

**The Role of Design Strategies in the Development of  
Ceramic SMEs in Egypt**

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**Abstract:**

Needless to say, that the Small and Medium Enterprises (SMEs) have a significant importance in the economy of all societies, regardless of their system and development plans. In Egypt, SMEs occupy the major part of the industry sector; hence, these enterprises have a vital role in the Egyptian economy despite all the difficulties and problems they face.

Many efforts have been done, on an international scale, to reveal all economic and managerial effects of the SMEs; among these efforts was the development of many strategic models that have been constructed especially for this sector.

The integration of design into strategic management is crucial to the success of the economy in general, and in the SMEs sector in specific, but its implementation is subject to unpredictable changes, particularly in the establishment's external or internal environments, this can have a measurable effect on the performance of SMEs.

**Keywords:** Strategy, Design strategy, Small Scale Ceramic Enterprise, SMEs, Ceramic Design.

## **1. Introduction**

### **Research Problem:**

The need to identify the knowhow of employing design strategies in the development of SMEs in Egypt.

### **Research Objective:**

The purpose of this research is to investigate the importance of design strategy within Ceramic SMEs to evaluate the key success factors in implementing it for business management and development.

## **2. Strategy**

Wit & Ron Meyer (2010) define strategy as “the pattern of decisions in a company that determines and reveals its objectives, purposes, or goals; produces the principal policies and plans for achieving those goals; and defines the range of business the company is to pursue, the kind of economic and human organization it is or intends to be and the nature of the economic and noneconomic contribution it intends to make to its shareholders, employees, customers, and communities “.

Generally, any strategy has two main aspects; “**the vision** which is how the organization sees itself or wishes to be seen at some time in the future; and **the mission** which identifies the activities that the organization believes will allow it to achieve the vision, and exert enough control to predict if its performance will be adequate to achieve the vision”. (Glenn H. Mazur: 1998)

The general strategy of any enterprise can be defined as a collection of a few strategies in different aspects including: design, manufacturing, marketing, business, technology and finance.

## **2.1 Small & Medium Enterprises (SMEs)**

According to “The United Nations Industrial Development Organization – UNIDO”, the definition of SMEs is a significant issue for policy development and implementation and depends primarily on the purpose of classification.

Despite the fact that different countries use different definitions of SMEs; and the lack of a consistent cross-countries data; generally, the most commonly used definitions relate to either size of employment and/or quantum of capital investment/fixed assets.

**The European Commission (EC) definition of SMEs:** “Small enterprises are defined as those enterprises employing less than 50 persons and with annual sales or total assets that do not exceed \$13 million. Meanwhile, micro enterprises are defined as those which employ fewer than 10 persons and with annual sales or total assets that do not exceed \$3 million”. (Qimiao Fan, World Bank 2003).

### **Strategies designed for SMEs:**

Due to their flexibility, SMEs have the ability to develop new markets, based on their industry category, so, they have a big impact on the social development process in general, particularly: creation of employment, economic sustainability, preservation of social stability ... etc.

Nevertheless, many issues affect SMEs development strategy: market access, political environment, human resource development, access to information, training, technology, and financing. (Suresh Kumar Dhameja, 2008)

Any SMEs development strategy must take into consideration that the majority of firms in this sector are small; that they face different obstacles and opportunities than large firms; and that the types of institutions and mechanisms best suited to their needs might be under stipulation in distorted and segmented markets.

### **3. Examples of Global Strategies of SMEs:**

The following strategies are examples of the global strategies that are related to industry, business, marketing, as well as, the development of SMEs.

- **Blue ocean strategy**

This strategy is about finding an uncontested market space, as many enterprises are “swimming in the red ocean of bloody competition”, where there is in fact a limited room for growth. It is a strategy of making the rivals irrelevant rather than competing with them.

• **B.O.P "The Base of the Pyramid "Strategy**

This strategy emphasizes that enterprises can gain competitive advantage by targeting the poor at the bottom (or the base) of the pyramid of economy. This theory is based on the belief that there is a fortune at the B.O.P, as business can take advantage of this market with increased welfare for the poor through its procedures.

