Journal of Advances and Scholarly Researches in Allied Education
Vol. 20, Issue No. 1, January-2023, ISSN 2230-7540

Indian Project Managers' Experience with the effect of PMI Ethical Principles on Software Project Performance

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Abstract - Since the Indian IT and ITES businesses have grown so rapidly, global software projects must be completed successfully. These attempts have not revealed the key to continuously successful software projects. Therefore, software professionals must consider project management as a whole as appraising software projects just on technical merits may not be adequate in today's changing global marketplaces. Software project success must be examined from several aspects, with a focus on intangibles. In light of this and the increased focus in PM literature on project managers' ethical conduct with concerned stakeholders, our research examines how Indian project managers' ethical behaviour affects software development project success. Even though the PMI clearly describes these four basic ethical requirements and their connected aspirational and necessary behaviour, it is largely a Western cultural concept of project ethics. Project managers sometimes face ethical difficulties while managing big, worldwide projects, yet the PMI doesn't provide any advice. Therefore, project managers from a variety of cultural backgrounds must have a deep awareness of these widely accepted standards for any study on ethics and project performance to be valid. This material will aid PMI and project managers by helping them understand the possible challenges of applying these principles to real-world projects.

Keywords - Indian Project, Effect of PMI, Ethical, Software

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1. INTRODUCTION

Businesses are actively seeking out education and training in project management in an effort to learn from their errors, which has resulted in a booming market for such services. Over the last two decades, several standards have been developed to increase the level of professionalism in project management. International Project Management Association, Australian Institute of Project Management, Association for Project Management in England, and the prince himself have all contributed to the development of widely adopted standards for insuring project quality, processes, and outcomes. However, in 1984, the Project Management Institute created one of the Allen encompassing and global standards in project management. A Project Management Professional credential from the Project Management Institute is highly valued and typically required of those seeking employment in the project management industry. The Association for Networking Improvement Standards Australia, and many other organisations across the world have all embraced the PMI's Project Management Body of Knowledge guidebook from 1996. Numerous iterations of PMI's Project Management Body of Knowledge have contributed to its status as the de facto global standard for project management.[1]

However, concerns have been expressed about these criteria and credentials as PMs' human and behavioural skills outside of the area of codified project management standards become increasingly important to workplace effectiveness. Despite the multiple problems inherent in project management, there is little evidence that PMs with formal training or certification outperform "accidental" PMs in terms of delivering on time and under budget. As a result, project management scholars have come to recognise the importance of PM complexity, process chaos, comprehending project outcomes, and environmental unpredictability. It is critical that scholars have noted that project management is increasingly becoming procedure-based. Managers have to find a balance between keeping everyone happy and attaining the greatest potential results while deciding on the "correct" course of action. Ethical implications often lurked in the backdrop of these seemingly insoluble situations.

1.1 Overview of Project Management

The project's scope encompasses both internal and external factors. Environments are monitored, evaluated, and disseminated data to help determine critical strategic elements. Projects are used to put into action the value-creating strategies that have

been developed at the corporate level after an examination of the external environment. Every business, no matter how big or little, has to deal with new project implementation at some point. The creation of a new product or service is only one example of the variety of activities that fall under this category. In order to achieve the objectives of their strategy, businesses must guarantee the accomplishment of their initiatives. In order to achieve this goal, they must strengthen their existing corporate project management skills and use best practises in project management. Program and portfolio management are subsets of project management's greater reach. A strategic plan is at the top of the hierarchy, followed by programmes, portfolios, projects, and finally, sub-projects. Multiple projects working together to realise an overarching goal constitute a programme. Companies should make improving their project management systems a top strategic goal if they want to experience steady expansion.[2]

i. General/Operational vs. Project Management

Morris claims that project management is still being overlooked in favour of operations management and other fields. Operations Management was assumed to naturally develop into Project Management.

General or traditional management includes tasks including developing a strategy, creating a plan, allocating resources, hiring and supervising employees, and evaluating the results of the plan. Every one of these tiers is topped by a manager or department head who is responsible for a specific area of operation. They are the direct supervisors of staff members working in their divisions. However, the scope of project management extends beyond departments and other organisational silos.

Project management builds on the foundation of general management, and practitioners of the discipline may need expertise in any number of fields.[3]

Effective communication, influencing the company, giving leadership, inspiring, managing disputes, issue resolution, etc., are all transferable from general to project management.

