

Operations Strategy Development in Project-based Production — A Political Process Perspective

Structured abstract

Purpose: To study how operations strategy innovation occurs in project-based production and organisation.

Design/methodology/approach: A longitudinal case study encompassing the processes at the company headquarters and in two projects using Lean.

Findings: The operations strategy development commences at a middle level in the organisation, is underpinned and embedded in production projects, and only after several years becomes embedded in the corporate operations strategy. The projects use Lean principles in a differentiated manner.

Research limitations/implications: A qualitative case study provides insight into only a single occasion of change in operations strategy. More case studies would probably reveal several paths of operations strategy development. Operations strategy development need to be handled as emergent, political and with contributions from several managers and management levels bridging the vertical divides between projects and headquarter.

Practical implications: A conscious and systematic vertical integration and interaction is crucial in project-based companies doing operations strategy development.

Originality/value: The present study contributes to the small body of studies of operations strategy development processes by providing insight into how project-based companies renew their operations strategy.

Key words: Lean, Construction, Operations Strategy, Political Process

Article Classification: Research paper

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Introduction

A range of industries that includes aerospace, shipbuilding, software, and construction (Green et al., 2005; Levering et al., 2013) has for long organised their manufacturing as project-based production, and manufacturing has for some time moved towards engineering and manufacturing to order. This type of production involves closeness to, and demands from clients, criticality of time to market and competition on unclear and complex conditions. A range of competitive strategies need to be employed to keep such companies in business. Here, the focus is on operations strategy development in production.

The aim of this paper is therefore to study how operations strategy innovation occurs in a project-based production and organisation.

The present study contributes to the small body of studies of operations strategy processes, which provide insights into how project-based companies renew their operations strategy. The case study presented and analysed features a building contractor making strategic decisions regarding the implementation of Lean Construction, a variant of lean (Koskela, 1992). The building contractor operates in Scandinavia, and the division being studied is based in Denmark and encompasses a project-based organisation with some design capacity and involved in a large number of concurrent production projects. The study is longitudinal, covering two years of the implementation of lean construction at a detailed level and follow-up sampling throughout the following five years. The study also encompasses two typical production projects, which were selected in order to study the implementation of the operations strategy.

Lean construction, as available internationally, covers supply, design and production of buildings (Ballard, 2000). Lean construction for production, which is in focus in our case, encompasses a range of tools for planning and execution of project production. This involves using “seven flows” or “healthy streams”, which are conceived to be preconditions for carrying out specific production processes. The healthy streams cater for all the production resources: Three streams focus on human resources, materials and equipment. They involve the “last planner”, a fine scheduling procedure involving foremen/first-line managers in production

planning, and “Percent Planned Completed” (PPC), which is used to measure performance (Ballard, 2000).

Theoretically, the paper adopts a political process view of strategy formulation processes (Pettigrew, 1985; Pettigrew and Whipp, 1991). One cannot assume agreement and full support to operation strategy renewal (Boyer and McDermott 1999), and there is a need to better understand the processes of developing consensus over operation strategy (Boyer and McDermott 1999).

This paper’s contribution is the development of a framework for operations strategy formulation processes and the empirical analysis of these processes – a scarcity in the operations strategy literature, especially when it comes to project based production.

The paper is structured as follows: First, the theoretical framework is elaborated. This involves an understanding of operations strategy and of construction as project-based. This is followed by a method section, which presents the theoretical, empirical and analytical approach. The case is then described in two major parts – the overall process and the two production projects. Similarly, the analytical discussion then deals with the overall operations strategy development process and the two cases. The paper finally arrives at a series of conclusions.

Theoretical framework

The theoretical framework is developed in three steps. First, an understanding of operations strategy is presented; second, a section on project-based organisation; and third, an understanding of change processes is developed.

Processes of change in operations strategy

Within the operations, manufacturing, and technology management literature, the concepts of operations strategy and manufacturing strategy compete (Rytter et al., 2007). In the following, both strands are taken into account and operations strategy (OS) is used as a common term for both, since OS can be understood as covering a broader set of a business’ operations, which in addition to production includes for example services. OS can be defined as:

“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).

