Improvement through International Business Profile Benchmarking: Case Studies from Melbourne Australia

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ABSTRACT

The small and medium-sized enterprise(sme) is presented in many cases as the source of economic development and the creation of employment. However, the sector is very inhomogeneous, and presents significant challenges to policy makers and those responsible for policy implementation. Many innovative ideas have been developed to address the support of the sme sector with a view to improving survival rates of companies in the sector. One way to improve the survival rate of firms in the sector is to enable them to identify their strengths and weaknesses and address these in a practical way, ameliorating the effects of weakness and capitalising on their strengths. This paper reports on the use of a business profile benchmarking process based on the UK Benchmarking Index in the context of small and medium-sized enterprises. The paper describes the approach to improvement which was taken with six different companies in the Northern Metropolitan region of Melbourne. The improvement and development of such companies is crucial to the continued wellbeing of major segments of outer metropolitan communities. The success of this instrument may make a significant contribution to ensuring such improvement and development.

Keywords: Business Profile Benchmarking, SME Sector, Case Studies, International Competitiveness

1.0 Introduction

The importance of the SME sector to the wellbeing of modern economies has been recognised in most developed economies. Their contribution to economic activity, job and wealth creation has made them a focus for governments internationally. In
developing economies, the sector is seen as the kernel of growth and development, as well as constituting the infrastructure which attracts and supports inward investment. In the developed economies, the sector is seen as dynamic and a source of innovation, flexibility, simple organisational structures and rapid decision making. The sector is, however, extremely diverse and inhomogeneous, and this is a characteristic which makes the sector difficult to manage from a policy perspective. For example, many of the companies in the SME sector in the developed economies are, in fact, sole practitioners who have chosen ‘corporatisation’ as a legal entity, rather than to trade as an individual. In many jurisdictions, there are legal and fiscal advantages to this separation of the individual from the trading entity.

In the developed economies, there are examples of small, long established companies which are trading in the same way, and at a similar level to previous years and, perhaps, decades. There are also newly established, entrepreneurially driven companies which are destined to either develop successfully, collapse, or go out of business, having served their purpose. The challenge for those engaged in the area of ‘business development’ and the associated policy makers is to create an environment and encouragement and support systems which meet the needs of the diverse populations.

The Australian Bureaux of Statistics (ABS) classifies businesses as small businesses if they have less than 20 employees, medium-sized businesses if they have between 20 and 200 employees and large businesses where more than 200 people are employed. ABS (1999) estimated that the small business sector, including sole practitioners, constituted 96% of all non agricultural enterprises, and provided 47% of total employment in Australia. These statistics are similar to those reported for the UK (Day(2000)).

Thus, the SME sector is an important provider of employment and economic activity. The increase in globalisation and the associated, or enabling removal of distance as a barrier to communication and trade brings both opportunities and threats. (Ritchie and Brindley (2000) The opportunities involve the opening up of markets which were remote and inaccessible, with the possibility of expansion in outputs, lowering of unit costs and the achievement of economies of scale. The relative reduction in freight costs and the advent of commercial airfreight capability at reasonable prices have lowered the transport cost barriers to remoteness of markets. The development of internet based information, quotation and ordering systems which operate in real time has replaced, among other things, the relative exclusive ‘partnership’ based EDI systems of a decade ago. Direct communication in real time via email has also improved communications and provided greater confidence that accurate, timely and appropriate information can be exchanged without impediment or excessive time delay.
This environment has encouraged companies to contemplate exporting, overseas operations, entering the international market for the supply of goods and services, joint ventures, and other similar developments. (Jameson (2000), Weiskott (2000), Burpitt and Rondinelli (2000)).

These developments combine to present two very significant challenges. Firstly, for the policy makers who have a responsibility to support and nurture the economic development of their localities, regions or countries. How is support to be provided to the SME sector to ensure that the sector thrives in an increasingly globalising economy? At the level of the individual enterprise, how is improvement to be achieved to maintain competitiveness, particularly when there are likely to be new entrants to the global marketplace?

