THE ROLE OF PROJECT START-UP IN THE ORGANISATIONAL DEVELOPMENT OF PROJECT MANAGEMENT: THE CASE IN IRAN

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The paper reviews the emergence of project management as a discipline. It is proposed that the shortcomings of its original rationalistic emphasis have been gradually supplemented by attention to the need for the social integration of project participants. 'Project Start-Up', a set of techniques for securing this end, is described and, drawing on an empirical study, its relevance to the distinctive circumstances of project management in Iran is discussed.

Keywords: Iran, project management, project start-up, rational planning, social integration.

INTRODUCTION

Writers on project management date the emergence of a distinct project management discipline (PM) from the application of a matrix form of organisation on the Apollo project in the 1960s [1]. In a classic text on project management, Archibald [2] suggests that the purpose of project management is to provide a single point of authority and a planning system for project integration. Stuckenbruck [3] has stated: *"the success of project management is based on the simple concept that the sole authority for the planning [...] is vested in a single individual. This single-point authority and responsibility constitutes the greatest strength of project management, but it also constitutes its greatest weakness."*

With the prime concern for project integration, initial studies in PM developed around two themes: i) efforts to determine the best organisational structure and, ii) the development of project planning techniques. On the matter of organisational structure, formal integrating mechanisms were introduced with the use of a project co-ordinator in the 1930s. Initially, the major challenge for project management was the need for horizontal co-ordination within hierarchically-structured organisations. The prevailing view was that there was 'one best way' to manage any enterprise and so the associated research efforts were devoted to establishing what it was [4].

However, in 1972, studies on the structural forms of organisations led to a US Congress announcement supporting a contingency theory of project organisation. The study concluded that: *"there is no universal answer to the merits of project/ matrix/ functional or in-house/contracted-out organisational options, the choice basically reflects a fit between program characteristics and resources available"* The contingency perspective suggests that there are different ways to manage a project and

that the methods adopted are contingent on the task and the circumstances of the situation.

On the matter of planning, various techniques were developed, informed by a systems engineering viewpoint. The earliest project management planning and control tools were essentially products of the Operation Research (OR) era of the 1950s. Most of the early examples of PM came from the construction industry, where the activities, although *sequentially* interdependent, were nonetheless fairly autonomous and hence could be carried out relatively independently. Thus, planning techniques, such as network analysis, could visualise and integrate these sequential interdependencies.

Early PM, therefore, developed on the classic management theory assumptions of repeatedness, predictability and boundedness [5]. Morris [1] suggests that even up until very recently, these assumptions have been relatively unchallenged. He reports: *'Until the 1990s, project management's philosophy was based on norms. Estimators knew how much standard items cost; planners knew how long activities took'.*

However, as both the nature of projects and the expectations about performance have changed, these assumptions are now being questioned. Morris suggests that the team approach to project design and production will become increasingly common. Most notably, complex projects such as new product development, involve a great many *reciprocal* interdependencies. Such high degrees of interdependence require a very well-functioning and cohesive team, where the aim is to maximise integration of all production and development disciplines into the design process so that production can begin smoothly and quickly. Recently, the need for whole project integration is being more insistently stated in the context of production

As projects become faster and more complex it is necessary to recognise the extent of reciprocal interdependencies and to achieve this requires nothing less than a *paradigm shift*, a change in *mental models*. Thus, paradigm shift means radically changing ways of thinking and ways of doing things.

PROJECT MANAGEMENT - NEW DIRECTIONS

The key feature of the required change is to get rid of rigidity associated with the mechanistic models and machine analogies of classical theory and look for more organic forms to achieve co-ordination, exploring new metaphors for organisation design which stress flexibility and fluidity. An assumption underlying this search is that people themselves are more adaptable and inventive than the performers of roles and routines envisaged in classical theory. In short, the emphasis is that projects are carried out by groups of *people*, not unyielding formal systems. Therefore, attention must focus on how *they* actually do it - how they use the formal provisions, prepare plans, make decisions and communicate with each other.

