Knowledge management such as achieving project records/reports, lessons learned is an important activity of PMO. These project assets can be reused for new projects and hence can provide a significant value to the projects, speed the process, avoid previous failures and ultimately repeat the project success.

Figure 19
Chapter 5:

Conclusion and Recommendations
5 CONCLUSIONS AND RECOMMENDATIONS

5.1 Conclusion

This chapter contains the conclusion and the recommendations regarding the findings of this study. Purpose of this study is to summarise the theoretical implications that are deducted from the combination of literature review, qualitative and quantitative research findings in relation to the research question. At the heart of 21st century information revolution is the fact that management and business now depends on technology for a day-to-day operations as never before. There is a very strong belief that IT projects can significantly improve existing standards, procedures and processes, thereby increasing efficiency and effectiveness of organisation. This suggests that IT projects should enable organisations to work smarter and not harder.

The objective of this research was to gain a better understanding of PMO and examine its impact on project delivery in IT industry. This research purpose has been achieved by answering the research question and satisfying all the stated objectives.

Characteristics of IT project success

Schwalbe (2010) says that the factor affecting the success of information technology projects is the organization’s commitment to information technology in general. Then he further continues that the Information technology project managers work best in an environment in which top management values information technology.

Many will agree with by stating that IT project should be measured from the consultant’s point of view and the consultant’s point of view. They also say that this measurement should go beyond project implementation to the measurement of client use and satisfaction. From a consultant’s point of view a project delivered on time and on budget is successful because budget and schedule are easily quantifiable. However, from a client’s point of view it is much more than a “technically sound” solution delivered on time and on budget because priorities and scope can change during the project life cycle. Therefore, it is how you meet the project’s critical success factor and how the business client is satisfied by the product. The quality of project output was the most important factor useful when measuring IT project success.
Client’s role in evaluating project success

Funding and Burgman (2003) acknowledges the role of client in a project in that it helps the consultant in developing a product that will meet or exceed their expectations. For a project to be successful you need a clear business case (i.e. the reason why the organisation will benefit from the project) and a strong and respected “project champion” (i.e. project leader from the client) who believes in the business case and brings the organisation along with consultants from start to finish. This leader should be effectively delegate project responsibilities and to sell the “change management story” (i.e. the anticipated benefits from the project and the change impacts) to the whole organisation.

Full engagement from clients helps in two ways: the clarification of the requirement at the earlier stages of the project and the validation that the requirement were met by the project output, at the later stages of the project. This is in line with Hoch et al (2000) that involving the clients clarifies the requirements, prevents extensive rework and unnecessary “gold-plating” during the course of the project (i.e. correction of program mistakes that could have been avoided by clarification of gaps in requirements). Full participation from clients helps the consultants in managing the client’s expectations by agreeing on key metrics and communicating project benefits, change impacts and jointly managing project risks. They also believe that you can share lessons learned with having PMO department from projects with possible actions for future improvements in a participative IT project environment. When one work together as a partnership, you are made aware of the client’s organisational culture and its politics that are important when evaluating project success metrics.

However, client participation is an ingredient for success; some clients will take a step-back by overly committing the consultant. This can lead to project failure. Participative environments call for the clarification of roles and expectations from both the consultants and the clients, right from the start of a project. There is a strong belief that the client’s role in evaluating project success is influenced by their (i.e. client’s) level of participation and commitment to the project across all stages in the project life cycle. This fits with what Senge (1990) stated about the importance of project collaboration. Scheduling project meetings with clients is an effective way of communication that can help in resolving project conflicts.
Influence of PMO in IT project success

The importance of PMO in IT projects success is accepted by managers across the organisation, where it is the junior level or the senior level. Top management particularly emphasises on the role and function PMO can deliver to make the IT projects successful. PMO impact is significant in customer satisfaction, team’s Project Management knowledge, and projects strategic alignment, successful development of the project plans, communications, and risks management and at the last quality of the projects. The success of many information technology projects that use outside resources is often due to good project management (Schwalbe, 2010). Majority of the current implementations of PMO are mainly focused on maintaining PM standards and methodology, project status reporting in line with the business objectives, and customer management and providing project management training to the staff. It is clear that an effective programme management office (PMO) is an important and an integral contributor towards successful project delivery.

5.2 Limitation of the research

Although this study finds interesting facts in project management area, it becomes very necessary to talk about the few limitations of the conducted study.