In the strategy literature, it is customary to distinguish between content and process approaches (De Wit and Meyer, 2010). Strategy content approaches in OS deal with how operations can create competitive advantage by providing normative guidelines on what to include when formulating an OS or manufacturing strategy (Anderson et al., 1991). Most writings in OS and manufacturing strategy fall into this category.

Strategy process approaches, on the other hand, deal with how to conduct OS formulation and implementation processes (Barnes, 2001; Rytter et al., 2007). The process strand is smaller than

the content strand, which has led to calls for more research on strategy processes (Dangayach and Deshmukh, 2001; Boyer et al., 2005; Leong et al., 1990; Minor et al., 1994; Rytter et al., 2007). Moreover, most process contributions are prescriptive and not based on research into what actually happens in OS processes (Barnes, 2001, 2002). OS is presented as a rather linear, analytical and rational process of top-down OS formulation and implementation activities (Leong, 1990).

Construction as project-based organisation and production

The literature on projects and project-based organisation distinguishes between ranges of different types of projects (Bartsch et al., 2013; Maylor, 2010). Maylor (2010) operates with the following four types of projects: production projects, change projects, product development projects and innovation projects. Production projects are assumed to encompass high stability, a focus on product and/or process, a repetitive element and actor-renewal across enterprises, and they are customer driven. In construction projects, a mixture of production and product development occurs, as the construction on site mostly represents a production setting, and to some extent, the design involves an element of (new) product development. Counter to Maylor's (2010) categorisation, the industry emphasizes the uniqueness of the single product and production project delivered and the human resource constellation employed, and downplay the stability and repetitive elements. Yet the (production) projects do carry a different type of temporality than product development and change projects.

The construction industry can be said to be a project-based industry (Kentaro and Cusumano, 1998) with a strong focus on carrying out projects. Operations strategy, along with other types of change and innovation, tend to be either confined to single projects and/or related to corporate management (Winch, 1998). There are however important mediating groups between these two main routes toward new operations strategy. Department and portfolio managers responsible for market/product areas are involved in managing the multiple projects and coordinating and communicating upwards and downwards in these organisations (Ekstedt et al., 1999; Nonaka and Takeuchi, 1995).

The main dynamics in project-based organisations, such as contractors, can be described as pressures on the following levels (Ekstedt et al., 1999; Koch, 2004):

- Pressure to deliver on a *structural level*: contractors tend to be squeezed on prices not only by clients but also by component manufacturers attempting to add value to their product.
- Pressure to deliver on an *organisational level*: projects are organisations of resources and tasks (inputs) relating to some kind of output/product demands. (Beukel and Molleman, 2003; Kentaro and Cusumano, 1998; Newell et al., 2002).
- Pressure to deliver on a *professional group level*: contractor's professionals are continually developing their competencies and knowledge, as they are expected to deliver systemic solutions that include product and process innovation (Winch, 1998; Gann, 2000; Gann and Salter, 1999).

- Pressure to deliver on *an individual level*: Garrick and Clegg (2000, 2001) demonstrate how knowledge workers such as engineers and technicians are subject to demands relating to cross-disciplinary approaches that require competencies related to extensive communication, problem-solving and coordination.

It can thus be expected that project-based organisations will exhibit different patterns in the processes of operations strategy innovation, since the dynamics underline the projects as interpretive, economic and resource arenas that are bounded from the “outside”. Winch (1998) discusses how the dynamics of the project interact with the dynamics of the project-based company under the influence of the surrounding environment. Moreover, a ubiquitous sense of risk and uncertainty follows from the impact of the dynamics. Managers in project-based organisations thus experience insecurity as an everyday condition (Bresnen and Marshall, 2001; Galbraith, 1977). The many dynamics exert an influence on particular operations strategy ideas’ alignment with managerial interests and perspectives in processes through which they enter organisations and impact action. These chosen perspectives help us avoid a too simple portrayal of managerial recipes as inert commodities that circulate without undergoing any transformation as they are produced, consumed and enacted (Bresnen et al., 2002).