The great impact of group dynamics upon organisational effectiveness was first formally recognised in the human relations literature by Elton Mayo more than half a century ago. This work was expanded during the 1960s, when a number of behavioural science-based technologies were developed to facilitate the effectiveness of work groups, most notably the Organisation Development (OD) strategy referred to as team building. Liebowitz and De Meuse [6] report that "several team building models are available for addressing each of a wide variety of group problems. Each model is geared to addressing a different purpose". They refer to four models outlined by Beer [7]: the goal-setting model; the interpersonal model; the role model; and the managerial grid model. They report how team building has proved to be a "very

versatile intervention" for establishing new teams and that the exercise has been successfully conducted with many different kinds of group, from employees under a first-line supervisor to top management groups.

Within project management, Turner [8] reports that principles of OD such as involvement and participation, team building, training and communication are increasingly being applied to the project management situation. In fact, design of the project organisation is not solely a matter of rationally structuring relationships within the divisions of labour. It is subject to the vagaries of competing goals and the personalities and interests of its participants. Therefore, an understanding of goal agreement and power processes becomes essential to the design of organisations. Commentators stress that much more can be done to address the plurality of interests and perspectives that projects invariably involve, and that project participants would work more effectively together if the social aspects of the project were more consciously planned and managed.

Reflecting this changed climate of thinking, in 1981 the term Project-Start-Up (PSU) was used for the first time, signalling the application to PM of principles drawn from OD. The application of these principles developed particularly as a result of demands for the involvement of the client's key people in project planning and the use of external project management consultants. The external consultant brings expertise, tools and techniques to facilitate the project planning process which the client's project management team then carries out themselves. The PSU concept initially emerged as an interactive process for behavioural modification and action planning involving the project participants.

Given the temporary nature of project organisations, Tuckman's growth life cycle for groups, that of forming, storming, norming, and performing, has been seen as relevant within the new perspective on project management practice. In particular, it provides a framework for conceptualising Project Start-Up (PSU) as an attempt to develop a systematic approach to the storming and norming phases of a project's evolution.

THE PSU MOVEMENT

Within the discipline of project management, it has increasingly been seen as necessary to view and manage the evolution of the project as a socio-technical process. In order to supplement conventional planning, some practitioners have developed mechanisms under the label of Project Start-Up (PSU). PSU can be seen as a number of attempts to develop practical packages of techniques for planning projects, with attention being given to both their social and technical dimensions.

Morten Fangel is a leading proponent of PSU development. In his research for the Danish National Council for Scientific and Industrial Research, he has studied the application of contingency theories of organisation to the project management arena [9]. He observed a close relation between development of the strategic process and the organisation of a project which he called the Master Project Plan. He asserted that 'the process must be developed with the organisational realities in view.' The Project Master Plan is similar to what, in the more recent literature, is called Project Strategy [e.g. 1 & 8]. He also observed that a technical approach to the Project Master Plan, based on rationalistic assumptions, is not sufficient because organisations have various priorities which should be considered in the development of the Project Master Plan. Thus, he suggests that the Project Master Plan is not just a technical issue to be carried out by a solitary planner rationally applying scientific principles. He

suggests that development of the Project Master Plan is an interactive process requiring the involvement of key persons from the project. He reports [10] that as an external project management consultant, engaged to develop the Project Master Plan, he encountered a range of issues needing to be addressed which were not technical in nature. He classified these issues as 'behavioural', 'political' and 'perceptual'. An example of the last would be the unwillingness of key people to spend time on planning as they see it as unproductive. To overcome these barriers, he uses the notion of PSU as a method for the development of a project system and project culture in a workshop process with the main people involved in the project.