C. K. Prahalad (2010) put a framework to BOP transition in the private sector (SMEs are considered a private sector), as shown in fig.

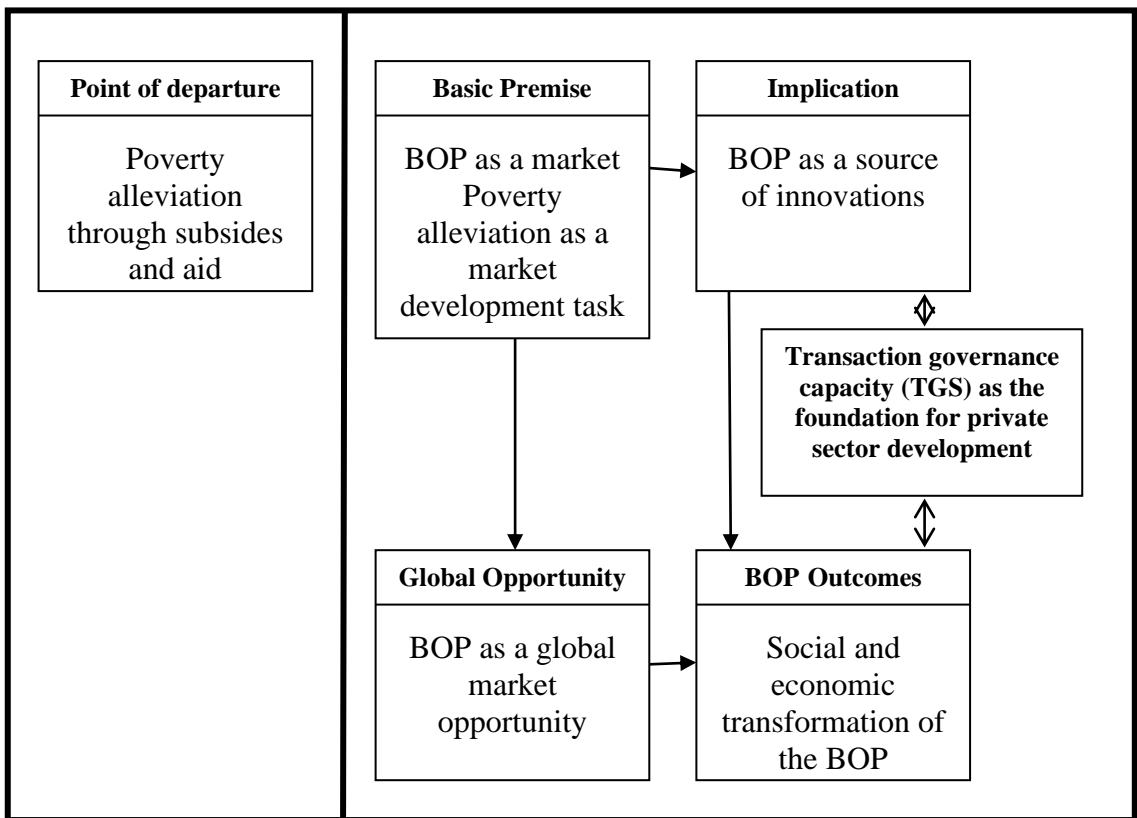


Fig. 1 BOP framework

- **Purple Ocean Strategy "Strateco Dashboard"**

This new methodology identifies weaknesses in its initial approach, and proposes the integration and development, which aims to provide small and medium enterprises with the clearer and more systematic strategy, i.e. the “strategic and economic control dashboard”, or in short, “Strateco Dashboard” to complement the assessment of the market value of a strategy with a construct that estimates its impact on financial performance, in terms of value creation.

The Purple Ocean represents the link between the Blue Ocean Strategy and Red Ocean Strategy, so it is considered the most appropriate strategy for small and medium enterprises.