The personal experience of an enterprising individual who has attempted to access support systems in the United States is catalogued by Hlava (1999), who expresses frustration about her experience. The main criticism of the systems relate to their generic nature, and their failure to relate to the situation of the proposed beneficiary of the information. Support organisations are perceived to be bureaucratic, with unrealistically long response times and to be providers of information which requires considerable tenacity to follow through.

Robson and Bennett (1999) report on the UK government’s creation of the “Small Business Service” to replace a variety of different support mechanisms and from a number of different agencies. These authors report that the previous administration had identified the problem of multiple sources of information of varying standards from government and other organisations. That administration had evolved a policy of decentralising support for the SME sector to the local organisations providing SME advice and support. This was combined with a policy decision to ‘target’ support on firms with 10 – 200 employees which had ‘growth potential’. It is further reported that the experience of those who had accessed support services was very variable, ranging from very dissatisfied to very satisfied. The “Small Business Service” is reported to have been designed to address a number of these criticisms and perceived weaknesses in the previous arrangements. Ultimately, the effectiveness of the support mechanisms depends on the calibre of those who provide advice and assistance, and on the instruments and tools that they have to support them. The SME sector requires people who are capable of taking a whole business approach to advice and support, and such people may be in short supply in the SME support environment.
This paper reports on a set of case studies where the UK Benchmarking Index instrument, which was developed by the UK Department of Trade and Industry to enhance the instruments available to those providing support and advice to SME sector companies in the UK (Pilcher (1999)). The European Union has now recognised the instrument as a genuine contribution to the support and assistance of SME sector companies, and a project is underway to extend the use of the instrument, and the service that it provides, to the wider European Union companies. In parallel, portability to Australia has been established (Dalrymple (2000)) and the extension of its use to the United States is underway. This is an example where the government support systems have successfully enhanced the tools and instruments available to those providing support, advice and assistance to the SME sector. The scale of investment and the level of activity involved in making this instrument a useful contribution has been such that only national government could have enabled this to occur.

The results reported here constitute part of a longitudinal study which seeks, in the first instance, to establish whether the use of such an international business profile benchmarking tool is portable into the international arena. The second question addresses whether the use of the instrument acts as a catalyst for improvement activity. The third element seeks to establish whether the improvement activity achieves improvements sought. The longer term goal of the program is to establish whether the intervention based around the international business profile benchmarking activity produces sustainable improvement in competitiveness. The first and second questions are reported elsewhere (Dalrymple (2000)), and it is the third question which forms the basis of this paper.

The question of competitiveness can be reduced to the question of making ‘better use’ of labour, plant and equipment, capital investment, materials, or some combination of these. The approach may be given a new name, for example, ‘Just-in-Time’, but the common theme in these modern approaches to management is a desire to make the enterprise ‘more productive’. This is illustrated in a case study by Gunasekaran, Forker and Kobu (2000) which reports on a case from the automotive supply industry.

2.0 Case Studies

2.1 The Companies
The design of the project was such that a variety of different sizes of company was sought, although in this project, micro companies ie those with less than 10 employees were excluded. It was also intended that a variety of industry sectors would be addressed.
It was felt that, in order to test the applicability of the business profile benchmarking instrument, this level of variety would be desirable. It was also desirable to include some companies from the automotive supply sector, where there has been considerable attention to supply chain matters through, for example, QS9000.

2.2 Employee Size Distribution
The number of employees in the companies which were included in the full business profile benchmarking exercise varied from fifteen to over three hundred. All but three companies had eighty employees or less.