Table 1: Comparison between General and Project Management

General Management	Project Management
Mainly responsible for as is	Responsible for overseeing change
Authority defined by Organizational Structure	Lines of authority is not defined and spans across functions
Consists of tasks, mostly repetitive	Ever changing tasks
Works in permanent structure	Operates in structures which exist for the life of the projects
Limited set of variables	Multiple elements and contains intrinsic uncertainties
Success is determined by interim targets	Success is determined by end goals

There is a growing chasm between project management and operations management, the latter of which still places a premium on using optimization techniques to study manufacturing procedures. The field of project management has become more important to the modern economy. Businesses all around the world are the primary drivers of the growing need for expertise in project management.

ii Project Management's characteristics

A well-defined area of study, a body of specialised knowledge, theories and concepts to effectively organise that knowledge, a shared vocabulary and set of research methods, and a concrete institutional manifestation in the form of subjects are all characteristics of an academic discipline, such as project management. Project management is still in the process of becoming recognised as a separate academic discipline. As shown by its standing within academic institutions and the research community, project management is not yet recognised as a distinct subject. Because there is no comprehensive body of knowledge upon which to develop, the profession of project management is generally seen as fundamentally fragile. In academic writing, the need for a broader and more diversified understanding of projects and their management has become even more apparent. Cecile and Hodgson highlighted these numerous dimensions of project management work, including the political, social, and ethical components, in the form of more critical project case studies.[4]

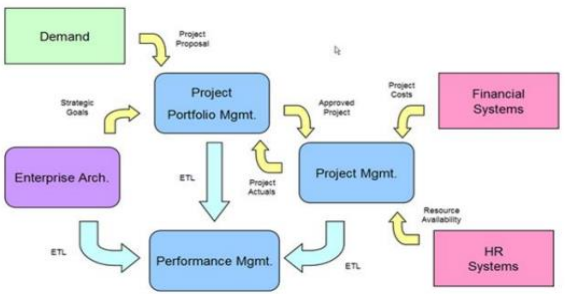

Figure 1: Software project management context

2. PROJECT MANAGEMENT FRAMEWORKS

In project management, there are three distinct Books, each of which is based on a different fundamental paradigm. For a long time, the absence of a unifying theory and a clear route for theoretical

growth has been the most significant issue confronting the subject.

Theorizing about project management has just recently started. In response to the emergence of worldwide standards for diverse approaches to project management, project management frameworks were established and updated. Respected organisations in the area have lobbied for these. All of these frameworks are helpful, and some are better than others in particular situations. Project management bodies of knowledge and standards have been developed by the Project Management Institute (PMI), the Central Computer and Telecommunications Agency (UK), the Association for Project Management (APM), and the International Association for Project Management.

Professional organisations fostered the extension of our knowledge of project management in the 1980s in order to strengthen their certification systems. The focus was always on the end-users rather than academic discipline. The Project Management Institute's (PMI) standards are based on time-tested industry practises. The IPMA Competency Baseline was founded on functional management. A third source of information is the Japanese P2M. Each BOK's essential tenets are distinct.[5]

3. SOFTWARE PROJECT FAILURES

As defined by the Project Management Institute, a one-time, time-limited goal-directed large undertaking requiring the commitment of numerous skills and resources (PMI). A project, by definition, is a time-limited endeavour involving more than one person or group of individuals and having its own unique starting and end points, goals, roles, budget, and strategy. The efforts conducted to generate and distribute software are referred to as "software development initiatives." Tasks that result in completed software may be classed as new development or modification, reuse, re-engineering, maintenance, or any combination of these.

Projects are regarded successful if they are completed on time, under budget, and with the intended results.

Several high-profile episodes of poorly managed software development projects have occurred in recent years. Many IS initiatives fail to produce the promised outcomes because the resultant systems are either not used for their intended purpose or are never deployed. According to the Standish Group's estimates, 31.1% of projects are abandoned before they are completed. According to supplementary statistics, 52.7% of projects wind up spending more than 189% of their original estimates. Only 16.2% of software projects are completed on schedule and on budget. Many of these programmes wind up being little more than a shadow of what was initially envisioned.[6]

The costs of a failed software project extend well beyond the bottom line. A company's market position and even existence may suffer if a project intended to provide it an advantage over competitors fails. The minimization of software development challenges and setbacks is the primary area of concern for software organisations as they continue to invest resources to software development.

i. Software Development Project Risk

The level of risk in a software development project is related to the level of uncertainty around the project as well as the extent of the potential loss if the project fails. The presence of possible barriers may be traced back to the degree of unpredictability in a software development project. These traits, nicknamed "risk factors," endanger the successful completion of a software development project.

The bulk of the literature on software project risk and risk management supports risk assessment and risk control as the two fundamental pillars of the software development project risk management framework. Controlling risks means taking action against each risk element to eliminate or lessen it, while risk assessment comprises doing so to establish which risks are most likely to jeopardise a project's success. If the first doesn't work, neither will the second. Managers may undertake IS development efforts that are guaranteed to fail due to a lack of risk understanding. Managers' efforts will be misdirected, and they may make risky wagers if their knowledge of the risks involved is incorrect.[7]

Risk factor checklists are becoming increasingly common as a technique for detecting possible hazards. These checklists offer the project manager with a thorough list of potential hazards and require him to physically tick out those that apply to his task. An extensive list of software project risks may be constructed by combining risk factors available in the literature with those recognised by actual project managers.

ii. Importance of Risk Management Techniques

After identifying and analysing risk factors, the risk management phase begins. One technique for reducing the possibility of a failing software development project is risk management.

