Large Scale Innovation - Reengineering Methodology in SMEs

Positivistic and Phenomenological Approaches

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The aim of this article is to conduct an exploratory study into how SMEs apply reengineering. In particular, the approach of SMEs to reengineering definition and methodology are examined. Reengineering has developed from a background in large enterprises. Existing methodologies mainly assume a large organization setting with large-scale resources dedicated to bringing about the large-scale reengineering changes. The paucity of studies in SMEs is surprising given the current and anticipated future market challenges in the SME environment that increase pressure for organizational realignment and responsiveness and market agility. The research involved a literature review and an exploratory multiple case study analysis. In total eight case studies on SMEs, where reengineering had been applied, were analysed using an inductive research methodology, which analysed positivistic reengineering approaches and less structured, more phenomenologically based approaches, which emerged within the case analysis. The analysis indicates that the taxonomy and nomenclature of reengineering, as defined by large organization-based studies, has not translated into SMEs, who use much more general terminology.

KEYWORDS: methodology; phenomenology; positivism; reengineering; SMEs

Introduction

Most business improvement philosophies, models, tools and techniques originate in the theory and practice associated with large private sector organizations. For example, the Business Excellence model (Wiele and Brown, 1999), ISO 9000 (Ahaire et al., 1996) and Investors in People (Dale, 1999) all have their origins within the underlying assumptions of such organizations. Further development of these business improvement approaches is often equated with wider sectoral application, usually the public and SME sectors (Ghobadian and Gallear, 1996). Thus, it is contended that SMEs often apply business improvement approaches that are fundamentally flawed in an SME context, as they do not start by addressing the key features and constraints of SMEs.
The aim of this article is to conduct an exploratory study into how SMEs apply one such business improvement approach, namely reengineering (Alavi and Yoo, 1995). This approach is selected as it has its origins in large organizations. Zairi and Whymark (2000) point out that large organizations must apply reengineering in a systematic manner if success is to be realised. They point out that inappropriate and mis-application mainly causes large-scale failure rates (attributable to most large-scale change in organizations). It is not the purpose of the article to attempt to measure the effectiveness of reengineering in the SMEs. The first part of the article describes the definition and methodology of reengineering in regard to both positivistic and phenomenological epistemological understanding and how these definitions and methodologies can relate to SMEs. The second part describes the research method, results and discussion. Similar epistemological distinctions in SME based research are made by Choueke and Armstrong (1998), relating to Learning Organisation application in SMEs; and Hines (2000), in regard to focus group research in SMEs.

**Defining Reengineering for SMEs**

Reengineering definitions and resultant methodologies and praxis initially (late 1980s–early 1990s) developed along positivistic assumption lines in relation to organizational learning (Willmott, 1995). While this historical, somewhat mechanistic legacy remains, there has also been the more recent development of reengineering along more phenomenological lines, resulting in more interpretivist and subjective definitions and methodologies (Grint, 1995). Thus, when seeking to develop reengineering in an SME context (or other sector), an epistemological continuum can be considered where definitions, methodologies and praxis may vary (Willmott, 1993), as seen in Figure 1.

Parkinson et al. (1999) points out that this tension in the literature is reflected in change management evaluation and approaches to strategic management. Furthermore, Rickards (1999) refers to similar issues in regard to creativity and

![Figure 1. Epistemological Continuum for Reengineering Definitions and Methodologies](image-url)
innovation management – knowledge creation versus the more structured idea generation and filter literatures. Thus, there is a lack of consensus on the most effective paradigm; there is no one right way. As pointed out by Willmott (1993), these differing paradigms are not incommensurate and can mutually exist in organizations. It is worth noting that although this article uses the precise academic terms associated with epistemology and ontology a helpful and more organizational language could refer to ‘plan driven’ compared to ‘just do it’ approaches, not unlike rapid cycling in strategic double loop learning.

Positivistic Definitions and Methodologies
The reengineering literature is often associated with large-scale innovation and high-risk change (Lee and Dale, 1998). Such views on reengineering are similar to those of Hammer and Champy’s (1993), whose views on reengineering have been supported, or disagreed with, by a number of researchers, (e.g. Francis and McIntosh, 1997; Halachmi, 1996). Hammer and Champy (1993) identify seven key activities associated with Reengineering. The four most fundamental are:

- Business process design;
- Dramatic improvement in business processes;
- A process orientation, (as opposed to a functional orientation);
- A radical change in business processes.