Change process – organisational politics

Here, we adapt Pettigrew and Whipp’s (1991) framework and examine strategic change from three dimensions – content, context, and process. Change is seen as a continuous process in a given context. The context is both internal and external, where the external context is, for example, the competitors in the industry and the economic situation, while the internal context can be resources and capabilities. The processual understanding is that strategy, here OS, is not a straightforward process with identifiable sequential phases, but more a continuous, iterative and uncertain pattern. New operations ideas are seen as the content dimension of a process of strategic choices (Pettigrew and Whipp, 1991).

The content dimension of strategic change is occasionally labelled “the political programme” (Koch 2001, Simonsen 2007). The content or political programme is shaped in the interaction between different actors who build alliances to overcome barriers and resistance. These negotiation processes are embedded in a particular context and dependent of both internal and external contextual elements, such as management resources, department structures, markets (labour and products), and competitors (Pettigrew and Whipp, 1991).

When actors enrol in the alliance, the content of the change concept is often changed to accommodate their political programmes, but the content’s negotiability is of central importance to the programme, because it functions as social glue. Many of these political processes are peaceful interactions in which players rhetorically, and by other means, convince each other, bend towards other positions and make alliances in order to obtain an understanding of a future change. Such processes are viewed as unavoidable in an organisational context (Knights and Murray, 1994).

To summarize: In construction, production is mainly situated in projects, where the operations strategy is predominantly played out. A new operations strategy is developed through a series

of dynamics, understood as four different types of pressure. The new content of operations strategy is viewed here as a political programme with goals, objectives, tools and an understanding of how to handle operational resources. The development of new content in the operations strategy involves processes of enrolling project teams, middle-level managers and the top-level management, and these processes are continuous, iterative and uncertain. The vertical decoupling is considerable, and the processes of strategy content change are dependent on the competition for resources and the top-level support obtained within this internal context. Alliances have to be built to overcome vertical splits. Processes of negotiation of the strategy content – which potentially change it to accommodate diverse interests – become important. Competitors in the industry and the more general (economic) situation are seen as external pressures. The framework is summarized in figure 1.

Insert Figure 1 about here

Method

The paper adopts an interpretive approach (Walsham 1993) to operations strategy innovation processes, using organisational politics as its main lens, combined with contributions on operations strategy processes (Barnes, 2002; Leogh et al., 1990; Platts et al., 1998). Organisational politics is chosen because it matches with strategy formulation processes.

The empirical material was collected as part of a longitudinal processual case study for a ph.d. thesis for which the author was supervisor (Simonsen 2007).

The case studied is a major building contractor operating in Denmark with a project-based organisation involving a large number of concurrent production projects and with some design capacity. The contractor was selected at an early stage in the doctoral study as case because the implementation of Lean was to be initiated, which would enable the doctoral study to span two years of the implementation process.

The study was carried out using qualitative interviews at different management levels in the contractor organisation to expose the strategic decisions regarding the implementation of Lean Construction. A total of 14 interviews with headquarter representatives was carried out.

Furthermore, interviews and participatory observations of two projects with ongoing building activities were carried out. The sites were selected as the longitudinal study unfolded and the possibilities arose. One of the project cases was also being used in another research project and access was therefore possible. One project is a set of dwellings (3500 square meters), the other an elderly care centre of approximately 5000 square meters.

The observations were made at the weekly work planning meetings with the foremen as well as interviews with both foremen and project managers. The seven interviews on project 1

included the project manager, two assisting project managers and two foremen. Seven observations at planning meetings were carried out at project 1. At project 2, seven interviews included the project manager, an assisting project manager and three foremen, and six observations were made at planning meetings.

Finally, four interviews with observers, i.e. persons outside the contractor organisation, from the Danish construction sector were used to provide background information.

Project 1 was labelled LivingBuilt, and project 2 CAREhouse, with reference to their respective main purposes.

The qualitative case approach involves limitations, since even if the two selected projects turned out to be developing in characteristically different ways, they still only represent a qualitative insight in how projects can develop, and cannot be claimed to be typical or characteristic.