The major emphasis of software risk management research has been guidelines on how to accomplish certain duties. Some of these scholars advocate for a comprehensive approach to risk management that encompasses the whole product lifetime. The spiral model is proposed by Boehm as an explicit technique of incorporating risk management measures into the software life cycle. Certain research proposes taking a more fragmented approach, with some treatments administered at various stages of development. Because any one risk management paradigm is insufficient, experts

recommend using a holistic strategy that considers several points of view.

4. STAGES OF PROJECT MANAGEMENT WHERE ETHICAL ISSUES ARISE

At any point in one's career, one may be forced to make a difficult ethical decision. The following points highlight and illustrate the crucial phases of project management when personnel may face ethical concerns, although no such standards are currently available.[8]

i. Project Monitoring and Reviews

Monitoring a project is an on-going process that involves checking in at various points to evaluate its progress and see how things are shaping up. It's a record of the progress made by the whole team, as well as the tasks that have been accomplished thus far. In many cases, a professional and ethical manager may provide a clear image of the project's status and their duties via innocuous conversation with their team members. Controlling a project entails keeping tabs on its progress at every stage, from planning to execution to post-mortem analysis. Daily meetings and contact with project personnel, for example, might indicate any problems in the underlying phases, thus informal monitoring can frequently predict prospective task concerns by unearthing and exposing challenges as they arise while doing the tasks. Employees are more likely to reach project objectives if they get technical improvement training and regular, overarching project evaluations.

ii. Personal Selection and Scheduling

Selecting the right people to work on a project is a crucial part of being a project manager. Having a team that is well-educated and has relevant expertise is ideal for completing the job. Financial constraints might force managers to settle for a less-than-ideal staff to complete a project. They are unable to fill the post with a highly compensated and experienced individual since their budget won't allow for it. The company may decide to invest in its workers' professional development to reduce the impact of this. Those with less experience or new hires may be tasked with a project so that they may receive knowledge and practical training. [9]

iii. Report Writing and Presentations

It is common practise for project managers to report on the project's progress at regular intervals. The conceptual core aspects from the comprehensive project report must be archived in a report in a way that is clear, consistent, and exact. Project managers must be well-versed in both oral and written communication skills in order to effectively communicate all relevant information on the audit status of tasks. Managers have an obligation to the company's upper management and the client to compile and deliver detailed data and analyses of projects. All the accurate and correct information on achievements should be handled by trained professionals, so that it has to be taken seriously. Quality, validation, configuration management, maintenance, and staff improvement design are just few of the many plans that need to be written by project managers.[10]

5. WORKING ENVIRONMENT

Most workers in the digital service industry cooperate on projects, as described in ergonomics: man and his working environment. He went into great detail on the climate, lightning, heat, and human working posture. Workers' productivity and job happiness are, nevertheless, heavily impacted by their working environment. The manner in which he interacts and collaborates with the other members of his team will decide the extent to which he makes an influence. In many psychological investigations, various aspects such as space, furniture, equipment, temperature, humidity, illumination noise level, and privacy have been shown to have a substantial impact on people's behaviours and attitudes. The architecture of the structure and the quality of its communication systems may have an impact on group behaviour. Furthermore, the architectural design and layout of the workplace have an impact on team communication. Employers that do not provide safe and healthy workplaces for their workers pay a real and high price. Employees who are dissatisfied with their occupations are more inclined to depart. As a result, the corporation will need to devote more money to enhancing the working conditions of its smart and competent personnel.

To prevent burnout, software engineers and programmers want a calm working environment where they can concentrate on their job without distractions. Many workers like natural light and views of the outside world, making this a significant idea in the workplace. Everyone on the project team has an opinion on aesthetic concerns such as colour scheme, layout, and so on. Two approaches to improve the working environment are to modify the workplace to better fit productive techniques of work and to allow for individual expression.

6. GROUP COMPOSITION

It describes several types of group dynamics and includes primary, social, collectives, and categories. This section will define the social category that includes coworkers, teams, crews, study groups, tasks, and forces. Software developers in the digital service business are mostly motivated by their work. Because they are actual drivers of the software product, everyone has their own point of view on how to handle the technical problem that has arisen in the team. The membership of the group is reflected by the often stated challenges of interface benchmarks and being neglected. Management should apply and choose group members to prevent these sorts of problems. A group with complementary personalities may function better than a group picked for technical competence.