Reengineering is dependent on the successful identification and streamlining of processes that add value to the products or services being provided (Aurand et al., 1996). As such, successful reengineering efforts must focus on the cost and the revenue sides of a business. The fifth of Hammer and Champy’s (1993) critical activities is a ‘starting over approach’. This involves a mindset that focuses on the total reconstruction of a process and not simply a modification of existing practices.

Strong leadership is the seventh of Hammer and Champy’s key activities. Gaining firm support and commitment from top management can easily mean the difference between the success and failure of a reengineering project (Lee and Dale, 1998).

Reengineering and associated business improvement methods are often classified as a ‘mechanized’ view or paradigm of organizations (Peppard and Rowland, 1995). This mechanistic approach leads to stepwise methodologies for reengineering implementation. For example, the approaches of Edosomwan (1996) and McAdam and Leonard (1999) support the use of mechanistic methodologies, which essentially start with process identification and analyses, then process innovation and application (see Figure 2).

These methods are essentially positivistic and appear to be more suited to large organizations where stepwise methodologies can be applied in a cause and effect manner, relying on the quasi-stability of the organizational structure. It is not the purpose of this article to be judgmental between positivism and the phenomenological, or more simply the ‘plan driven’ or the ‘just do it’ approaches. Initial analysis of the research case data indicated that some of the SMEs had adopted this approach.
Phenomenological Definitions and Methodologies

If the current paradigm of reengineering is that of a mechanistic nature, it is contended that resulting mechanistic approaches are too simplistic to understand the organizational change issues involved. There is also an associated increase in people and learning issues that are not predicated on pre-set rules and regulations. Willmott (1995) describes this change as a shift towards the ‘softer’ issues. This ‘breaking of the paradigm mentality’ (Willmott, 1993) is described by Spencer (1994) as a combination of mechanized, organismic and cultural paradigms or models.

Grint (1995) suggests a more balanced, mixed model that is, at least, consistent with the main views of the critical writers. The model indicates that reengineering should develop in four principle quadrants (see Figure 3):

1. Decision Making – Incremental to Utopian
2. Execution – Rational to Political
3. Legitimation – Internalist to Externalist
4. Understanding – Analysis to Synthesis

Grint’s model is discussed below and compared with the reengineering literature to determine its usefulness for advancing reengineering development in SMEs.

1. Understanding – Analytic to Synthetic Thinking

Many existing reengineering
approaches are founded on an analytical epistemology. These approaches can be partially attributed to the engineering and information systems influences of early reengineering developers (Peppard and Rowland, 1995). Grint (1995) contends that such analytical thinking when used in isolation leads to reductionism, unreal fixed boundaries and resultant over-simplification, which ultimately can lead to predictions based on delusory predictive extrapolation. Grint proceeds to advocate a synthesis approach to understanding reengineering-based organizational change, which goes beyond solely the analytical approach (or ‘plan driven’ approach). In the synthesis approach everything is seen as changing and ‘changing together’ (similar to SME contexts; Gunasekaran et al., 1996), rather than as a set of discrete dependent and independent variables (a combination of ‘plan driven’ and ‘just do it’ approaches). Thus, Grint (1995) sees reengineering taking on the role of synthesizing ‘a multitude of disparate elements into an unstable but highly effective hybrid’. Such a process of holistic synthesis is potentially useful in an inherently multifunctional SME context.

2. Decision Making – Incrementalism to Utopian Decision Making Grint (1995) refers to the danger of ‘incremental orthodoxy’ as a reason for some reengineering efforts failing to produce radical improvements. People in organizations largely approach change with an existing set of customs, practices and politics that militate against large-scale innovation. Willmott (1994, 1995) states the need to address such issues, which he broadly characterizes as people issues or the ‘missing
links’, if true large-scale improvement is to take place. Braganza and Myers (1995) list some of these issues as reward, personal contribution, enlightenment and learning. In this respect reengineering is seen as integrating (similar to the ‘synthesis’ described earlier) issues such as leadership, motivation, learning and cultural change (similar to the integrative nature of SMEs; Gadenne, 1999).

3. Execution - Rational to Political As already discussed, the analytical basis of some reengineering methods can lead to reductionism if more contingent approaches are not incorporated in plan driven methods. This reductionism is also supported by an underlying assumption of cause and effect rationality (A Ivesson and Willmott, 1996). For example, in an SME context, networking is a critical success factor (Gadenne, 1999; Stewart and M cAuley, 2000) in promoting business change and development.