2.2 Turnover Distribution
The company turnovers ranged from $1.6 million to $170 million. All but three companies had a turnover of forty Million dollars or less, whilst the majority of companies had a turnover of eight million dollars or less.
2.3 Industry Sector Distribution
A variety of industry sectors was represented. There were a number of companies from the automotive supply sector, although some of these came for the component replacement market, rather than suppliers to the original equipment manufacturers. This is relevant because the QS 9000 process has not been generally applied in the replacement market. The OEM automotive supply market was, however, represented. The chemical and related industries were represented, as were textiles and engineering fabrication. There were a number of ‘systems fabricators’, engineering, electrical and refrigeration systems all featured. Thus, the perception is that there was a reasonable range of the important industries from Northern Metropolitan Melbourne represented in the sample. That is not to suggest that the sample is either random or representative.

3.0 Supported Case Studies
Six case study companies were selected for assistance to implement action plans which had been developed from the benchmarking profile.

3.1 Case Study 1
Case Study Company 1 is a stainless steel fabricator for the construction industry. It has 45 employees and it has achieved high performance levels in many aspects of its business. Innovation measures are at international best practice levels. The business profile benchmarking process indicated that improvement was possible in the adherence to production schedule. This was seen as increasingly important because of competition on both price and delivery. There were a number of issues identified, but the skills of the managers and supervisors in the production area were selected as an important area for training. The outcome was to be an increased ability at all levels of the organisation to further improve performance and maintain growth of the company in order to maintain market position.

3.1.1 Approach
A series of training and learning sessions with the Factory Manager, Supervisor and Leading Hands was carried out. Subjects covered included working as a team and problem solving. The issue chosen for application of training was to improve production schedule adherence to best performance levels of 94.5% as identified in the benchmarking process.

3.1.2 Outcomes
After seven weeks production schedule adherence had increased by nine percentage points. The major reasons for improvement were:
- Making results visible
- Introducing a weekly schedule based on what was actually feasible
- Changing some work practices
Increasing the amount of information supplied to the shop floor on specific jobs
Changing some habits regarding communication and supervision style
Other initiatives are planned relating to monitoring and improving key manufacturing performance measures and making performance visible to the workforce. Further improvement programs will be initiated based on those measures, including comparisons with the business profile results.

3.1.3 Comments on Case 1
A longer term, strategic approach is being taken to maintain the achievement of the company’s key growth and market objectives. Training of apprentices has been high compared with similar companies, but the company wishes to achieve best practice levels of investment in training for all employees, another key issue identified in the benchmarking process.

3.2 Case Study 2
Case Study Company 2 is an electrical engineers and manufacturers producing mains transformers and related systems. This is a company with 15 Employees that has excellent growth and innovation performance backed by strong financial management as identified by the benchmarking process. The competitive pressures for this company come from both price and on time delivery. The company had some concerns about their production schedule adherence, which was giving rise to higher than necessary costs and customer satisfaction issues. These were identified in the benchmarking process. Improve % adherence to production schedule. The focus of the improvement programme was improved customer satisfaction by improving orders delivered when promised.

3.2.1 Approach
A new approach was taken to production planning based on a simple weekly demand schedule that is issued to manufacturing. The basis of the approach is:
- Development of a rough cut production schedule for all orders
- Production of a weekly plan that is issued to manufacturing, indicating what is to be produced that week, with day to day priorities
- Making the plan visible to the shop floor, and marking progress on the plan daily
- Monitoring and reviewing performance weekly. Performance is reviewed in terms of what was, and was not, within the control of manufacturing.

The weekly plan must be feasible in terms of capacity (hours worked) and availability of drawings and bought in components. The previous approach was to issue all orders and delivery dates to manufacturing regardless of availability of capacity, drawings and components, and plan each job on the shop floor. The problem was the difficulty to effectively juggle all the jobs simultaneously. It also had the unintentional effect of passing decision making on priorities to the shop floor, without adequate information to
make good decisions. The new approach focuses manufacturing on effectively controlling day to day production against a defined plan, whilst management controls the total picture.

3.2.2 Outcomes
Within 14 weeks production schedule adherence had improved by 16 percentage points, and then levelled off. Projects have been initiated to improve further to achieve best performance levels.