Case: The contractor's development of a new operations strategy

In the following, the main story spanning a decade is told first, and then the two cases of implementing the operations strategy are presented.

Lean Construction was first introduced in the Danish construction sector in 1999 (Simonsen, Bonke and Walløe, 2004). Due to other strategic efforts – most important that of partnering (Bresnen and Marshall, 2000), the case company did not enter the world of Lean Construction until the fall of 2002. At this point, a competing contractor had already been working with their version of Lean Construction for a period of time.

The first project, including Lean Construction, was initiated by an experienced project manager and enabled through cooperation with an external partner, a consulting engineering company. Last Planner System was introduced first to the project managers and then to the foremen of the sub-contractors on site. A first set of experiences with especially Last Planner System was developed (Ballard, 2000), which included the involvement of foremen in the fine scheduling. Afterwards, the project manager recalled:

“I had the original schedule in my drawer, so I could follow whether we complied with the milestones, but it was not necessary at all; the common process plan worked a lot better” (interview, Project Manager).

The project's construction process was successful, and the project managers returned to the company bearing news of the success of Lean Construction. At the corporate headquarters, however, a large programme on implementing another operations strategy focusing on white collar processes was going on at the time, and to obtain the best possible result, all efforts and resources were allocated to this endeavour. The project managers from the first Lean project kept on advocating their experiences, disseminating them at internal seminars and the like, and two more projects were initiated with less clear results. For the company as a whole – independent of these local experiences – Lean Construction was put on hold; but as a result of

the operations strategy project, a corporate support function was established aimed at improving scheduling of projects.

A manager who participated in this first project decided to use the concept within his department, implying that the concept had obtained considerable organisational resources; but the second project initiated in this department had trouble and failed. The implication however was an ex post interpretation that emphasizes the need to get all sub-contractors on board in the project coalition, since “no chain is stronger than its weakest link”.

About one and one-half years later, when the other operation strategy was somewhat embedded in the company, the corporate support function for scheduling turned toward Lean Construction. During the next year, the principles of Lean Construction and the Last Planner System were studied, and representatives also joined a Danish network for discussing the Lean Construction principles. Then, the first implementations of the Last Planner System were tried out on construction projects, supported by the corporate function.

A new corporate strategy was massively disseminated to the employees. Lean Construction was not a direct part of this strategy. Corporate management was reluctant to promote Lean Construction as a new major strategic decision. Consequently, Lean Construction was presented as part of the process of industrializing construction before it was formally introduced. From this point on, all projects of a certain size should use the Last Planner System. Executives did not have profound understanding of the content of the Lean Construction concept, and the details of the implementation were laid in the hands of a corporate support function and its manager.

After a period of operation, the focus of the support function group shifted to Lean Construction. At first the group collaborated heavily with the project managers of the Lean Construction ‘pilot’ projects. Competences were embedded in the group, and it became able to commence counselling project management groups on the building projects in the use of Lean. The (political) programme of the support function group mainly contained Last Planner as the crucial element of Lean. Attempts were made to spread the understanding in a relatively informal manner. The support function group coached project management on site in using the Lean methods. No manual or the like was produced, but gradually building projects began using Lean, even though most projects still operated without it.

Alongside working with Lean on projects and promoting the concept in the organisation, the coalition behind Lean was also heavily involved with Lean activities outside the organisation, in the public Lean Construction debate and development.

The next step in the development was to embed it in the corporate strategy. Again, the resources and especially the manager of the group played a central role, since the manager presented the concept as being compliant with current strategic considerations. Lean was portrayed as a logical next step from the scheduling focus. Corporate management decided to generalize the Lean strategy to the entire company. This should be understood as a change in governance rather than in direct organisational resources. The scheduling support function group continued to be central in the implementation.

The implementation in projects during this period was differentiated and gave much space for local interpretations. This was especially evident in projects not supported by the scheduling support function group. The two cases described below were carried out during this period and developed in two different ways, despite the use of Lean principles. At this point, around 40% of the production projects used Lean.