4. Legitimation - Internalist to Externalist Discourse on the legitimation of Reengineering as a radical change enabler often focuses on internalist arguments (Grint, 1995). Grint alternatively suggests that an externalist view should be taken in reengineering inquiry. From this perspective reengineering should be seen as having ‘sympathetic resonances’ with other contemporary organizational change approaches. A key strength of successful radical reengineering is therefore the ability to synthesize these disparate strands of organizational change into a single package. Thus a new discourse is provided with which contemporary elements are simultaneously explained and controlled.

Reengineering and SMEs

The organizations in the current study were all in the 50–100 employee bracket, all had quasi-stable structures, processes and procedures (Culkin and Smith, 2000), however they were in rapidly changing markets, reflected in customer changes which required rapid and flexible business processes and organizational change. Reliance on continuous improvement methods were found to be inadequate (R yans, 1995), hence the interest in the more radical reengineering approaches (Raymond et al., 1998). The existing literature on SMEs and reengineering has been collated and coded under key categories, which relate to the specific characteristics of SMEs (McAdam, 2000), discussed below.

Resources

SM E s are by nature resource limited in comparison to larger organizations. Barrier (1994) and K inni (1995) define the resource limitations for effective reengineering implementation as human, material and financial. Such a drain on resources could hinder the SME’s ability to function (R yans, 1995). Furthermore, SMEs have small management teams compared to large organizations and cannot dedicate full time resources to oversee the reengineering change (K inni, 1995). Reengineering requires both integration and diversity of skills and experience. SMEs are unlikely to have this breadth of experience and knowledge (Raymond et al., 1998).
Market
SMEs have little effective control over the market environment; therefore they are considerably affected by volatile market pressures (Raymond et al., 1998). Furthermore, SMEs can align the purposes of the reengineering effort with business strategy, which has been formed to address market changes and pressures (Hale and Cragg, 1996). This alignment can be much more rapid in SMEs than in large organizations because of the increased dynamic responsiveness of SMEs (Wiele and Brown, 1999). Grint’s incremental to utopian approach could support the innovative thinking necessary for increased responsiveness.

Leadership
In almost all change management and reengineering literature (e.g. Francis and MacIntosh, 1997), the importance of leadership is emphasized. In SMEs, where the leadership role is usually dominant, the need for leadership in regard to the reengineering effort is very important (Hale and Cragg, 1996). Leadership commitment must be demonstrated in the allocation of resources and the outlining of plans for the reengineering effort in the long term, rather than in improvement of teams and actions in the short term.

Flexibility
SMEs are more at risk from volatile market conditions than large organizations, and the need to address the effect of change is even more important (Vossen, 1999). The quasi-stable assumptions of the more positivistic stepwise approaches may need to be linked to more ‘just do it’ approaches in this case. The inherent flexibility within many SMEs can be effectively used in implementing reengineering (see Figure 1). The analytical to synthetic approach of Grint (1995) should support this flexibility. The lack of training and development in SMEs may hinder the effectiveness of the rapid decision-making process and the subsequent outcomes (Wiele and Brown, 1999).

Structure
SMEs have relatively informal, flatter and highly centralized structures compared to larger organizations (Hale and Cragg, 1996). Thus, SMEs may not have the same degree of problems when implementing reengineering change that large organizations have in regard to management resistance and functional fiefdom (Francis and MacIntosh, 1997). Hale and Cragg (1996) concludes that SMEs have more chance of quickly forming team-based structures, in line with reengineering, because of their relatively informal style and natural cross-functional working style.

Research Methodology
The main research questions in relation to the aims of the article are: what approaches to reengineering are SMEs adopting and adapting, in efforts to address rapid market change? What reengineering definitions and methodologies are used in the SME discourse?
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The research method chosen was that of an exploratory multiple case study (Yin, 1994). The exploratory case strategy was used as the study focuses on achieving insights based on 'what' type questions (Yin, 1994), that can be used to 'develop pertinent hypotheses and propositions for further inquiry'. A multiple case design was chosen, as the phenomena to be studied were likely to yield more compelling and robust evidence than a single case design. The multiple case design used is similar to that suggested by Eisenhardt (1989) where comparative case analysis and 'replication' across the cases (or different 'experiments'), can enable both unique and consensus findings to be made. The key steps of the research methodology are shown in Figure 4.

