

On the strategic project management process in the UK upstream oil and gas sector[☆]

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Abstract

This paper reports on an investigation into strategic project management in the UK upstream oil and gas sector. The management process is represented by a set of elements which covers context, content and output and are balanced across financial, internal business, external environment, and learning and innovation perspectives. The paper uncovers elements that appear to explain successful project management and compares these with the elements to which managers pay greatest attention. There appears to be a mismatch between those elements which are associated with success and those receiving significant management attention.

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1. Introduction

This paper reports on an investigation into the strategic project management process in the UK upstream oil and gas sector, and is concerned with understanding the effective management of the process. The research objectives are as follows; first, to understand the extent to which the strategic project management process can be characterised by a set of elements which are both recognised by management and consistent with a wider literature; second, to explore whether the set of elements emerging provides coverage of context, content and output elements, and whether it is balanced across financial, internal business, external environment, and learning and innovation perspectives; finally, to analyse whether there is a close match between the elements that appear to explain successful project management

and the elements to which managers pay greatest attention. Section 2 of the paper discusses the nature of strategic projects and the management process allied thereto. The process is divided into evaluation and control stages, and is characterised by a set of elements, obtained from an exploratory empirical and theoretical investigation. Section 3 outlines the research methodology adopted. The chosen approach involved the collection of both qualitative (an exploratory phase consisting of nine exploratory interviews in a single oil and gas company, and a literature review) and quantitative data (a main phase, consisting of a survey of 54 projects across 15 oil and gas companies) in order to enrich the overall results of the study.

Section 4 of this article covers the data gathering for the main research exercise, which was via questionnaire. In the following section, the data analysis and research findings are outlined, and two sets of elements—one associated with the successful management of strategic projects, and one receiving significant management attention—are identified and compared. Finally, a conclusions section discusses the implications for successful strategic project management.

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2. Strategic project management

Strategic projects are considered to represent the core of corporate growth, change and wealth creation. They are major investments, often involving a high degree of uncertainty, offering intangible benefits (benefits that come from such issues as flexibility, learning, synergies, innovative routines, etc.) and promising attractive long-term financial outcomes [1,2]. Strategic projects also motivate the creation, acquisition and development of competencies [3], comprise a collection of diverse options [4], and are often conducted in a changeable, uncertain and complex environment [5–8].

Here, strategic project management is taken to comprise two main stages: evaluation and control. This is based on Amram and Kulatilaka's taxonomy [4] and has a clear alignment with classifications proposed by a number of authors in the project management field [9–13]. Evaluation involves framing (i.e. drawing up a strategic project after its inception), planning and valuing a strategic project, and ends with its authorisation. Control comprises the management, review and redesign of a strategic project through to its completion. A precursor stage involves generating possible projects before their effective creation. Although this is an important and interesting stage which could be the subject of further research, this paper focuses on the lifecycle of a project, i.e. the period from its creation to its completion.

Managers often regard evaluation and control as discrete, detached stages, and therefore the control stage is considered to be a natural consequence of the evaluation stage [4]. Projects are often optimistically planned [14], and rarely go according to plan [15]. Managers who assess a project are generally different from those who execute it [4]; both parties are likely to fear blame if the project fails [16]. However, evaluation and control are not sequential, but interconnected processes [17], and control can be carried out from a project's outset [18].

A key concept in the strategic project management process is the 'critical factor' or 'critical element'. 'Critical elements' should receive constant and careful attention from management, because they drive the organisation to focus attention on the success of the project in hand. According to the Pareto Rule, which separates "*the important few from the trivial many*" [15], if attention is paid to sets of 'critical elements' and their interactions, success is more likely. It is conjectured here, therefore, that there is a set of 'critical elements' that explain a strategic project's success. This possible set of elements known as 'success critical elements' is central to the research study that follows.

3. Research methodology

Despite the polarisation of quantitative and qualitative paradigms at a conceptual level, in recent years the friction between quantitative and qualitative methods within the social sciences has progressively diminished. Combinations

of research methods, both quantitative and qualitative, have increasingly been applied by many researchers [19]. An integration of both paradigms has quite often been rejected in theoretical terms. However, a 'paradigm of choices' is defined as a way of achieving methodological quality instead of methodological rigidity [20]. The 'paradigm of choices' allows for the combination of diverse methods in a single research project [21]. The combination of different methodologies in the management sciences is referred to as a multimethodological approach [22]. The following paragraphs present and discuss the adopted research methodology.

This study pursued the notion of success critical elements associated with strategic project management by first carrying out an exploratory investigation in a major company in the upstream oil and gas sector. The exploratory investigation comprised an empirical phase and a theoretical phase. The empirical phase consisted of nine semi-structured recorded interviews with a diverse group of managers holding top and mid-ranking positions. This phase broadly identified and defined a range of relevant elements involved in, respectively, strategic project evaluation and control. These elements were then reviewed for their importance—elements were combined, eliminated or restated, along with the examination of potential interrelationships amongst them, and reduced to those elements shown in Table 1, a mixture of context and project specification elements.

The proposed set of elements presented in Table 1 emerged from the business world, following the approach supported by Grounded Theory. Grounded Theory is a process for guiding research through collecting and verifying data, while allowing the researcher to be conscious of contingencies that affect the original hypotheses. The theory is based on data but it is not strictly bound to it. Grounded Theory is therefore useful for exploratory research [23,24].

The ideas borrowed from Grounded Theory fit properly with the main purposes of the exploratory fieldwork of this study. Grounded Theory plays a role in identifying and defining the meaning of empirical elements that give practical support to a specific framework. In this way, the interviews undertaken aimed to verify the importance of the proposed elements in a real context, and to include a sufficient set of elements in the framework, as well as defining and putting them into practice.

However, it is necessary to check whether the set of elements proposed by the empirical phase of the exploratory investigation are consistent with theory. The theoretical phase of the exploratory investigation checked the set of empirical elements against theories about the project management process. This phase of the research validated the proposed set of elements, as all the elements proposed are necessary in the logical sense. The elements uncovered were consistent with an extensive literature on the nature of the strategic project management process.

A further check on the validity, comprehensiveness and coherence of the set of elements was then made by placing them within a conceptual framework, based on ideas from

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