**\*\* By choosing and applying the appropriate strategy, SMEs can gain the following advantages:**

- SMEs can still compete against bigger firms effectively by implementing Integrated Business & Sustainability strategies, without the need to possess cost advantages, which will force the big firms to accommodate.
- The "Base of Pyramid " strategy and the Development Strategy of offering a quality product, designed mainly to the poor, allows SMEs to successfully penetrate existing markets dominated by bigger firms.
- “The Purple Ocean” Strategy of supplying differentiated products can help SMEs compete against the bigger firms; if they possess sustainable competitive advantages over these firms.

#### **4. Examples of the development of international SMEs**

Many economies like Malaysia, Brazil ... etc have acknowledged that SMEs are crucial to the industrial restructuring, and have formulated national financing policies, targeted at developing this sub-sector.

##### **4.1 SMEs in Malaysia**

The government of Malaysia is highly committed to the development of SMEs and operates under the philosophy that this sector needs to be supported. The agency that performs this role is the “Small and Medium Industries Development Corporation” (SMIDEC)\* which established the SME Information and Advisory.

Government aid is the ultimate point in the case of Malaysian SMEs development; government assists them in several ways in Malaysian market such as through collaborative training programs, R&D programs among government-funded research centers, universities for specific sectors of the SMEs.

##### **4.2 SMEs in Brazil**

The SMEs sector in Brazil is fairly developed and the policies and institutional framework are aimed at further developing and strengthening SMEs to further contribute in job creation, innovation and inter-industry linkages. Apart from policies in support of SMEs, there is a strong cooperation between research institutes/Universities and Brazilian industries including the SMEs sub-sector (Meneghel, Mello, Gomes and Brisolla, 2004).

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\* SMIDEC: Established in 1996, the SMIDEC was borne out of the recognition that the enabling environment must be made to develop in tandem with globalization.

### **4.3 SMEs in Nigeria**

Small and medium scale enterprises control the private sector of the economy of Nigeria, but almost all of them are deficient of funds, which led to the establishment of development finance institutions DFIs and the introduction of numerous funding programs for the development of SMEs in Nigeria.

The Small and Medium Enterprises Development Agency of Nigeria (SMEDAN) was established in 2003, to facilitate the promotion and development of a structured and efficient Micro, Small, and Medium Enterprises (MSMEs) sector to provide an enabling environment for these enterprises to grow and increase competitiveness on both local and global markets.

## **5. Ceramic SMEs in Egypt**

Due to today's globalized economy system, the Egyptian manufactures' sector is facing a deteriorating position in terms of trade, as the Egyptian economy faces competitive pressures from international fronts (Hawash, 2007). Egyptian manufacturing SMEs, being the engine of growth in the economy, have a crucial need to continue to be a major supplier in the domestic market and to increase their exports, thus contribute to the Egyptian economy (El Mahdi, 2002).

### **Definition of SMEs in Egypt**

Both the *Ministry of Industry* and the *Federation of Egyptian Industries* define the small-scale enterprise (SSE) as; the one employing between 10 - 100 workers, with a fixed capital that does not exceed LE 500,000.



### **The importance of the Egyptian SMEs:**

According to the Bank of Cairo, SMEs are responsible for a mammoth 98% of the country's total economic activity and they provide nearly 80 % of total value added to the country's economy.

Employment opportunities created by SMEs also account for over 65 % of the entire Egyptian workforce, as they accommodate large numbers of unskilled workers and train them, which directly contribute in solving the problem of unemployment in Egypt.

SMEs are also responsible of preserving and improving the Egyptian traditional industries, especially the hand-made artifacts. They are an auxiliary factor for large firms by providing manufacturing components through sub-contracting, while these firms concentrate their efforts on more important issues; such as marketing; product design and quality control.

### **5.1 The Important of Ceramic SMEs in Egypt**

The ceramic industry is - by far - one of the most important industries in Egypt, this is due to:

1. It consists of a large number of enterprises, both big and small, although small enterprises are larger in number.
- 2- It accommodates a huge number of workers, as it occupies 0.06% of the workers in manufacturing industries which form 25.7% of the Egyptian employment.
- 3- It is spread in several areas across the country, although there is some qualitative centering in some cities.