Selection of Cases
Initially 70 SMEs were selected as possible candidates for the study. These SMEs were known to be involved in applying business improvement methodologies and had claimed to have used reengineering methodology. This information was obtained through the University of Ulster's Small Business links and the National Quality Centre in Belfast. Furthermore, the organizations were representative of SMEs in both market growth and market decline environments. Next, a series of filters was applied to the SMEs to achieve a manageable number that allowed for design rigour and research resource limitations. First, SMEs (between 50 and 100 employees) were chosen. Organizations in this category have usually developed beyond the embryonic and start-up phase and are undergoing significant organizational change as the organization size increases and the number of markets,

![Figure 4. Research Methodology](image-url)
Customers and systems continue to grow and develop (Culkin and Smith, 2000). Beyond 100 employees, organizations tend to assume a relatively more defined structure and resultant approaches to change (Culkin, 1998). Thus, 100 employees were selected as an upper limit for this initial exploratory research. A cautionary note is needed here – Meeus and Oerlemans (2000) and Larsson (1993) point out that the heterogeneity in the SME sector means that precise numerical employee sized cut-offs are used only as general bands for research purposes rather than exclusive limits. These organizations were further reduced using a Business Excellence Model filter of 400–500 points using the Small Business Excellence model (European Foundation for Quality Management [EFQM], 2000). SMEs in this bracket tend to have significant development in the area of Business Improvement methodology and have a large propensity for ongoing change. Wiele et al. (2000) adopt similar terminology referring to this category as those who are ‘challenging’ barriers to improvement. Finally, eight SMEs were selected for the multiple case study that best met the filter rules in comparison to the other organizations. The eight cases were found to give significant replication and construct rigour (Yin, 1994).

Data Collection and Preparation
Based on the recommendations of Easterby-Smith et al. (1993) and Remenyi et al. (1998) data collected for each case included organizational information, archive data, artefacts and semi-structured interviews with the Managing Director (or equivalent title) and the person responsible for business improvement (Operations Manager, Quality Manager, Supplier Development Manager, etc.).

Analysis Model
The analysis model chosen for the case data was based on two methodological approaches to reengineering which emerged from initial analysis of contrasting approaches in the cases. This model is similar to that of Choueke and Armstrong (1998) involving the Learning Organisation application in SMEs. First, an attempt was made to analyse and structure the data using a typical large organization Reengineering methodology, mainly positivistic and functionalist, that emerged from initial analysis of some of the cases, as discussed earlier (Edosomwan, 1996). Secondly, a less structured, more phenomenologically and interpretativist based methodology (Grint, 1995) was applied to the data which emerged from initial case analysis as an alternative to the more structured approach. The data was then coded (Easterby-Smith et al, 1993; Larsson, 1993) into the main categories of the analysis model methodologies.

Multiple-Case Study Analysis
The SMEs were found to have a range of interrelated reasons for applying large-scale innovation in the form of reengineering. These included the need to realign, and to address rapidly changing markets, new high growth markets, new customers, new products and services, shorter lead times, increased customer satisfaction and reduced costs. These findings are consistent with those for large...
organizations (Peppard and Rowland, 1995), however the SME cases placed more emphasis on reengineering being used to achieve increased agility and alignment in rapidly changing markets, consistent with the findings of Raymond et al. (1998). Surprisingly the SMEs in both the growth areas and the declining areas (see Table 1) had similar reasons for pursuing reengineering. The one exception was the area of cost reduction, which was emphasized more by the SMEs in the declining markets.

**Positivistic Analysis Model**

The case analysis revealed that six out of the eight cases had started reengineering using a positivistic stepwise methodology consistent with that used in large organizations. Although these organizations were not under any supply-chain pressure to conform, there was an implicit assumption that the approach for large organizations must be right: ‘the general option was that reengineering was a structured; analytical; cross-functional approach to the improvement of processes’.

The research revealed that the syllabi for the training were in the main based on large organization methodology with large organization examples. Training and development is a problem area for SMEs (Alstrup, 2000), thus it is somewhat ironic that scarce resources in this area were allocated to misleading courses. Six of the eight of the cases initially adapted the large organization approach using ‘in-house’ considerations to develop a more SME orientated approach. Throughout the cases there was a disappointing lack of SMEs, initially, fundamentally questioning the definition and methodology of reengineering in regard to SMEs’ fundamental structure and being. The positivistic approach was further accentuated by the SME’s use of the Business Excellence Model (BEM; EFQM, 2000). All of the SME ratings on this model were in the 400–500 point bracket, showing that, along with the case analysis, the SMEs had attempted to apply the large organization based reengineering approach which is implicit in the BEM (Criterion No. 5.). There was further evidence that the SMEs has attempted to apply Investors in People (IIP), Balanced Scorecards and ISO 9000 in a similar manner.