The World Bank has developed a similar concept called a Project Launch Workshop (PLW) [11]. Satin reports that from the early 1980s, World Bank officers applied the concept to developmental projects which the World Bank carried out in developing countries, demanding the contribution and co-operation of various governmental departments. Youker [12] describes its objective as ranging from mainly political, with a large group of key actors, to technical planning, with a small group of key contributors. Also, the inadequacy of various structural models of project organisation for technical assistance projects, regarding the roles of various parties involved, led to an emphasis on a procedural approach to project organisation. Action planning has been used for the interactive process of design and execution of projects, which facilitates involvement of the local people [13]. Decisions cannot be made solely on the basis of technical considerations together with those economic considerations which are conventionally used by those having experience of Western markets. Various economic and social considerations in different socio-economic contexts require much local knowledge. This requires much interaction between local and technical assistance personnel. So, action planning provides a conceptual framework for such interaction and associated team building.

Archibald is another proponent of PSU. Ono and Archibald [14] report the adoption of a matrix form of organisation by American Telecom and Telecommunication (AT&T). They add that this organisational change required moving from a functionally-based structure with emphasis on a role-culture to creating a project-culture and managing the interfaces between functional divisions of the organisation. They report that in order to develop project management expertise and techniques to facilitate cultural change, AT&T enlisted the help of external consultants. Organisational change was carried out by adopting and applying the PSU process. The process was also used to develop positive attitudes in the client organisation.

Honert [15] attempted to apply the PSU process at the early stages of *each project phase*. Moving beyond commercial boundaries, he also suggests that all parties should be involved in the planning process, including contractors and sub-contractors, based on the notion of partnering, in order to facilitate the application of PSU and to bring their knowledge into the project development. Although Honert applied the PSU process for partnering in the manufacturing industry, Morris [1] reports that methods similar to those of PSU have recently been applied to the construction industry by the American Corps of Engineers. He said: *"Interestingly, partnering and ADR [alternative dispute resolution] processes have been especially championed in the USA by the public sector, the US Corps of Engineers in particular. Partnering to the Corps, however, is in fact more like the European Project Start-Up idea: essentially a two-to-three-day workshop after contract award during which a common spirit and common aims between all parties are established."*

Through establishing formal and systematic project management, traditional delivery of the built-environment has evolved into a rigid "phases" process. This approach, coupled with the traditional low bid contracting, puts a premium on withholding information. Loraine [16] asserts that "the principal reason for the introduction of partnering in its various guises is given as the desire to remove adversarial relationships from contracting".

Production is normally managed by dividing the work among specialists who develop and follow the directions embedded in drawings, specifications and contracts and are co-ordinated by a plan. Regarding the inadequacy of such a mechanistic division of the work for today's practice, Howell et al [17] also state that: *"we believe the partnering movement is evidence that the current rules [of contracting] provide an inadequate basis to manage complex, uncertain and quick projects and that it is time to reconceive the basis of the construction process. Once reconceived, radical changes in practice will make current forms of partnering interesting and important footnotes in construction history".*

In order to study the relevance and feasibility of OD and, in particular, that application of it known as PSU, an investigation was carried out into Iranian project management practice.

EMPIRICAL INVESTIGATION INTO PROJECT MANAGEMENT AND CULTURE IN IRAN

An investigation was carried out in the public sector, in Iran into its approach to project organisation and planning and the consequences for project performance. Following Argyris' concept of 'theories of action' [18] the aim was to establish, by talking to project participants, the beliefs and assumptions which they held regarding the consequences of their actions at the beginning of the project. The researcher was then able to compare these beliefs and assumptions, as the plan was executed, with the organisation's performance and outcomes. In the course of the research enquiry the following sources and techniques of data-gathering were chosen:

- The researcher's general knowledge of Iranian society based on his birth and upbringing in that country;

- Literature review;

- Official documents on project execution systems in the country;

- Official reports on project execution containing qualitative and quantitative analyses of project execution;

- Semi-structured interviews with many people who were connected with the topic, among them more than 50 PM practitioners, including interviews with the key participants of the five projects adopted as case studies of OD practice and its performance; and

- Participants' observations during the conduct of a four-day course on OD with 46 PM practitioners.