4- The ceramic industry is among the industries that are capable of achieving the goals of foreign trade in Egypt, as Egypt participates with 4% of total ceramic & porcelain exports worldwide.

The ceramic industry in Egypt is classified according to the factory system into: small factories & big factories, this classification is based on the similarity in each system and the difference of the products.

#### **Small ceramic factories (Ceramic SMEs):**

This group is affected by many factors, such as type of products, factory's size and location. Despite the variety of the products types manufactured by this group, they still generally depend on traditional production processes.

The Ceramic SMEs in Egypt can be divided into 02 groups (according to the number of workers):

#### **First: enterprises under 10 workers:**

There is no real statistics that represent the size of these enterprises, due to the ignorance of the governmental organizations for many of them, because they use a criterion of 10 or more workers in their statistics, and the fact that a lot of them are operating illegally. Due to their limited funds, labor and production methods, these enterprises' main goal is to gain as much profit as they can, with no consideration of the quality of their products.

**Second: enterprises with more than 10 and less than 50 workers:**

This group is represented by a limited number of enterprises, despite the limited ways of production, this category's products are considered of higher quality in general than the previous category, and this higher quality includes planning of working area, materials used, production method and type of products.

**5.2 Characteristics of Ceramic SMEs in Egypt:**

1- It depends mainly on 2 production types: forming by the ceramic wheel and by casting, the latter is only used in big orders, more than 8500 pieces, with a time limit, or when the design is unsuitable to be formed by the wheel.

2- In general, each factory's owner is a craftsman himself and is experienced and involved in all production procedures, in addition of supervising the whole production process.

3- The available labor do many jobs, including preparation forming, finishing ... etc, which means that the labor in this kind of enterprises is very qualified and flexible to be able to move between different jobs, and consists mainly of small boys.

### 5.3 Problems of Ceramic SMEs in Egypt:

The Egyptian Ceramic SMCEs face many problems; that can be categorized into:

- **Production problems:** Funding, Raw materials, Energy, Production Processes, Equipment & technology.

- **Marketing problems:**

1- The strong competition of imported Chinese products which surpass domestic products in quality, variety and price.

2- The non-existence of a real competition between the ceramic SMCEs themselves, they don't try to widen their distribution circle as well.

3- Lack of creativity in materials and designs, as many of them rely on imitating existing successful products.

4- The lack of proper and creative product packing to attract more buyers.

5- Ceramic products are distributed mainly as gifts and antiques only in the local market, which is controlled by seasonal sales.

6- The poor level of economical and cultural awareness of the owners and workers in the SMCEs makes them unaware the real need of the consumers (high quality, low prices).

7- The small administrative structure of SMCEs led to the absence of any marketing programs, relying mostly on personal relationships and direct sales.

8- Lacking of a clear marketing plan as well as the funds to have one.

**Design strategy** is a plan of action to have a competitive advantage through the product design process, either through designing new products to create new markets; or through supporting the needs of the existing market by offering better design functions than the competitors. (James A. Fitzsimmons et al., 1991)

## **6. A Proposed Strategy for small scale ceramic industry in Egypt**

The success of the small-scale ceramic companies depends on their ability to meet the needs of customers, match the rapid growth and development of these needs and at the same time provide them at reasonable prices. Achieving these goals involves different tasks that need to be addressed, including marketing, design, and manufacturing tasks. It also involves the task of product development which is connected to all other tasks, starting from the stage of gathering information about the market needs, through the design and production stages and ending with the after-sale service.

Based on the information collected through this study, it is found that a strategy model is needed to help creating future insights for the development of small-scale ceramic industry in Egypt. As any future goals must depend on strategic planning, without it, the institution will never know where it is headed; much less know when it reaches its goals. Needless to say, that one of the important concepts of strategic planning is realizing that; in order for any establishment to flourish, everyone - who is part of it - must do their best to ensure that the team's; hence the establishment's; goals are met.