The six organizations that applied the more positivistic stepwise approach experienced a range of difficulties, which forced them to adapt a more phenomenological, less formal approach over a period of time. It is stressed that they did not abandon their previous approach, but that they modified it. Categorizing any approach as simply ‘good’ or ‘bad’ results in over-simplification of the issues involved. The factors that brought about this transformation (Figure 5) were mainly those of the earlier discussion.

For example, resource limitations (Raymond et al., 1998) resulted not only in a failure to apply the large organization approach but also in a drop in performance caused by ‘organizational confusion’ during this attempted implementation period. Some of the SMEs found the pervasive influence of the owner and the resultant structure (Francis and MacIntosh, 1997) to be a disadvantage in exclusively ‘plan driven’ reengineering. The formal method was seen as disrupting this authority within the organization by assuming multiplicity of process owners and unacceptable levels of empowerment for process workers. As acknowledged by
<table>
<thead>
<tr>
<th>Company</th>
<th>Sector</th>
<th>No. employed</th>
<th>Market trend</th>
<th>Reeng focus</th>
<th>BEM score</th>
<th>Other Quality initiative</th>
<th>Training</th>
</tr>
</thead>
<tbody>
<tr>
<td>Company 1</td>
<td>Service, customer</td>
<td>55</td>
<td>decreasing</td>
<td>new markets</td>
<td>400-450</td>
<td>iIP</td>
<td>Customer complaints manager</td>
</tr>
<tr>
<td>Company 2</td>
<td>Manufacturing, textiles</td>
<td>82</td>
<td>decreasing</td>
<td>improving customer processes, new</td>
<td>400-450</td>
<td>ISO 9000</td>
<td>Manufacturing Director</td>
</tr>
<tr>
<td>Company 3</td>
<td>Service, sports</td>
<td>60</td>
<td>decreasing</td>
<td>new markets, new customers</td>
<td>400-450</td>
<td>iIP</td>
<td>Managing Director</td>
</tr>
<tr>
<td>Company 4</td>
<td>Manufacturing, computers</td>
<td>95</td>
<td>increasing</td>
<td>new markets, new customers</td>
<td>400-450</td>
<td>iIP, ISO 9000</td>
<td>Customer Services Manager</td>
</tr>
<tr>
<td>Company 5</td>
<td>Service, distribution</td>
<td>85</td>
<td>decreasing/flat</td>
<td>new markets</td>
<td>400-450</td>
<td>sector accreditations</td>
<td>Financial Controller</td>
</tr>
<tr>
<td>Company 6</td>
<td>Service, software</td>
<td>53</td>
<td>increasing</td>
<td>new markets, new customers</td>
<td>400-450</td>
<td>iIP, Balanced Scorecard</td>
<td>General Manager</td>
</tr>
<tr>
<td>Company 7</td>
<td>Manufacturing, printing</td>
<td>77</td>
<td>increasing</td>
<td>new markets, new customers</td>
<td>400-500</td>
<td>iIP, ISO 9000</td>
<td>General Manager</td>
</tr>
<tr>
<td>Company 8</td>
<td>Manufacturing, building products</td>
<td>58</td>
<td>increasing</td>
<td>new markets, new customers, improving customer processes</td>
<td>400-450</td>
<td>ISO 9000</td>
<td>Business Improvement Manager</td>
</tr>
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Improvement Manager: ‘He is the sole owner, the company is driven by him, and he decides through consultation’.

In summary, while these factors forced the six SMEs to abandon the positivistic large organization approach, it did not deter them from seeking to implement a form of reengineering suitable for their organizations (along with the two SMEs who directly took this route).

Phenomenological Definitions and Methodologies
Following the application of the positivistic analysis model to the case studies, the more phenomenologically based analysis model, as discussed earlier, Grint (1995), was applied to the multiple case data. The analysis is structured under the four key headings of Grint’s reengineering model (see Figure 3).