Individuals who are motivated by work are more likely to be technically strong, but people who are self-motivated are more likely to be the best at pushing the job forward to complete their obligations. Others who are interaction-oriented help to foster communication within the team since they like to talk to people and can notice tensions and disagreements early on before they have a negative impact on the team. In this case, the group leader plays an extremely important role in project planning. They are the ones who come up with the finest idea for getting the team and higher management to cooperate on initiatives. The essential components of group composition are group cohesiveness, group communications, and group organisation, all of which play an important role in project and task completion.[11]

7. ETHICS CODES REDUCE ETHICAL ISSUES

The research looked at the code of behaviour developed by organisations such as PMI, ACM, IEEE, BCS, and the Computer Society of India, among others. Codes of ethics for the IT sector include topics such as how to handle complaints and what to do if a community member is found to be in breach of the code.

When workers participate in unethical behaviour, a situation is created in which these values are put to the test. The code of ethics is essential for promoting ethical behaviour in all situations concerning the organisation.

All employees and participants are required to act with honesty, integrity, and ethics in all areas of their lives and work.

A code of ethics is essential in training and education for effective people management and the development of already exceptional persons. Every project's result is dictated by the personnel involved and the decisions they make; hence, engineers overseeing projects must make ethical decisions while allocating resources. Management of clever and moral people is notoriously difficult, and if judgements are not managed properly, everything may devolve into chaos. Management may avoid making unethical decisions by reacting to any situation in a way that achieves a balance between demonstrating authority and showing respect for individuals affected. Managers should monitor tasks and output while remaining confident in their employees' abilities to provide excellent outcomes. The most important aspect of any set assessment is to concentrate on the outcome rather than the input.[12]

i. Consistency

Colleagues might be treated in the same uniform manner by adopting the consistency approach. It is not, however, expected that all benefits would be equivalent. In other words, workers should not feel that their efforts are being undervalued by the company. The following arguments centre on discussions of tolerance, acceptance, transparency, and trust. According to the IEEE code of ethics, IEEE members must always put the public's health, safety, and welfare first and come clean quickly about anything that might put the public in risk.

ii. Respect

All members of the organization's staff—from frontline workers to upper-level executives—are expected to treat each other and the organization's many valuable human, financial, reputational, physical, and ecological assets with care. Everyone on the team should bring something unique to the table, and management should recognise, value, and respect each member's unique set of experiences and perspectives. In addition, they need to communicate clearly with everyone and allow everyone a fair shot at making a difference.

iii. Inclusion

Members of the committee should be prepared to provide recommendations and show dedication to those who have been included in the project, which is what is meant by "inclusion." In the workplace, inclusion is bringing together people at all levels of experience and seniority to form a cohesive one. Workers need to believe they are responsible for rallying everyone they can for the common good of completing the project.

iv. Honesty

In order to be fair, we must make judgements and do actions without bias or prejudice. Our actions must not be influenced by bias or partiality, or motivated by conflicting interests. When we are being honest, we are fulfilling our responsibility to know the truth and to be truthful in all of our interactions and conversations. Both upper management and staff members need to be forthright about the team's successes and failures. Management must be forthright about their abilities and admit when their subordinates have better expertise. Managers of projects risk having their reputations tarnished if they are dishonest. Regarding the outlook of future initiatives, this is unethical.

v. Trust

Because trust is multidimensional, it is difficult to describe and grasp from a single perspective. However, it is crucial to understand why trust is so important in the moral argument. There are several shades of trust that may be applied to various challenges and contexts. When studying the significance of trust in social interactions, social psychology researchers came to inconsistent results. Faith is the assurance that another person's or group's word, promise, speech, or written statement will be kept "A person's faith in another is determined by his or her conviction that the other will behave in

accordance with his or her stated intentions in the present and past.

As far as I can tell, trust entails having beliefs that aren't accepted due to evidence and holding ideas that, in certain situations, may be highly resistant to information that contradicts the (Beliefs)." According to the economist, trust is a mental disposition characterised by the assumption that one's business companion will behave in a predictable and satisfying way to both parties.

The concepts of trust, responsibility, respect, fairness, and honesty will be incorporated in the company's code of ethics as guiding principles to assist firms flourish ethically in a global economy.[13]

8. CONCLUSION

The study conclusion explored how PMI's core ethical principles affect the success of software development projects and its inherent challenges. Due to the exploratory character of our research, we used grounded theory to analyze empirical data using a qualitative research methodology. The views of Indian project managers on PMI ethical standards and their need in software projects are discussed, along with the challenges connected to their practicality and the impact on project performance. The research makes a conceptual contribution to prior literature by expanding our understanding of PMI ethical values in project contexts, the role of ethics in projects, and the impact of ethics on the success of software development projects. Practical insights into the challenges of adopting these core ethical principles in project contexts at CIS and related other organizational domains were also provided by the research.

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