As this study was mainly on IT industry so respondents of the questionnaire survey were from IT sector; the data collected was to some degree partial to this portion of the population. According to Bryman and bell (2007), the research findings from the selected population sample can be generalised only to the population from which that sample was taken. Hence, this is an intrinsic limitation to any research of this kind and is not particular to the methodology used. So, a large scale research covering enlargement of population sample across several industry sectors would be more representative and would also increase the quality of the study with the literature.

In context to the semi-structured interviews conducted for this research, it is necessary to consider the level of bias during the process (Hinds, 2000).

The researcher has taken every possible precaution in taking down the responses precisely and accurately. With regards to these many limitations this study could be extending the literature in project management field.
5.3 Recommendations
Comparison of the project success depends on how one measures the success because every project is unique. The size of the population is very limited so, it is recommended to utilise a larger scale sample study from all industry sectors. This would allow for greater reliability and improved generalisations to be made based on the findings. Another interesting approach would be to focus on two or three different industries and analyse a large enough data sample from the selected industry sectors to allow comparisons between them. Because of the intricacies of this research topic, a deeper investigation through the research of a larger population sample is recommended.

Although this study is based on IT industry apart from this study there should be one in which the role of PMO is analysed in every industry from manufacturing to retail and to everything that is possible.

PMO do help in making projects successful. This is accepted by all the managerial members. Sometimes the success also depends on the internal environment such as strategies, structures, politics and cultures.

A further research to evaluate the value of PMO with the organisational context- culture, strategies etc would be an interesting proposition.
Chapter 6:

Reflection on learning
6 REFLECTION ON LEARNING

“I see and I forget, I hear and I remember, I do and I understand.”

“Learning is a process as well as an outcome” Zuber-Skerritt, 1992.)

Learning style is defined as the way each learner begins to concentrate on, process and retain new and difficult information (Dunn et al., 1994, p.2; cited by Bostrom,l and Lassen, L.M, 2006). Learning process makes you to stop and think what you have learned, not only you even others have learn. It is to enlighten what has been learnt or experienced and provides a basis for future action (Raelin, 2008).

Kolb (1984) believe that “the learning process must be reimbued with texture and feeling of human experiences shared and interpreted through dialogue with one another”. For example if you are learning to drive, the mistakes you made in the first lesion will be practised and therefore better in the second lesion.

This chapter focuses on how the MBA-Project Management course has added value to my knowledge and how it has provided my learning with personal development information and transferable skills which can be applied in today’s business environment. This section would also reflect the new competencies developed throughout the completion of the course.

“An understanding of learning style is a necessary component in the ground work of an emancipator pedagogy” (Fielding 1994).

6.1 Learning styles

David kolb (1984) found that the four combinations of perceiving and processing determine the four learning styles. According to kolb, the learning cycle involves four processes that must be present for learning to occur:

Four learning cycles

The experiment, like the concentrate experience, takes a handle-on route to see if their ideas will work, whilst the reflective observers prefer to watch and think to work things out.
Figure 24: Kolb’s Learning Styles (Source: Concept David Kolb, adaptation and design Alan Chapman (2006))

**Convergers (abstract conceptualization/active experimenter)**

Convergers think about things and then try out their ideas to see if they work in practice. They like to ask ‘how’ about a situation, understanding how things work in practice. They like facts and will seek to make things efficient by making small and careful changes.

They prefer to work by themselves, thinking carefully and acting independently. They learn through interaction and computer-based learning is more effective with them than other methods.

**Accommodators (concrete experience/active experimenter)**

Accommodators have the most hands-on approach, with a strong preference for doing rather than thinking. They like to ask ‘what if?’ and ‘why not?’ to support their action-first approach. They do not like routine and will take creative risks to see what happens.

They like to explore complexity by direct interaction and learn better by themselves than with other people. As might be expected, they like hands-on and practical learning rather than lectures.

**Divergers (concrete experience/reflective observer)**
Divergers take experiences and think deeply about them, thus diverging from a single experience to multiple possibilities in terms of what this might mean. They like to ask ‘why’, and will start from detail to constructively work up to the big picture.

They enjoy participating and working with others but they like a calm ship and fret over conflicts. They are generally influenced by other people and like to receive constructive feedback. They like to learn via logical instruction or handle-one exploration with conversation that lead to discovery.

**Assimilators (abstract conceptualizer/reflective observer)**

Assimilators have the most cognitive approach, preferring to think than to act. They ask ‘what is there I can know?’ and like organized and structured understanding.

They prefer lectures for learning, with demonstrations where possible, and will respect the knowledge of experts. They will also learn through conversations that takes a logical and thoughtful approach.