1. Understanding - Analytic to Synthetic Thinking
   The case analysis revealed that the SMEs, once past the initial solely ‘plan driven’ attempts at reengineering, quickly and effectively developed an understanding of reengineering that was acceptable to SMEs. For example, the SMEs had a range of improvement targets, both radical and incremental, such as exceeding customers’ needs, continuous improvement, developing new markets (similar to that of Hale and Cragg, 1996). Rather than separating out distinct targets for distinct initiatives, the broader understanding of reengineering enabled them to have a ‘holistic’ reengineering change approach that addressed multiple interrelated improvement targets. Thus, specific adherence to paradigm ideology was avoided. The word ‘holistic’ (Grint, 1995) was frequently used by the SMEs to explain their broader approach to reengineering: ‘we are adopting a fairly holistic approach . . . being able to suit local requirements’.

   One SME manager linked the ‘holistic’ and ‘creativity and innovation’
approaches to reengineering: ‘a holistic approach is taken that encourages and stimulates higher levels of creativity and innovation’.

Thus, moving from solely positivistic stepwise reengineering to include a more phenomenologically based approach has resulted in increased holism in terms of understanding and the identification of such an approach with increased creativity and innovation within the SMEs.

2. Decision Making – Incrementalism to Utopian Decision Making

A key tenet of reengineering is the concept of radical change, or going beyond incrementalism (Peppard and Rowland, 1995). Grint (1995) contends that ‘incremental orthodoxy’ will only change to radical or ‘utopian’ outcomes when change decisions are based on the developed understanding of reengineering referred to earlier. The case evidence suggests that a strong temptation exists for the SMEs to accept only incremental change (Wiele and Brown, 1999) and associate radical change as the exclusive domain of large organizations. However, there was strong evidence that the ‘new’ understanding of reengineering based on holism, creativity and innovation encouraged radical change. Examples of radical change targets in the cases included 80% increase in availability, over 50% reduction in production lead-time and over 50% increase in new markets. These compare favourably with those of large organizations (Peppard and Rowland, 1995). The drivers behind these targets were based both on increasing and decreasing markets: ‘the cost of manufacture had spiralled out of control . . . this situation could not continue if the company was to stay in business’.

Some of the SMEs considered their reengineering changes to have been so radical that they now are industry leaders in areas of their operation: ‘we now lead our industry on service and lead-time. Our largest competitors struggle to keep up with our current standards and when customers regard service as key this keeps us ahead of the competition’.

The creativity and innovation associated with the ‘new’ understanding of reengineering was seen as crucial in new product and market development (Stewart and McAuley, 2000). One Managing Director, referring to the role of reengineering in new product development, stated: ‘it is a good time to embark on the development of new products and reduce the company’s dependence on few markets’.

Despite the generally optimistic development and use of the broader approach to reengineering some of the SMEs expressed concern at the level of risk inherent within any approach to reengineering, especially with their limited availability of ‘spare resources’ (Ryans, 1995) if the reengineering efforts were to fail.

3. Execution – Rational to Political

Following ‘Understanding’, and ‘Decision Making’ there is a need for ‘Execution’ or implementation of the ‘new’ reengineering approach (see Figure 3). The initial failures by most of the SMEs in applying solely large organization stepwise approaches, had developed a willingness to try a broader reengineering approach, while not eliminating the radical change element of reengineering.
To encourage a ‘reengineering culture’ in the organization, a number of the SMEs linked the issue of people development (a critical issue in SMEs; A Istrup, 2000), and reengineering: ‘a company development plan has been agreed and all those involved in reengineering are currently engaged on a personal development plan’.

The role of leadership within an SME context (Hale and Cragg, 1996) was specifically referred to by a number of the SMEs. Referring to the Managing Director, one senior manager stated: ‘they all report to him, he has the ultimate say. He is the sole owner, the company is driven by him, and he decides through consultation’.

In implementing reengineering some Managing Directors and senior managers see a need for ‘balance’; for example, one organization was growing, leading to a more formalized management structure while at the same time: ‘the company has always benefited from an entrepreneurial culture where managers and employees were empowered to take decisions’.

Interestingly, the language used by the SMEs in regard to reengineering was not related to specific business processes types, as often found in large organizations. Rather there was a more system-based language referring, for example, to ‘customers’, ‘suppliers’, ‘new markets’, ‘seamless integration’. This finding is consistent with the development of a more ‘holistic’ understanding of reengineering as discussed earlier. Thus, the rigid procedures of formalized reengineering were absent in all of the SMEs studied: ‘it is clear there are no formal new/product service processes’. However, a holistic version of reengineering was practised and radical business improvement results were obtained as discussed earlier.