A re-organisation of the company followed. Seen from a Lean position point of view, the status and embankment of the concept did not change as a result. There was a change of responsible manager for the support function group, but this could be interpreted as a signal of continuation, since the new manager possesses strong Lean competences. The management innovation thus became embedded in corporate routines, yet subordinated in the company strategy. Also, the first manager, who was a central actor in the organisational development and promotion of Lean Construction, was promoted as a result of his efforts. The timeline of the operations strategy development is shown in figure 2 illustrating how the development had to bridge several management levels, especially the vertical divide between projects and the headquarter.

Insert figure 2 about here

When the financial crisis set in, the overall turnover of the company had a serious decline. Corporate management was forced to carry out layoffs, and important parts of the support functions for Lean Construction disappeared. Yet, a small core remained. When the corporate management developed a new strategy focusing on public buildings and infrastructure, the Lean element was continued as a supplement to partnering.

Two projects using Lean Construction

In the following, we present two construction projects in which Lean Construction has been used – though very differently. The cases are further analysed in the discussion section.

Project 1: LivingBuilt

The project consisted of about 50 apartments in a combination of two storey terrace houses and two-four storey tower blocks. The project manager (PMO) was on the project since its start. Another project manager (PMT) was assigned to the project at the start of the finishing work, and shortly thereafter, an assistant project manager (APM) joined them. The project got off to a bad start with a lot of problems regarding the precast concrete elements. This caused some delay in the time schedule, as well as some less perfect construction.

PMO decided to use the principles of Lean Construction on the project, although her knowledge of the content of the concept was only based on one previous practical use. The activities initiated were weekly meetings with foremen and checking for the seven flows in the time schedule. Two weekly project meetings were held with the foremen – one for the outdoor activities and one for the indoor activities. Each weekly meeting lasted for 30 minutes. The meetings were run by PMT and APM and used to deal with different problems on site. Typically, the project manager handled the problems with each foreman separately. The time schedule was also examined. In two periods, the time schedule was checked for whether upcoming activities were sound according to the seven flows. The company used a self-developed software system that includes space for checking off the seven flows, i.e. prerequisites for sound activities. In the first period, the project group quickly dropped using the tool, as it was too time consuming to clear all seven flows on all activities. After two months, they tried again, but it was again found too heavy to manage. PMT and APM discussed the use of the seven flows and decided that only four flows were necessary, because PMT already had an overview of the remaining three. But after a few weekly meetings, the use of the four flows was also dropped.

The knowledge of Lean Construction on the project came from different sources. The project manager, PMO, who originally requested the use of Lean Construction on the project, referred to experience with Lean Construction on an earlier project, as part of a development programme. In addition, she had heard some stories from the company and discovered the seven flows' check boxes in the time schedule. The other project manager, PMT, had not been in the company for long; he had only heard of Lean Construction but had no experience with it. The assistant project manager, APM, had heard stories from another project where Lean Construction had been successfully implemented.

Project 2: CAREhouse

The project objective was to build 60 apartments in two-storey houses for elderly (some with dementia), including service centres.

The management team on this project consisted of two project managers and two assistants. They had used several Lean Construction tools before. A staged schedule was produced by the foremen of the sub-contractors at the start of the finishing work. Weekly Last Planner meetings were held with all foremen on the site every Friday morning at 9 am and Danish pastry was served. At the meetings, a list of constraints was updated, the schedule was examined, and the tasks in the look-ahead window were judged “sound” or “not sound” with reference to the seven flows, and ticked off in the time schedule. Each contractor presented his tasks for the previous week and briefly compared them with what he had planned. Percent Planned Completed (PPC) was calculated but not used at the weekly meetings. The project manager found the PPC good for competition but not for exact measurement. He observed that the foremen might speculate on getting high PPCs rather than trying to plan realistically. At the end of the meeting, the work plans for the following week were produced.