They often have a strong control need and prefer the clean and simple predictability of internal models to external messiness.

The best way to teach an assimilator is with lectures that start from high-level concepts and work down to the detail. Give them regarding material, especially academic stuff and they will gobble it down. Do not teach through play with them as they like to stay serious.

**6.2 Initial self assessment**

By identifying attributes of difference learning style I realize that my learning style is that of an activist (accommodators). Following major events in my life make it more confirm.

Fascinated by computers and programmings from a young age, my ambition was to be an IT engineer. Always planning and executing my life to predetermine goals, I worked towards and secured admissions to the bachelor of degree in Information Technology at Ragiv Gandhi Technical University and graduated with a first class. With that I also worked for multilevel marketing company. I joined it as to do part time and in lieu of that to earn money for my living expenditures. I immediately plunged myself into this field. Knowing that it was not going to be a smooth sailing for me, yet with my perseverance and devotion to hard work, I was confident of attaining success. My work experience so far has given me a general broad idea of actual working environment of business. It has given me the knowledge of performing
work involving team support and sort out the problems faced in actual business scenario. This part time job gave me the exposure to other management aspects, which has stimulated this need in me to update myself and to gain a position of greater responsibility in my current field. The company was satisfied with my work and I was performing well. But I had personally observed that in some areas of management, writing, communication, decision making skills I was not up to the mark due to lack of knowledge in that particular area. And if I would have knowledge of that field I would have performed much better. With this in mind, I wished to enrol myself for an M.B.A. programme.

Though there are lots of Institutions in India which offer course in Project Management but I strongly believed that International exposure will earn me the plethora of qualities with experience. So I decided to go out of my country. And I finalized to take admission in MBA in Project Management in Ireland and pass through the experience of a foreign country to better understand the market, culture and business aspects. Above mentioned consequences prove that I have an activist learning style as these events have had a significant impact on my life.

**Learning and skill developments in MBA in project management course**

The MBA in project management course has given me knowledge to apply in real work environment and gave a great value addition to my learning base.

The module like integrated marketing communications, international management, and academic support helped me to develop and improve many skills like time management skills, problem solving skills, communication skills, decision making skills which can be useful in personal and professional life and the dissertation stage being the most valuable learning experience of all.

This programme has developed my decision making skills. Good decision making is an essential skill for career success generally, and effective leadership particularly. If you can learn to make timely and well-considered decisions, then you can often lead your team to spectacular and well-deserved success. However, if you make poor decisions, your team risks failure and your time as a leader will, most likely, be brutally short.

The decision making skills have been developed while doing case studies and group presentations of modules like Project management, strategic management and international business and trade. In case studies as a student I have been required to analyze case study and
“Influence of Project Management Office”

make strategic decisions, suggesting possible solution to the real world business problems and in group presentations decisions on various tasks to finish the presentation on time. These skills would help me when I start my career now in a company and in my personal life as well when I would be required to make critical decisions on daily basis.

Another important part of the module was group presentations. The interesting thing in this module was that group assigned by module lecturer. All member (from different countries sometimes) in a group sometimes didn’t know each other and they required to work in a team to get pass the module. It was like a project group in a real business scenario where all group members from different working styles have to work to complete the project. These presentations developed team working skills in me. These skills have built self confidence and I believe that these experiences would make me more prosperous in future career to deal any situation in workplaces.

Personal time management skills are essential for effective people. People who use these techniques routinely are the highest achievers in all walks of life, from business to sport to public service. If you use these skills well, then you will be able to function exceptionally well, even under intense pressure. During my course work, time management was very important one. The number of assignments deadlines, class exercise, and research activities forced me to get everything on time. Then I implemented a time scale for my activities. It made me organized to carry out my research activities and to complete the assignment on time without exceeding any deadlines.

The dissertation part has also added value to my learning. Because it requires substantial work in all areas reviewing of literature, planning primary research, secondary data analysis, primary data collection, analyzing the gathered data and finally putting all together in the form of a written report. As it was most time consuming part of the course it required well organizing and planning skills.

I have done my dissertation on role of PMO (project management office) making IT projects successful with that also fulfilling client’s satisfaction. My study has been a practical business problem area wherein the world seems to be single entity, lot of work or business activities are carried out as projects, so that they can be carried out well with success. In this age of computers everything is somehow related to IT. Many projects go around IT which does fail or they are not completed on time etc. So PMO has become an increasingly a fashion to accomplish the projects successfully. While doing literature review I developed my skills of
findings and collection of required information, logical thinking, building analysis and I learned to work with library resources, electronic catalogues. Moreover I have gone through many issues related to my problem area which has further increased my knowledge of project management. During primary research I believe I had developed my interpersonal skills to a higher level. Interaction with managers regarding surveys and conversation with respondents made me more confident.