4. Legitimation – Internalist to Externalist

The area of ‘Legitimation’ is pervasive to all of the areas in Grint’s (1995) model (Figure 3). From this perspective the new approach to reengineering must be seen as linking to other externalist approaches to business improvement in a ‘holistic’ whole, rather than adopting parochial internalist perspectives.

There was clear evidence that the SMEs had holistically linked their reengineering efforts to the Business Excellence model; as shown in Table 1 all of the SMEs were in the 400–500 point range on the BEM model, which is considered to be a good score (Wiele et al., 2000). One manager stated: ‘the reengineering work has developed our links with the British Quality Foundation [Business Excellence Model] and the objective of being in the top tier of Europe’s best run SMEs . . . our score is 420 [BEM] compared to the European top tier of 650 plus [BEM]’.

Some senior managers saw a clear link between aspects of Investors in People and the reengineering efforts: ‘staff surveys have been set up and cross functional teams to involve employees at all levels in the improvement effort . . . the introduction of a system necessarily involved the introduction of multi-skilling’.

The ‘new’ reengineering approach was also seen as ‘legitimately’ interfacing with other external improvement efforts such as modular manufacture: a more flexible approach was needed than traditional assembly line techniques, the way
in which this state of affairs was achieved was through the introduction of reengineering in conjunction with modular'.

In summary, the new 'Understanding', 'Decision Making' and 'Execution' of reengineering in SMEs is closely linked to, and a part of, other externalist business improvement approaches. The key link for the organizations studied was between reengineering and the Business Excellence model. Although not the purpose of the current study, the researcher feels caution is needed to avoid 'new' reengineering being linked with 'old' BEM approaches. There is a need to replicate this current research for other business improvement initiatives in an SME context, not least for the BEM.

**Conclusions and Recommendations**

Most business improvement philosophies, methodologies, tools and techniques have their origins in theory and practice that is grounded in large private sector organizations. In the main these approaches to business improvement, such as reengineering are positivistic, rely on cause and effect relationships and involve stepwise methodologies, or in other words most tend to be more 'plan driven'.

The research has shown that attempts to solely apply these reengineering methods to the SMEs studied ended in failure and a need to fundamentally reconsider the definition and methodology associated with reengineering in SMEs. Key factors associated with the failure of solely plan driven large organization reengineering methods when applied to SMEs were resource constraints, rapidly changing markets and customers, leadership roles, the need for agile strategy, flexibility and structure.

The research findings indicate that the SMEs developed their own fundamental understanding and successful implementation of reengineering. Overall, their approach was a combined (or synthesis; Grint, 1995) approach, using a greater number of holistically based approaches that include both positivistic and phenomenologically based strands. Grint’s model of reengineering, which is situated in this epistemological domain, was found to be a useful means for summarizing the SMEs’ approaches to reengineering. First, the model (Figure 3) shows the need for agreed understanding, not simply based on rational thinking but developing a synthesis of understanding where many approaches are accepted. Thus, the SMEs developed a holistic understanding of reengineering that did not exclude an approach because it did not fit a precise methodology. Furthermore, their understanding of reengineering embraced creativity, innovation and knowledge as key catalysts for reengineering change. Secondly, in terms of ‘Decision Making’, the ‘new’ reengineering understanding developed by SMEs did not succumb to the temptation to retreat to incrementalism; rather, they retained the radical tenets of reengineering. Large-scale improvements were not seen as the exclusive domain of large organizations and the research revealed many examples of radical improvements in a range of key performance measures. Thirdly, the research relating to ‘Execution’, revealed that the SMEs were relying on a range of measures to implement the ‘new’ reengineering. These measures were not restricted to rational implementation reasoning but showed cognizance.
of political implementation factors such as the more dominant Managing Director’s influence in an SME and the organizational culture. Implications for training and development in SMEs include greater emphasis on action-based learning as distinct from formal learning by rote. Fourthly, the reengineering efforts were ‘legitimized’ within SMEs by linking them to other external business improvement approaches, such as the Business Excellence Model, Investors in People and Modular Manufacturing.

There is a potential danger emerging that ‘new’ reengineering in these companies will be linked with ‘old’ BEM or ‘old’ IiP. Such a link could potentially stop much of the progress that has been made in these organizations. It is therefore recommended that further case-based research be carried out to examine how SMEs are applying the Business Excellence Model and other business improvement approaches to see if there is a fundamental shift in their understanding beyond the assumptions of the large organization.