The project management team received training from the support function. This meant that they were introduced to the ideas behind the Lean Construction tools. At first, a representative from the support function facilitated the Last Planner meetings, but after a month, the responsibility was handed over to the project management team. During the process, the support function representatives were available to the project management team. The project managers were very open and positive towards the Last Planner System, and they had given the foremen on the site full responsibility for the work planning. To begin with, they kept the time schedule produced by the support function to check with the phase/time schedule produced by the foremen, but they quickly realized, that this was not necessary. The foremen on the site were also very positive toward the system.

Discussion

In this section, the political process interpretation analysis of the operations strategy renewal process is carried out. This involves the two production projects. Then, some cross-cutting aspects, such as the role of middle managers, are discussed.

The contractor’s external context featured a main competitor on the national scene that began to implement Lean. The content of Lean Construction attracted the promoting actors, because of its relevance for improving production project processes, especially the goals and objectives of Last Planner and its management of resources. The process then involved a promoting coalition that advocated this political programme by gathering around a pilot project using Lean Construction. This was a test even for the participants and succeeded in solidifying the coalition. Even though later projects went less well, the coalition was able rhetorically to promote the new operations strategy. Parallel to this, however, another operations strategy project focusing on scheduling was initiated by corporate strategic management. This internal context constituted competition for resources and support for the two political programmes,

Lean and scheduling, but more importantly it made it impossible to obtain top-level support for the Lean solution. This only became possible at a much later stage.

During this period, however, the support function became enrolled in the coalition. The processual building up of knowledge, methods, procedures and rhetoric of success in the internal context was important for the continual enrolment of more and more projects run as Lean. Similarly, the project manager's career move to department manager was a further step forward, adding resource power to the Lean strategy and bridging the project and the headquarters/hierarchy context. The process clearly indicates uncertainty when after the first successful project, two more are initiated, one of which is continuing while the second is failing. The process also shows iterative steps when the Lean concept becomes embedded in the corporate strategy, with the managers in a central role. And finally, in relation to the processual dimension, there is a continuous element in the process it does not actually start; it mostly originated in a new idea from an experienced project manager; and the OS also kept developing throughout the period.

LivingBuilt and CAREhouse can be considered typical production projects. They occurred at a time when Lean Construction had been sanctioned by corporate management and the support function was in operation.

At *LivingBuilt*, the use of Lean occurred as a consequence of a project manager's decision. The manager's knowledge on the concept was central. The weekly meeting of fine scheduling was carried out with the foremen using the idea of the seven healthy streams. The project manager and the assisting manager tested the concept in real time and found that seven flows were too many. They then iteratively reduced them to four and finally abandoned the concept altogether. The strategy content/political programme was therefore rendered "unusable" in the context. The lack of a strong coalition with the support function over the department manager level may have contributed to this. The promoting coalition possibly took this shape because the project managers wanted autonomy rather than counsel. The project was finished on time with some buffer left for thorough finishing and reworking of defects. The amount of defects was over average in this project due to an early defective supply of a precast concrete assembly.

At the *CAREhouse* project, it was the department manager who suggested the use of Lean Construction. This was accepted by the project managers, who then became allied with the corporate support function. A strong supporting coalition was thus in place. The project participants received intensive training, which was an ideal platform for transferring the content of the operations strategy. Foremen experienced more influence on fine scheduling and therefore became supportive as well. In many aspects, the project was carried out by the book. Not only a strong coalition, but also the support function's practice of experiential knowledge was important. The project was finished before scheduled, but the cost balance encompassed around 5% extra for services.

Crosscutting themes

In relation to top-down, bottom-up thinking (Winch 1998), it can be noted that the renewal process commenced from the bottom up, solidified at a middle level while not being accepted

at the top level. It eventually received support from corporate management and became embedded in corporate strategy, even though it was only a subordinate strategy to others. In other words, this is less than a clear bottom-up process. It can also be noted that a somewhat similar study of a UK contractor implementing Lean Construction exhibits a clear top-down approach (Sage et al., 2012) and that a Finnish paper argue that implementation often occur as pilot project, that however newer develop further (Koskenvesa and Koskela, 2012). Another Danish contractor also experienced a middle management embedding as well as differentiated project management practices (Thomassen et al., 2003). Operations strategy development thus appears to follow contextual paths (see also Arbulu and Zabelle 2006 and Neto and Alves, 2007 for similar accounts).

