

## PRINCIPLES OF PRODUCTIVITY AND OPERATIONS MANAGEMENT FOR SMALL AND MID-SIZE BUSINESS

### ABSTRACT

For this article, I selected a sector that has not been covered by authors and could hardly be found in books for Operations Management. I find this topic's importance and significance to the global economy, and the Western, in particular, very high. Authors and advocates (e.g., Schroeder, 2004) dealt with the large enterprises, from both the manufacturing and service sectors; the smaller firms, known as Small Business, Minority Owned Business, SME (Small and Medium-size Enterprise), or SMB (Small and Medium-size Business), have been virtually ignored by them.

### DEFINITION AND CHARACTERISTICS

A Small and Medium-size Enterprise is defined differently, according to the purpose of each definition; the "UK Department of Trade & Industry" (2001) suggests that it is mainly because of the wide diversity of businesses. The UK Department provides a basic definition of SME, one that was used by the Bolton Committee in its 1971 Report on Small Firms: "a small firm is an independent business, managed by its owner or part-owners and having a small market share". The UK Department also comes with statistics and hard numbers for its definition; however, I'll use a more updated, and broader definition of SME, which is given by "EU Commission" (2003):

The category of SME is made up of "autonomous enterprises" which employ fewer than 250 person and which have an annual turnover not exceeding EUR 50 million, and/or an annual balance sheet total not exceeding EUR 43 million.

An "autonomous enterprise" is any enterprise that is not classified as a "partner enterprise"... or as a "linked enterprise". Partner enterprise is an enterprise (upstream enterprise), that holds, either solely or jointly, 25% or more of the capital or voting rights or another enterprise (downstream enterprise). [In the US it is normally called "small business" and depending on who owns it, perhaps a "minority owned business". In the US, minority owned businesses often get breaks on public projects and contract awards; for example they can get a 5% higher score because of their minority status when being evaluated for public contracts in some cases.] Exceptions are public investment corporations and venture capital companies that can hold more than 25%, provided the total investment is less than EUR 1.25 million. A "linked enterprise" is an enterprise that has a majority of shareholders' or members' voting rights in another enterprise... or has the right to exercise a dominant influence over another enterprise.

Within the SME category, a small enterprise is defined as an enterprise which employs fewer than 50 persons and whose annual turnover/ balance sheet total does not exceed EUR 10 million.

Within the SME category, a micro-enterprise is defined as an enterprise which employs fewer than 10 persons and whose annual turnover/ balance sheet total does not exceed EUR 2 million.

This distinction is strongly correlated with the firms' organisation. Schlenker and Crocker (2003) suggest that micro-enterprises are more often a mixture of sole traders or sole proprietor organisations, which tend to behave as consultants rather than as corporate bodies. Small enterprises more often than not, begin to behave like corporate bodies, with a corporate culture and a clear division of responsibilities. Medium sized enterprises often mirror their corporate counterparts with a distinct corporate culture and a dedicated IT function. The primary purpose of these firms, they suggest, is not to maximize revenues, but to generate an income for their owners; "they are more concerned with "quality of life" issues than stock value... only 3 per cent of all SMEs actually wish or are able to grow, in terms of either employment or turnover". Another characteristic of this sector, point out the authors, is that most firms do not possess several of the core processes (conception, manufacturing, sales, delivery, after sales service) normally associated with "doing business". As a result, SMEs are forced to collaborate with each other and with larger concerns to survive, to compete, and to produce sustainable revenues over time. A research carried out in 1992, found that 41% of UK SMEs competed primary on quality, 37% competed primary on price, 13% on time (lead-time and on-time delivery), and 9% of the SMEs competed primary on flexibility (Neely et al., 1994).