References

McAdam: Reengineering Methodology in SMEs


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Innovation à grande échelle - Méthodologie du réingéniering dans les PME
Approches positivistes et phénoménologiques – Rodney McAdam

Cet article a pour objet de mener une étude préliminaire sur la façon dont les PME appliquent le réingéniering. En particulier, l’approche des PME vis-à-vis de la définition et de la méthodologie du réingéniering est examinée. Le réingéniering a vu le jour dans les grandes entreprises. Les méthodologies existantes supposent principalement une grande organisation disposant de ressources à grande échelle consacrées à apporter les changements au niveau du réingéniering à grande échelle. Le manque d’études dans les PME est surprenant si l’on considère les défis de marché actuels et futurs anticipés dans l’environnement des PME qui augmentent la pression pour le réalignement et la réactivité organisationnels et l’agilité de marché. Les recherches comportaient une revue de la documentation et une analyse préliminaire d’études de cas multiples. Au total, huit études de cas sur les PME, où le réingéniering avait été appliqué, ont été analysées en faisant appel à une méthodologie de recherche inductive, qui analysait les approches de réingéniering positivistes et les approches moins structurées, plus phénoménologiques, qui se dégageaient dans l’analyse de cas. L’analyse indique que la taxonomie et la nomenclature du réingéniering, comme définies par les études portant sur les grandes organisations, ne sont pas passées dans les PME, qui utilisent une terminologie bien plus générale.

Mots clés: méthodologie; phénoménologie; positivisme; réingéniering; PME

Innovación a gran escala - Metodología de la reestructuración en las PYME
Enfoques positivistas y fenomenológicos – Rodney McAdam

El objetivo de este artículo es realizar un estudio preliminar sobre la manera en que las PYME aplican la reestructuración. Se examina, en particular, el enfoque que las PYME le dan a la definición y metodología de la reestructuración. La reestructuración tiene sus orígenes en las grandes empresas. Las metodologías existentes se basan en un supuesto marco de gran empresa con cuantiosos recursos dedicados a producir cambios de gran alcance en la reestructuración. Es sorprendente la escasez de estudios sobre las PYME, dadas las perspectivas actuales y futuras del mercado en el ambiente de las PYME que presionan cada vez más para una reordenación organizativa, y sensibilidad y agilidad en las actividades del mercado. La investigación involucró una revisión de la literatura especializada y un análisis preliminar de varios estudios de casos prácticos. Se estudió un total de ocho casos de PYME donde se había aplicado la reestructuración, empleando una metodología de investigación inductiva para analizar los enfoques positivistas de la reestructuración y los enfoques menos estructurado y más fenomenológicos que surgieron dentro del análisis de los casos. El análisis indica que la taxonomía y nomenclatura de la reestructuración, definidas por los estudios basados en grandes empresas, no se trasladan a las PYME donde se emplean términos más generales.

Palabras claves: metodología; fenomenología; positivismo; reestructuración; PYME

Innovation in großem Stil – Die Methodik der innerbetrieblichen Strukturänderung in Klein- und Mittelbetrieben
Positivistische und phänomenologische Ansätze – Rodney McAdam

Ziel dieses Artikels ist die Durchführung einer Voruntersuchung über die Umsetzung der Strukturänderung durch Klein- und Mittelbetriebe. Insbesondere wird der Umgang von
Klein- und Mittelbetrieben mit Definition und Methodik der Strukturänderung untersucht. Ausgangspunkt für die Entwicklung der Strukturänderung waren große Unternehmen. Die bisherige Methodik nimmt hauptsächlich als Umfeld eine Großorganisation an, die sich mit umfangreichen Mitteln die Verwirklichung der umfassenden Änderungen im Rahmen der Strukturänderung als Ziel setzt. Der Mangel an Studien an Klein- und Mittelbetrieben ist überraschend, wenn man die aktuellen und die erwarteten künftigen Herausforderungen an den Markt in der Umgebung der Klein- und Mittelbetriebe betrachtet, die den Druck in Richtung einer organisatorischen Neuorientierung und Reaktionsfähigkeit sowie Marktbeweglichkeit verstärkt.


Schlagwörter: Methodik, Phänomenologie, Positivismus, Strukturänderung, Klein- und Mittelbetriebe