The following chart shows a proposed strategy for small scale ceramic establishments in Egypt:

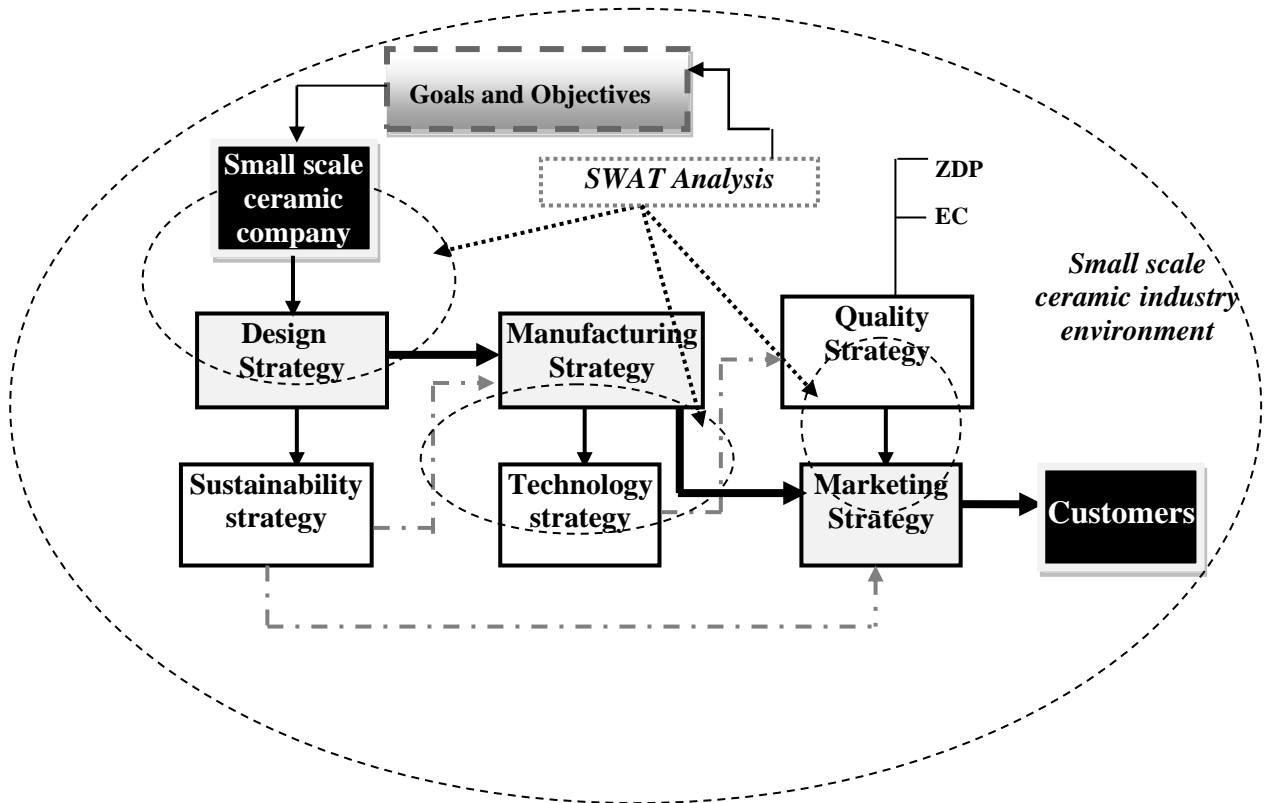


Fig2. The proposed strategy

The target is to develop a professional strategic structure with a futuristic approach and focuses on providing a fruitful environment, design and manufacturing development opportunities and marketing services to small and medium ceramic companies in Egypt.

Once the institution's strategy is constructed, critical performance measures can be developed for each objective. Once the measures are defined, targets can be developed to track success of the institution's strategy against expected performance.

The proposed strategy for the development of small-scale ceramics industry in Egypt depends on the strategic planning of the institution development stages from the product to the final consumer. It starts with identifying the strategic *goals and objectives* of the institution as well as its interim targets; and –based on them - determines the institution's partial and major strategies.