DEVELOPMENT OF A PROJECT MANAGEMENT CULTURE AND PRACTICE

To facilitate the reader's understanding of the content of these action theories, a brief background to the historical context of project execution in Iran may be useful. During the period after the Islamic revolution in 1979 until the end of the war in 1989, as a result of the highly uncertain environment and socio-economic instability, the use of five-year planning and budgeting programmes in Iran was suspended. This period led to the formation of a particular project management culture and practice. Three main relevant aspects of this culture and practice were as follows:

First, managers in the Executive Organisation gradually learned that they should initiate the work and not stop because of the numerous uncertainties and possible risks which might materialise. So, a 'reactive' culture in identifying and managing the numerous uncertainties and probable risks has grown up. Managers believe that initiating projects could lead at least to the accomplishment of some that otherwise might not have been carried out. Also, project planning was not taken seriously and sometimes carried out more as a ritual exercise since decisions have to be made intuitively and on a day-to-day basis through crisis management.

Second, the achievement of the accepted goals frequently required the authorities to ignore bureaucratic governmental regulations about the implementation of the project.

Third, without a state plan at this time, competition for resources among Executive Organisations was reported to be a common practice. The performance of each executive organisation was informally assessed on the number of major works completed and not on the efficiency and effectiveness of resource utilisation. Competition for resources became a prime concern of the executive organisations, leading them to give *under*estimates for the project to be approved. It is said that a common motto of the executive organisations was that "we must hoodwink the state in order to benefit the country". It was reported that economic appraisal of the project and market study were based on assumptions far from the real condition of the project environment of economic instability, a highly unpredictable inflation rate and a state-controlled market mechanism. As the projects were major infrastructure ones, this approach was understand, given the lack of experience of handling such projects in particular with regard to the inadequate institutional development of the country. It was reported that this was an accepted norm. Consequently, project executives mainly concentrated on achievement of a project's functionality. Consequently, management of the time and cost, normally considered in developed countries as two primary objectives of PM, were played down.

EXISTING PROJECT MANAGEMENT PRACTICE AND PROJECT PERFORMANCE

After the war and with the need for reconstruction, the necessity for central planning by the state was accepted, despite some opposition. The first five-year plan included a large number of major projects that have been undertaken by the public sector. Subsequently, the budget for implementation of such a state plan called for foreign loans. Apparently, such loans were taken on the assumption that the acquisition of the capital was the main issue, without adequate consideration of the capacity of the socio-economic institutions of the country. Insufficient institutional development, as revealed by this study, has led to considerable problems in projects. For example, most project executives complained that the major causes of delay in their project

were out of their domain of control. They attributed it to poor performance of the economic, financial, banking, foreign trade and customs systems of the country.

Regarding the overall management of projects, the research also reveals that there are a number of problems in the Project Execution Phase. A number of interviewees told the researcher that paying inadequate attention to the cost and time of the project is still a common practice. Although this was the culture before the state five-year-plan was enacted, the introduction of the plan has only been at the technical level. In fact, the old culture still exists. A senior manager stated that everybody knows this is the case and that somebody from the top should initiate change in the processes. The principle of OD suggests that if the introduction of a new system is to be successful, there is a need for an appropriate reward system and a change in the culture. It seems that lack of such development, despite the introduction of a planning system, has led to the inclusion of many projects in the state programme and initiation of them without recognition of the consequences. Therefore, many projects are initiated without sufficient resources leading to the inefficient use of resources because of the longer construction periods. Also, poor expertise in project management tools and techniques has led to a number of problems which seem to occur frequently, contributing to the failure of state programmes. These include:

- Lack of a carefully developed management strategy and policy which should be developed from the project appraisal study report;

- Unfamiliarity with the project working method (an objective/goal-oriented method of work) which demands working with a constant trade-off between project objectives. Decision-making dominated by technical and/or bureaucratic management, rather than objective-oriented management;

- Lack of appreciation of the importance of project planning before commencing to execute the work in haste;

- Insufficient investigation of numerous project constraints that will soon come to the surface;

- Insufficient thought on project objectives and priorities between them, in order to help project management to optimise decisions on time;

- Due to the restrictive nature of the governmental department regulations, decisions by the government department authorities are not based on project efficiency but on accountability;

- Development of the generic project plan and project management organisation without sufficient consideration of project tasks and the specific circumstances.

