“It worked for manufacturing…!”

Operations strategy in project-based operations

Harvey Maylor a,⁎, Neil Turner b, Ruth Murray-Webster b,c

a  Saïd Business School, University of Oxford, Park End Street, Oxford OX1 1HP, UK
b  School of Management, Cranfield University, Bedford MK43 0AL, UK
c  Lucidus Consulting Ltd., Greens End House, 33D, Greens End Road, Meltham, Holmfirth, West Yorkshire HD9 5NW, UK

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Abstract

This paper describes the application of an Operations Strategy (OS) approach to project-based operations (PBOs), defined as low to medium volume and medium to high variety operations. The OS approach has been extensively and beneficially used in high and medium volume operations. By examining the development of OS from its genesis in manufacturing operations, we identify four aspects of the OS approach — strategic intent, focus, fit and resource configuration. These elevate the discussion of how to configure resources to gain competitive advantage from PBOs, to the level of business leaders. The four aspects are then analysed in greater detail, with a view to determining the adaptations required for application in a PBO.

The results of this engaged study indicate that the approach delivered significant new insight for the organisation involved in the study. The contributions of this paper are identified for both practice and theory. For practice we demonstrate an alternative to a reliance on standards and process compliance to an opportunity to gain competitive advantage from PBOs. For theory, we have extended OS into PBOs and provide a basis for future theory testing. We conclude that there is a significant opportunity for further practical and theory development through using an OS perspective.

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1. Introduction

The genesis of this paper, and the work it describes, was a challenge in 2007 from the former CEO of a large global technology services firm. He wanted to know how his firm could gain competitive advantage from their programme and project management activities. This paper describes one line of enquiry that was pursued over a five-year period to address the challenge.

We started from the premise that programmes and projects represent operational activities within organisations. Operational activities and competitive advantage have been explicitly linked in the study of Operations Management and Operations Strategy (OM and OS). The resulting improvements in the performance of repetitive operations associated with the application of OM and OS are well documented (e.g. Tunälv, 1992). Contemporaneously, the academic subject area has grown from being the concern of production engineering departments, to a significant field within business and management. However, OM/OS has focused on repetitive, rather than project-based operations (projects and programmes). Our work therefore is based on a ‘practitioner problem’ (how to gain competitive advantage from project-based operations) that coincides with a gap in the literature.

The application of OS (defined in terms of ‘a pattern of decisions’) to project-based operations (PBOs — operations having low-medium volume and medium-high variety) appears to be novel. Some aspects of the approach were clearly evident in our case organisation (and others in our experience), but we
were unable to find systematic and deliberate application of the approach in its entirety. This is the key difference with repetitive operations, where such cases are plentiful (e.g. as described in Slack and Lewis, 2008).

The purpose of this paper is theory extension, extending the approach of OS into PBOs. The objective was exploration of whether the OS approach would provide insight in PBOs. If the approach did yield insight (as was found), testing could follow to explore its efficacy. Extensive empirical work to first explore, then test the approach was carried out embedded within the organisation from which the original challenge came.

The following section is a literature review that deconstructs the elements of the OS approach, and demonstrates the gap in the literature that we have identified. It further identifies questions for the study. We then show how the questions are then dealt with through a multi-stage research approach, before the findings are described, and the conclusions, limitations and areas for further research are outlined.

2. Literature review

Our review of the extant literature comprises four elements. The first provides a review of the key developments in Operations Strategy (OS), and demonstrates the evolution of the subject, including identifying four interlinked aspects for study — strategic intent, focus, fit and configuration. The second considers projects as an operations process area — the PBO. The third is a systematic review of OS in PBOs, identifying a gap in the literature. The fourth element considers how the four identified aspects for study (intent, focus, fit and configuration) could work in practice in PBOs.

2.1. Operations Strategy

OS is “…the total pattern of decisions which shape the long-term capabilities of any type of operations and their contribution to overall strategy, through the reconciliation of market requirements with operations resources.” (Slack and Lewis, 2008, p.18).

Following an OS perspective therefore means that our focus is on the decisions that determine the links (or absence of links) between organisational strategy and the operations of that organisation. A discussion of organisational strategy in general is therefore outside the scope of this paper. We develop further granularity in these links using this perspective by considering the development of the field. The aspects identified are then developed further for the context of PBOs in Section 2.4.

2.1.1. Genesis of OS

There is general agreement in the OS literature that the seminal contribution of Skinner (1969) began the development of OS (Brown, Squire and Lewis, 2010). The potential strategic contribution of the operations function, a manufacturing plant, was identified. Indeed, the focus of OS in the original case and much of the OS literature subsequently has been on repetitive manufacturing. Rather than being the default constraint to the competitiveness of an organisation, Skinner showed how it could become a source of competitive advantage, by linking the strategic decisions of the organisation to those of the operations function. Later work reinforced this linkage (Skinner, 1974) and demonstrated how it could be operationalised. Two aspects were identified: competitiveness through focus, and operationalization of that focus. The first recognised that an operation could not be good at everything, for instance simultaneously delivering cheap and very high quality products. There were trade-offs.

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<tr>
<th>Stage</th>
<th>Description</th>
<th>Characteristics</th>
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<tbody>
<tr>
<td>Stage 1</td>
<td>Minimize manufacturing’s negative potential: “internally neutral”</td>
<td>Outside experts are called in to make decisions about strategic manufacturing issues. Internal detailed management control systems are the primary means for monitoring manufacturing performance. Manufacturing is kept flexible and reactive. Industry practice is followed.</td>
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<td>Stage 2</td>
<td>Achieve parity with competitors: “externally neutral”</td>
<td>The planning horizon for manufacturing investment decisions is extended to incorporate a single business cycle. Capital investment is the primary means for catching up with competition or achieving a competitive advantage.</td>
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<td>Stage 3</td>
<td>Provide credible support to the business strategy: “internally supportive”</td>
<td>Manufacturing investments are screened for consistency with the business strategy. A manufacturing strategy is formulated and pursued. Longer-term manufacturing developments and trends are addressed systematically.</td>
</tr>
<tr>
<td>Stage 4</td>
<td>Pursue a manufacturing-based competitive advantage: “externally supportive”</td>
<td>Efforts are made to anticipate the manufacturing- potential of new manufacturing practices and technologies. Manufacturing is involved “up front” in major marketing and engineering decisions (and vice versa). Long-range programmes are pursued in order to acquire capabilities in advance of needs.</td>
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