As for the growing importance of SME in the global economy, La-Rovere (1996) suggests that empirical studies show a clear trend towards reduction of size in firms of the manufacturing sector in developed countries. Possible reasons for this are the diffusion of flexible modes of production and the downsizing of large firms. In addition, since the eighties SMEs have an increasingly important role in GDP in developed countries. This is a result of the increasing importance of subcontracting and labour flexibility for competitiveness. The author points out that SMEs have grown in number because in many sectors barriers to entry of new firms were reduced and also because a greater motivation of workers. Empirical studies, done on the US and Italy, show that a firm's size and its growth rate are negatively correlated. Nevertheless, argues La-Rovere, the reason why only 40% of American SMEs have a life-span above 6 years, is mainly because their lack of liquidity. O'Gorman and Doran (1999) suggest that another factor that affects SMEs, characterised by strong entrepreneurial leadership, is their state of growth and ever-changing, which requires an increasing need for the introduction of formal structures, systems, procedures, and controls. Nevertheless, SMEs can achieve global competitiveness without necessarily increasing their actual size, argue Tetteh and Burn (2001), but rather, by building on their virtual or soft assets in order to expand. "These virtual assets include information skills, digital resources, and competencies for managing inter-firm relations and collaborative engagements with other firms".

The World Bank Group's Small and Medium Enterprise Department claims to "combine the market perspective of the International Finance Corporation with the policy expertise of the World Bank to promote local small business growth in developing nations" (last updated February 4th, 2004, website [http://www2.ifc.org/sme/html/about\\_us.html](http://www2.ifc.org/sme/html/about_us.html)). SMEs play a key role in the developing countries' economy, which is far greater than it is in the Western countries. "SME in Bulgaria" (2001) estimates that following the 1990s major privatisation, the number of SMEs accounts for over 98% of all registered economic entities; the vast majority of these are micro-enterprises with less than five employees, and their main activities in the retail. However, 46.5% of Bulgaria's workers in 1999 were employed by SMEs; a figure that is lower than the EU average. A study in Brazil shows that small and micro enterprises (up to 100 employees) represent 51% of national production, 42% of wages, 65% of employment and 99% of enterprises registered in the country ("SEBRAE", 1991). Statistics show that in the developed countries, 50 percent of all innovations and 95 percent of all radical innovations since World War II have come from new or smaller firms (Timmons, 1994). In 1996, SMEs in then fifteen-members-EU made 66% of the employment share, with six persons per enterprise in average ("European Foundation", 2001). In Japan of 1996, however, only 33% of the workers were employed by SMEs, with the average of ten persons per enterprise; nevertheless, argues the organisation, in the Japanese economy, SMEs play a way more crucial role than in any Western country. The Japanese "Keiretsu" system of groups-of-businesses, with network of cross-shareholding, makes these SMEs fall out of the definition above, on technical grounds. The US is rated below the EU with regards to the SME employment: only 42% of the workforce is employed in SMEs (relative to EU's 66%), but when comparing between the micro-enterprises, those with less than ten persons, the difference is wider, with 33% in EU and only 11% in the US. Some of SME's labour characteristics, as identified by "European Foundation" for the Japanese society, are extensive use of part-time employees, non unionised and non-regular employees (family aid, seasonal and daily-temporary), lower salaries and benefits and more annual working hours. In the US, on the other hand, the SME labour is characterised as more flexible, even when compared to the EU; this flexibility is a result of informal communication, direct supervision, more broadly defined jobs, and the ability to capitalise on strengths of individual employees to meet customer needs. Other aspects of the SME sector will be discussed throughout the paper. However, the World Bank Group's initiative for building better business environments at the developing world, highlights some of the difficulties specific to SMEs in these countries: difficult regulatory, tax and trade climate, barriers to entry, lack of legal infrastructure and corruption.

You can find and read the full version of the article, a 26-page PDF that includes the following topics:

SME'S OPERATIONS STRATEGY  
SME'S QUALITY MANAGEMENT  
FLEXIBLE PROCESS DESIGN  
OWNERSHIP, STEWARDSHIP, AND MANAGEMENT  
TECHNOLOGY AND FLEXIBILITY  
INFORMATION TECHNOLOGY FOR SME  
SME AND THE SUPPLY CHAIN  
REFERENCES

<http://www.ez-b-process.com/Resources.htm#SME%20articles>

### FOOTNOTES

Ezra Bar, MBA, PhD Student, is a Business Process Reengineering Consultant, for Small, Mid-size, and Large organisations, and an Online Academic Mentor to Management and Engineering Students, operating globally from Toronto.

Find many other Academic and Business Articles and Papers at <http://Ez-B-Process.Com/Resources.htm>

<https://blog.granted.com/>