- Lack of appropriate involvement of the project management team in project planning and organisation, leading to lack of adequate discretion necessary for them to make decisions. Consequently, the project executive is overloaded with the day-to-day decision-making;

- Projects divided into too many packages, without sufficient attention to the immense demand for an integration mechanism commensurate with such a high degree of differentiation;

- Lack of familiarity with and application of any systematically developed project management tools and techniques regarding analysis and management

of project stockholders' influences on project process and outcome. This is also the case regarding identification and management of risks inherit in a project;

- The main project management technique used has been network planning. However, the software packages have been used mainly as a control mechanism rather than being used for the project management pro-active decision-making;

- Project work plan and project finance (cash flow) were poorly integrated;

- Poor communication of project objectives and constraints to the project contributors;

- Poor communication about the roles and responsibilities of the parties in the project. This has often led to conflict between various parties involved in project execution;

- Development of the project design by foreign consultants on the basis of technical and economic considerations which are conventionally used in their home country;

- Poor management and integration of design and construction; and

- Lack of appropriate post-project evaluation and a sound methodology to collate the experience.

Regarding project management, then, it seems there is no well-developed model for strategic management and decision-making in order to make integrated and optimal decisions. Consequently, there is no systematic improvement, but good, bad and indifferent performances are produced almost by chance. Instead, project executives need to think more carefully and at an earlier stage about what will influence the success of their project, and managing all the internal, external and strategic factors that will deliver that success. However, these matters are rarely addressed by them in a systematic manner.

NEED FOR CHANGE AND ADVANTAGES OF ADOPTING PSU

How could PSU contribute to improving project management performance? Successful state plans, which depend on the systematic execution of projects, will require major changes in the managerial approach and attitude, pro-active planning, risk management, team work and adoption of project management expertise. The PSU process could be seen as an appropriate practice. It could also provide an appropriate mechanism for the involvement of the project executive team in the process of planning and organising the project, rather than transferring the authority to an external management consultant.

Improvements in performance come from understanding, analysing and improving work processes. PSU does not directly solve all the problems mentioned above but, unless the participants involved in the project focus on analysing their joint processes, they have little chance of improving their performance.

During the research it was observed that despite inadequate managerial capacity mentioned above, a genuinely participatory approach was generated throughout the project, which facilitated their organisational practice and learning. In this approach, the individual members could, where appropriate, share their experiences and enter into a collaborative process of decision-making and problem solving on a regular

basis. Therefore, adoption of well-designed PSU workshop as a method for project phase initiation, to encourage proactive planning, based on an analysis of the realities of project constraints, seems promising in Iran. It also improves the management of a project by including various authorities in the project and facilitates decision-making at the project level. This itself will enhance a goal-oriented approach, instead of the present role- and accountability-oriented approach to decision-making. It also provides an action planning process, facilitating the development of the project participants' roles and responsibilities.

As a well-designed context situated praxis the key issues, in deciding to adopt PSU, are which aspects of the project and managerial levels to include in the process. The research reveals that most practitioners are willing to apply the concept first within the internal organisation and then to involve parties more widely in the project.

CONCLUSION

The paper has described the emergence of the PSU movement. Born from a recognition of the limitations of the rationalist, mechanistic approach to project organisation, it provides ways of developing more organic, co-operative working relationships. It has been argued that PSU, as a set of specific management actions, aiming to establish the principle of co-operation at the outset of a project, was something of a breakthrough. It sets out practical steps supported by measurable performance criteria by which a co-operative attitude based on trust can be secured. Assessing the viability of the approach in Iran, it is concluded that its emphasis on pro-active planning, tapping group wisdom and bringing power to the project, provides a sound methodology for performance improvement and OD.

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