THE INFLUENCE OF TECHNOLOGICAL FACTORS GOVERNING 'PROJECT TEAM MOTIVATION' IN ELECTRONICS MANUFACTURING SERVICES ORGANIZATIONS-A REVIEW

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Abstract
Effective team motivation is an important step to improve employee's performances especially in manufacturing organisations. Many studies have been conducted in the past which have highlighted various motivational factors affecting   project team performances. This article reviews the existing literature and theories established by researchers in the field of project team motivation. Organizations are switching towards modern concepts, methodologies and adopting newer technological tools to create a conducive workplace for its competent employees & satisfy end users as well. The main focus is on how team motivation can be enhanced by deploying modern technology in an electronics manufacturing services organisations. Overall, the proposed research aims at study of technological factors influencing the project team motivation & collect data from project teams including project directors, project managers and project engineers working in various projects in electronics manufacturing services organizations.

Keywords:Project Management, Intrinsic-Motivation, Extrinsic-Motivation,Team-Motivation, Technology.

1. Introduction
In today's global competitive business environment, project management [PM] concept has emerged as one of the most effective tools in managing many business tasks. In recent years many organizations have adopted PM concept & Project Management Institute [PMI] is the world's leading not-for-profit professional membership association for the project, program and portfolio management[1].

Globally, many such training institutes offering project management training and PMI is the only recognized standards training institute offering certification programs widely accepted by companies worldwide. PMI's Project Management Body of Knowledge [PMBOK] emphasizes that the ability to motivate a project team and other stakeholders is one of the most important interpersonal skills a project manager should possess [2].Project management will continue a decade long trajectory of growth across the globe. By 2027, employers will need 87.7 million individuals working in project management oriented roles across the globe and India requires 14.7 million project management professionals [3].

2. Sources of Motivation
According to Margit Osterloh & Bruno S. Frey "intrinsic motivation is crucial when tacit knowledge in and between teams must be transferred. Organizational forms enable different kinds of motivation and have different capacities to generate and transfer tacit knowledge. Since knowledge generation and transfer are essential for a firm's sustainable competitive advantage, technology impact is one of the most important tool in project management"[4].

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Gagne and Deci have said "intrinsic motivation involves people doing an activity due to self interest and satisfaction from the activity itself and on the other hand extrinsic motivation requires an instrumentality between the activity and some external push through tangible rewards, here the satisfaction comes not from the activity itself but from the extrinsic situations to which the activity leads" [5].

Project Team Motivation
According to Schmid, B. & Adams,Jonathan "the financial stability of every company depends upon the successful management of resources dedicated to completing projects within a predetermined budget & project team motivation is a key aspect to a successful project, yet few studies exist that shed light on this important subject, the ability of a project manager to work with a team and achieve goals is critical to the success of an organization and successful project management is more than simply working within predefined project management constructs and techniques"[6].

As per Peterson and Tonya M,"motivation can inspire, encourage, and stimulate individuals and project teams to achieve great accomplishments, motivation can also create an environment that fosters team work and collective initiatives to reach common goals or objectives"[7].

Zsuzsanna Kispál-Vitai has opined that "motivation is still a fascinating topic in the 21st century. Research results tend to steer towards multidisciplinary research where the work of general and work psychology and clinical neuropsychology create new results and aid practicing managers in designing effective motivational strategies for their employees. Business practices and experience of everyday lives seem to be enlightening the scientific experience and adding value to research and guiding towards a richer picture of the human"[8].

As per Patanakul, P., Pinto, J. K., & Pinto, M. B., have said that "at the organizational level, managing multiple group of projects can help facilitate organizational learning as knowledge gained from one project can be concurrently disseminated to the other projects and the opportunity to learn and develop new skills is found to be a source of motivation for project managers"[9].

3. Impact of Modern Technology on Project Team Motivation
Technology plays an important role in the context of project management due to high level challenges in today's technology enabled workplace, where technology tools are widely used for collaboration, communication, and deployment of project management practices [10].

In a competitive global market environment, all professionally managed organizations continuously update their organizational strategy to implement newer technologies to enhance the employees' performance output and to achieve their set organizational goal.

Further, organizations' strength lies in optimum utilization of resources to meet project goal.Apart from customer satisfaction, meeting financial goals to satisfy investors of the company is very vital for survival in the global market. Employee's sense of belongingness and motivation depends on well managed and implemented technology tools & deployment of systems within an organisational set up.
Intrinsic motivational factors which can influence project team motivation in electronics manufacturing services organisations are as follows:
1. Availability of user friendly enterprises resource planning system [ERP].
2. Robust integrated quality management system [IQMS].
3. Availability of high speed internet.

4. Remote access & cloud computing.
5. Industrial internet of things [IIOT].
6. Compatible network communication devices such as smart-phones, tabs & connected mobile applications.
7. Project data sharing through cloud & cloud ERP access.
8. Availability of interactive   project management software tools and dash boards for seamless interaction, delegation of work between superiors to subordinates and vice versa.
9. Use of enterprise wearable technology tools [Halo lens, Heads-up-displays, Virtual reality/Mixed reality applications, Body and wrist worn devises].
10. Deployment of artificial intelligence systems [AI] & machine learning to manage dynamic shop floor data generated in electronics manufacturing services organisations.

Extrinsic Motivational Factors Which Can Enhance Project Team Performance Include
1. Deployment of employee friendly human resource policies.
2. Transparent and impartial performance evaluation system.
3. Fair salary and fringe benefits to employees at par with dynamic global job market.
4. Deployment of continual improvement programmes to recognize and reward innovative brains within the organizations.
5. Conducting periodic gap analysis.
6. Conducting employee satisfaction surveys to assess the changing needs and also to assess training needs.
7. Adopting best training methodologies for every employee in the organisation.
8. Conducting management development programmes to enhance the soft skills of managerial staffs.

4. Conclusion
Effective project team motivation is key to achieve project goal & to bring customer satisfaction. Organisations should adopt latest methodologies, systems and tools by carefully conducting periodic gap analysis & employee satisfaction surveys to understand the needs of project teams. Though there are many factors which can motivate project teams, technology adoption are the most important   factors which can affect project team motivation in   electronics manufacturing services organisations. Today's competent   project team expects every organisation, whether it is small or big to adopt technology and conducive workplace to enhance their innovative skills. Hence future belongs to those who motivate their employees technologically rather than attracting them only through monetary rewards.

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