3.2.3 Comments
As part of developing the solution, members of the company visited another organisation to see how a simple weekly demand schedule system worked. This visit helped to make the decision to implement such a system, but the details of the system developed were unique to the company. The outcomes from the Business profile and benchmark project acted as a catalyst for the company to take the step of re-assessing their approach to strategic issues, and a number of initiatives will be taken to further develop the company to appropriate international performance levels.

3.3 Case Study 3
Case Study Company 3 is a manufacturer of beds and associated furniture. The company has 80 employees and a good business profile relative to its strategic objectives. It has a strong focus on customer service and satisfaction. As a supplier to the retail industry, speedy delivery is important to the company’s customer base. However, large stock holding was not an option for this company. Reduced manufacturing lead times and improved production schedule adherence were the major issues identified through the benchmarking process. The improvements sought were seen as related to increased profit by reducing direct manufacturing costs and further improving customer satisfaction levels.

3.3.1 Approach
The project was aimed at squeezing time out of the manufacturing process by reducing time spent on non-value adding activities. Three areas were initially analysed, an assembly operation, powder coating line and a multi-spindle drill. Two of these areas were shown to already have high levels of value adding performance but a number of opportunities for improvement in all three areas were identified:
- Further reduce drill set up time
- Change off-line materials handling methods at the powder coating line
- Change some work methods at the assembly line

3.3.2 Outcomes
A potential 5 to 15% improvement in productivity is possible at the three areas. However the effect on adherence to production schedule and related measures will not be
immediately evident until the interaction with other sequential manufacturing processes has been assessed and throughput re-balanced. The analysis and reduction of non-value adding time will be systematically applied to other manufacturing areas.

3.3.3 Comments
This project is an example of how improvement of high level measures depends on improving a number of operational measures. The Business Profile provided data on operational measures and indicated those areas having the best potential for improvement relative to peer performance within the industry.

3.4 Case Study 4
Case Study Company 4 manufactures car trailer parts and refurbishes of torque converters for automatic cars. The company has 34 Employees and a strong profit and financial management profile coupled with high growth levels from existing products and customers. These strengths were identified in the benchmarking process, and the ‘innovation’ element of the benchmarking indicated that growth might be sought through addressing new market segments and new customers. The company expressed a desire to sustain strong financial performance in the future.

3.4.1 Approach
The firm already had ideas for a number of products they could develop from an engineering point of view, but the first step was to create a business development strategy by a systematic analysis of opportunities in three different market areas:
- Existing Customers / New Products – 18 opportunities identified
- Existing Products / New Customers – 4 opportunities identified
- New Products / New Customers – 3 opportunities identified compatible with existing business

Opportunities were ranked according to potential financial returns, risk and ease of implementation. A short list of opportunities was drawn up and priorities allocated to each opportunity. An action plan was developed to implement the business development strategy, commencing with the high priority items on the short list.

3.4.2 Outcomes
Opportunities to increase turnover by 50% were identified though it is unlikely all opportunities will be pursued due to resource and capacity constraints. The outcomes will be achieved in the long term rather than the short term.

3.4.3 Comments
The firm has a strong business profile. The benchmarking process indicated it had been achieved by a best performance approach to supplying existing products to existing markets. It was realised that it would be difficult to maintain this performance in the long term, and the business profile revealed that the issue of developing new markets and new customers offered the best opportunity for improvement.
3.5 Case Study 5
Case Study Company 5 is a manufacturing engineer making materials handling and pneumatic conveying equipment and systems. The company has 27 employees and it is a company that has made significant investment in R&D, training and capital equipment as well as a strong focus on innovation. These characteristics were identified in the benchmarking process. The company also required to improve profitability through improved manufacturing performance. The percentage adherence to production schedule was identified as the benchmark measure to be used to monitor outcomes.

3.5.1 Approach
An analysis of time taken for all the activities associated with manufacturing revealed the interaction between sales, engineering, on site work, stores and manufacturing had the major influence on manufacturing performance. Four areas were highlighted which would lead to significant improvements in manufacturing performance.
- Design standardisation of material and components where possible, linked with a single source supply approach,
- Redefine "urgent" to reduce stop/start manufacturing,
- Improve daily planning between on site work and stores,
- Source a transport supplier that will provide a service to better meet the needs of the company.