6.3 future applications of learning and skills development
I believe this course added value to my knowledge and learning base and I acquired number of new skills and developed skills I already had. I believe these learning and skills would play a significant role in my future and personal life as well. Based on the skills developed during the course I plan to work at a management level in a Multinational Company that would challenge my skills and urge me to learn and enhance my capabilities to become more competent and experienced so that I can contribute to the growth of the concern organisation.
Chapter 7: Appendix
7. APPENDIX

7.1 Online survey questionnaire
Dear respondents,

I am a post graduate student of Dublin business school. As a part of my studies, I am conducting a survey research into project/programme management field.

The survey is design to collect information to evaluate the responsibility and effectiveness of PMO in organisation in terms of project management.

In order to full fill my research I need to obtain the viewpoint of project managers, PMO staff, project team and senior management working in project management area.

There are 11 questions which will take approx 5 minutes to complete.

The information collected in this survey will be treated in the strict confidence and will be used only to produce statically tables. It will not be possible to identify the responses of any individual firm from the result produced.

There will be no reference to you or your information in any part of my dissertation. For the sake of anonymity, your web responses will be automatically decoded and exported into a database.

Thank you for participating in this survey

Yours sincerely,

Krishna Govind Purohit

MBA student

Dublin business school
This section deals with the project performance in the organisation from project management perspective. There are 11 questions (i.e. that associate to the project management knowledge and 9 knowledge areas according to PMBOK 2008). Please rate your performance in the scale from – ‘strongly agree to strongly disagree’. This will enable the researcher to evaluate the impact of PMO on project performance.

Question1. Project plans are well developed?

(That includes development initiation and execution)

☐ agree
☐ disagree
☐ strongly agree
☐ strongly disagree

Question2. Project scope is well managed?

(That includes planning requirement and definition)

☐ agree
☐ disagree
☐ strongly agree
☐ strongly disagree
Question 3. Projects are on schedule?

(That includes effort estimation, schedule development & schedule control)

☐ agree
☐ disagree
☐ strongly agree
☐ strongly disagree

Question 4. Projects have adequate resources?

(That includes resources acquisition team development and planning)

☐ agree
☐ disagree
☐ strongly agree
☐ strongly disagree

Question 5. Projects successfully managing budget?

(That includes estimation budgeting and cost control)

☐ agree
☐ disagree
☐ strongly agree
☐ strongly disagree
Question 6. Project procurement management is successful?

(That includes contract administration, vendor/supplier selection and planning solicitation)

- agree
- disagree
- strongly agree
- strongly disagree

Question 7. Projects are standards with high quality?

(That includes quality standard, planning, assurance and control)

- agree
- disagree
- strongly agree
- strongly disagree

Question 8. Project risks are well managed?

(That includes risk identification, response planning, prioritizing, analysis, monitoring and controlling)

- agree
- disagree
- strongly agree
- strongly disagree
Question 9. Project communication successfully managed?

(That includes information to stakeholders, performance measurement and reporting with communication)

☐ agree
☐ disagree
☐ strongly agree
☐ strongly disagree

Question 10. Project management knowledge and skills?

(That includes project teams PM knowledge and skills with methodology)

☐ agree
☐ disagree
☐ strongly agree
☐ strongly disagree

Question 11. High customer satisfaction can deliver repetitive success?

(That includes lesson learned, repetitive project success, customer management)

☐ agree
☐ disagree
☐ strongly agree
☐ strongly disagree
7.2 Interview questions (semi structured)

1. How much experience do you have working in Projects or PMO?
2. How important role that Project Management Office plays in IT organisation?
3. Do PMO assist in increasing successful project delivery especially in IT industry?
4. How is PMO Accountable/Responsible for the IT project’s success?
5. What advice would you give for IT companies considering or starting for a PMO?
6. What other types of information about the client’s role might be useful when evaluating project success?
7. Please explain how PMO in the IT organisation might influence the interpretation project success?
### 7.3 Gantt chart for the research process