The process exhibits the important role of middle level managers in project-based production. Production projects and the headquarters hierarchy are often quite disparate. The central champions in the coalitions all came from this part of the company, which established a bridge connecting the two parts of the company. The first Lean project was managed by a senior manager who later became department manager, enabling him to sanction the use of Lean in his part of the hierarchy. Similarly, the support function manager acted from a middle-level position at a time when with project activities were integrating with corporate management. Moreover, it appears that experience with production does seep into the higher ranks of the organisation over time, enabling both integration and operations strategy renewal.

The process also exhibits the project managers' continuous role as local re-shapers of the operations strategy. As the two cases reveal, up-down integration differed in the two projects; more local space remained for re-shaping the project that did not integrate. This finding is similar to those of Neto and Alves (2007) which also see last planner implemented in a piecemeal manner.

Top-level management accepted the new operations strategy and backed it up for a period of time, but their relation to the strategy was not wholehearted, even though or maybe exactly because of top-level management's operational experiences. The pressure for cost reductions during the crisis was also important for the down-sizing of the support function.

Conclusion

The aim of this paper is to study how operations strategy innovation occurs in a project-based organisation and production, with focus on the strategy process. A call has been made for a more balanced content/process understanding of operations and manufacturing strategy understanding. This article contributes by studying a project-based organisation with a political process perspective, analysing a case of operations strategy development through implementing Lean Construction.

The political process perspective is instrumental for showing how coalitions were formed and emerged to back the new operations strategy. The coalition's came to encompass project managers, department managers and support function managers, each with slightly different motives and interpretations of the content of the strategy. Top-level management eventually accepted the new operations strategy and backed it for a period of time, but their relation to the

strategy can be characterised as lukewarm. It was middle management that provided the crucial support for the development, and also acted as solidifier of the new operations strategy.

The contractor experienced contextual pressures during the process from a number of dynamics, and it is under such conditions that an operations strategy development must occur. Therefore, conscious, contextualized and systematic vertical integration and interaction are crucial in project-based companies carrying out operations strategy development as the political and negotiated character of these processes implies that they are emergent and vulnerable. Neither top-down nor bottom-up strategies alone would have worked in the analysed case.

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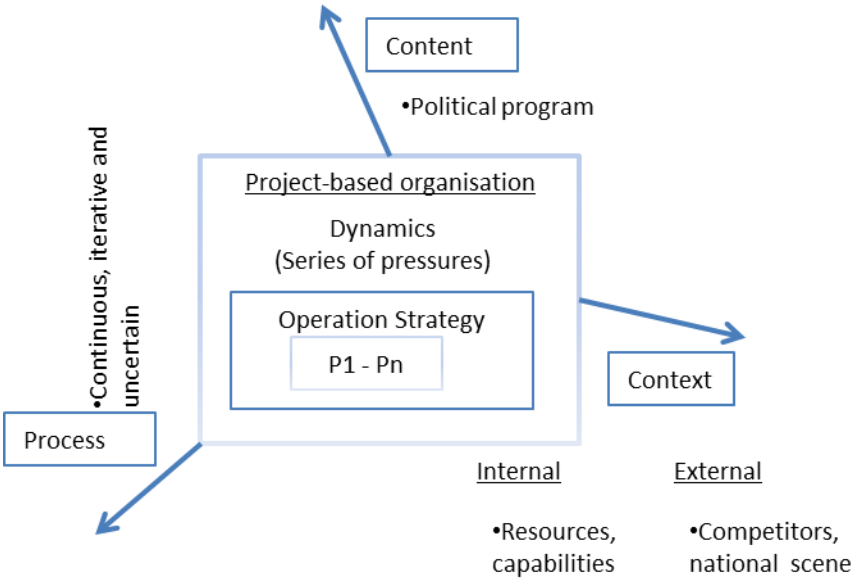
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Figure 1: Conceptual Framework, Source: Own research adapted from Pettigrew and Whipp (1991).



Timeline