3.5.2 Outcomes
It was estimated that a 10 - 15% improvement in manufacturing productivity could be achieved. Each 1% improvement would increase Return on Sales (profit as a % of sales) by half a percentage point - the outcome is significant. Solutions will be implemented over the relevant period of time. Some solutions, such as design standardisation and transport, can not be introduced overnight. Changes to manufacturing planning methods to be implemented quickly to address the above issues plus a number of other specific one-off issues that were highlighted in the initial analysis of data.

3.5.3 Comments
The project revealed that manufacturing performance was mainly influenced by factors external to manufacturing. It also provided an example of the inter-connection between benchmark measures in the Business Profile (e.g. manufacturing ratios and supplier performance).

3.6 Case Study 6
Case Study Company 6 manufactures commercial refrigeration equipment. The company has 20 employees and a strong focus on customer service and satisfaction. It has world
class performance for orders delivered when promised and zero customer complaint level. However, delivery was frequently achieved at a cost to the company. The focus of the project undertaken was to reduce actual to estimated manufacturing times, as this issue was the major reason for a lower than desired production schedule adherence. This was undermining the profitability of the company.

### 3.6.1 Approach
The initial project was confined to panel assembly. An analysis of time taken for all the activities associated with panel assembly revealed four activities that could be improved:
- Picking up and putting down tools
- Measuring and checking
- Cleaning
- Going to and from the folding machine

### 3.6.2 Outcomes
A potential 10 – 15% improvement in productivity was regarded as possible. A second folding machine was purchased which has been sited within the panel assembly area. Using a bin within the panel assembly area reduced ‘clean-up time’. Changes to work practices and methods will result in reducing the time taken for handling tools, measuring and checking. The process piloted in this area will be systematically applied to other manufacturing areas.

### 3.6.3 Comments
Whilst the driver for improvement was a desire to reduce direct manufacturing cost and improve profitability, the clue in the business profile that indicated the potential opportunity for improvement was the % production schedule adherence measure. Normally this measure would relate more to the customer satisfaction issue of orders delivered when promised, but the company was already a world class performer in this area.

### 4.0 CONCLUSIONS
The International Business Profile Benchmarking instrument which was initiated in the UK as the UK Benchmarking Index and has been developed into a diagnostic instrument for European small and medium-sized firms was successfully piloted in Australia. The owner managers of the Australian companies which participated in the research programme confirmed the validity of the instrument for their particular business. The case study companies took varying times to begin their work on the improvement projects. In some cases, preliminary data collection was required to establish the current position. Thereafter, the companies began to undertake the change processes required to bring about the improvements. In some cases, the companies needed to overcome the inherent reluctance to change anything before the first small changes could be made. In
all cases, once change had been achieved in one area, the process was more accepted and
the perception of change had been modified. In some cases, changes were being
suggested from the shopfloor, rather than management or supervisory staff.

4.1 Evaluation Interviews
The six companies were all visited after the projects had been implemented. The purpose
was to obtain feedback about the processes of data collection, benchmarking, the seminar
and the follow-up assistance. In all cases, the participants regarded the process as a
catalyst for change and improvement. All participants said that it was worthwhile and
that they would recommend it to other companies. All companies also agreed that they
would be willing to participate in benchmarking in the future to establish whether their
improvement projects had brought about lasting change and had had a positive effect on
the higher level measures that they had wished.

4.2 Programme Outcome
The conclusion of this programme is that the international business profile benchmarking
instrument is applicable with some care to companies in Australia. The case studies
illustrate that in the case of these companies, the instrument did catalyse the firm to take
to the improvement road and implement improvements in their operations. Further
evaluation in the future will demonstrate whether the improvements have been sustained
and produced the desired improvements in the important high level business measures.

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