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<th>JULY</th>
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<td>Administer IDI</td>
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<td>4</td>
<td>Develop questionnaire</td>
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<td>5</td>
<td>Pilot test of questionnaire</td>
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<td>7</td>
<td>Administer questionnaire</td>
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</tr>
<tr>
<td>8</td>
<td>Enter data into computer</td>
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<tr>
<td>9</td>
<td>Analyse data</td>
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<td>10</td>
<td>Drafting the findings</td>
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<tr>
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<td>Coding and decoding</td>
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<td>12</td>
<td>Updating literature</td>
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7.4 The Research ‘onion’ (Saunders et al, 2009)
### 7.5 Questionnaire Analysis Statistics (SPSS)

#### Table 3 - Project communication crosstabulation

**Project communication is well managed**

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#### Table 4 - Projects have adequate resources crosstabulation

**Projects have adequate resources**

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Table 5- Project risk management crosstabulation

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Table 6- Project plans crosstabulation

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Table 7- Project cost crosstabulation

**Project cost are successfully managed**

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Table 8- Project quality crosstabulation

**Project delivered with high quality management**

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Table 9- Project knowledge crosstabulation

**Project management knowledge is necessary**

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Table 10- Project scope crosstabulation

**Project scope is well managed**

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**Table 11- Project schedule crosstabulation**

**Project are on schedule**

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<th>Valid Percent</th>
<th>Cumulative Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Valid</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>agree</td>
<td>19</td>
<td>29.2</td>
<td>29.2</td>
<td>29.2</td>
</tr>
<tr>
<td>strongly agree</td>
<td>22</td>
<td>33.8</td>
<td>33.8</td>
<td>63.1</td>
</tr>
<tr>
<td>disagree</td>
<td>10</td>
<td>15.4</td>
<td>15.4</td>
<td>78.5</td>
</tr>
<tr>
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<td>14</td>
<td>21.5</td>
<td>21.5</td>
<td>100.0</td>
</tr>
<tr>
<td>Total</td>
<td>65</td>
<td>100.0</td>
<td>100.0</td>
<td></td>
</tr>
</tbody>
</table>

**Table 12- Project procurement crosstabulation**

**Project procurement management is successful**

<table>
<thead>
<tr>
<th></th>
<th>Frequency</th>
<th>Percent</th>
<th>Valid Percent</th>
<th>Cumulative Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Valid</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>agree</td>
<td>17</td>
<td>26.2</td>
<td>26.2</td>
<td>26.2</td>
</tr>
<tr>
<td>strongly agree</td>
<td>35</td>
<td>53.8</td>
<td>53.8</td>
<td>80.0</td>
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<tr>
<td>disagree</td>
<td>8</td>
<td>12.3</td>
<td>12.3</td>
<td>92.3</td>
</tr>
<tr>
<td>strongly disagree</td>
<td>5</td>
<td>7.7</td>
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</tr>
<tr>
<td>Total</td>
<td>65</td>
<td>100.0</td>
<td>100.0</td>
<td></td>
</tr>
</tbody>
</table>
Table 13- Project customer satisfaction crosstabulation

**High customer satisfaction can deliver repetitive success**

<table>
<thead>
<tr>
<th></th>
<th>Frequency</th>
<th>Percent</th>
<th>Valid Percent</th>
<th>Cumulative Percent</th>
</tr>
</thead>
<tbody>
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<td>strongly agree</td>
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<td>32.3</td>
<td>32.3</td>
<td>58.5</td>
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<tr>
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<td>29.2</td>
<td>29.2</td>
<td>87.7</td>
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<tr>
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<td>12.3</td>
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</tr>
<tr>
<td>Total</td>
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<td>100.0</td>
<td>100.0</td>
<td></td>
</tr>
</tbody>
</table>
### 7.6 SPSS Data Coding Screen

The image shows a SPSS data coding screen with columns for Name, Type, Width, Decimals, Label, Values, Missing, Columns, Algo, Measure, and Role. The screen lists various variables with their corresponding data types and descriptions. For example, variable 1 is labeled `VAR001001` with a string type, and variable 2 is labeled `plandevelopment` with a numeric type and a description of "projects plans are well developed." The screen also includes a data view tab and a variable view tab. The overall setup is designed for data analysis and management within the SPSS environment.
7.7 Four stage model of system development cycle

Stage 1: Conception stage
- Initiation stage
- Feasibility stage
- Proposal preparation

Stage 4: Operation stage
- System Termination
- System Improvement
- System maintenance and evaluation

Stage 2: Definition stage
- Project definition
- System definition
- User and system requirement

Stage 3: Execution stage
- Design stage
- Production/build stage
- Fabrication
- Testing
- Implementation stage
- Training
- Acceptance tests
- Installation
- Termination

(To stage 1: repeat cycle)
CHAPTER 8:

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8. BIBLIOGRAPHY

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