Small scale ceramic strategy is built through integrated activities carried out through three integrated strategies; which are considered the major strategies of the development of small-scale ceramic industry, followed by partial strategies to realize the whole goals and objectives of the institution.

The three major strategies are: **Design strategy**, **Manufacturing Strategy and Marketing Strategy**, they all take into account the interests of both customer and developer. Design strategy represents the key role in transforming the customer's desires into tangible products that match as much as possible the requirements of the clients. While Manufacturing Strategy is a job converter of the output graphics and design concepts into products, it also tackles -more or less - purchases, planning and fixtures. Marketing Strategy mediates the relationship between the company and its customers, it gives indications for the right product through marketing quotas that identify customer needs; it also includes the task of promoting and distributing the company's products.

***The Design strategy*** as a key of success is important for SMEs to develop innovative products and services which impacts directly on the institution's future growth and profitability. Design strategy focuses on developing new products and services; it is important that the institutions understand their business-life cycle that starts from the design of product and ends with product purchase.

The design strategy starts with identifying the goals and objectives of small scale and medium institution; it moves in two directions; first towards the sustainability strategy as a partial strategy, second towards the manufacturing strategy as a major strategy.

***Sustainability strategy*** helps to increase the value of product design that confirms the environmental, social and economic values in the institution strategy. It affects another two strategies: "marketing strategy" through the additional value of sustainable products and "manufacturing strategy" through the additional value of environmental and technological aspects.

***Manufacturing strategy*** consists of structural and infrastructural decisions that affect the ability of the institution to meet long-term objectives. The purpose of the manufacturing strategy is to guide manufacturing decisions to support the institution's competitive priorities. Manufacturing strategy urgently responds to the whole institution strategy and objectives, copes with anticipated environmental changes, corrects manufacturing weaknesses or exploits strengths, and finally gets hold of the up-to-date technology that currently may not be available.



It moves in two directions; first towards the technology strategy which leads to the quality strategy that is divided it into two sections, according to M.J. Kayasa and C. Herrmann (2012): **Economic Conformance Level (ECL)**: A cost minimizing quality level is proposed by this model. This quality level is achieved by balancing prevention and appraisal costs against internal and external failure costs. **Zero Defect Production (ZDP)**: This strategy generally attempts to avoid all errors. The cost per produced unit decreases continuously when the specifications are met better in the production process. Second towards the marketing strategy; this is an essential tool for any successful small or medium scale institution. The key components of an effective marketing strategy are: First, *determine the institution target market*: it is critical for Small scale and medium institution to identify their target market and focus on delivering to this identified group the best possible customer experience. Second, *identify the institution Unique Selling Point (USP)*: USP is what distinguishes the institution from others within the same industry. Oftentimes, the Small scale and medium institution is unable to distinguish their products and services from the competition and is therefore, unable to achieve sustained customer retention and loyalty. Third, *become visible institution*: small scale and medium institution must continually seek to be number one in the hearts and minds of their customers. Finally, *understand market competition*: small scale and medium institution must know who competitors are, what are their target markets and USP, in order to preserve their place in the market.

At partial and major strategies **SWOT Analysis** is used. SWOT is the combination of four major terms which are: Strength, Weakness, Opportunity and Threats. Strength refers to inherent abilities to be complete and grow strong. Weaknesses are the inherent deficiencies that cripple one's growth and survival. Strength and weakness are mostly internal. Opportunities are the good chances and openings available for growth. These are environmental & external. Threats are the extremely wielded challenges, which might suppress inherent Strength, accelerate weakness and stifle with opportunities being exploited. These are again posed due to the external environment. (S. D. Kalpande et al., 2010).

We need to apply SWOT analysis on the proposed strategy as situational analysis, to gain insights from their status to the design strategy, also to stand on the strengths and weaknesses of monitoring the relationship between the linkage of manufacturing and technology strategies, and the linkage of quality and marketing strategies.

## **Conclusion**

Despite the fact that the SMEs play a vital role in the economy of developing countries, yet, they face many problems that vary from one country to another.

This research has contributed in studying the problems that face the SMEs, concentrating on those working in the ceramics industry as an example, by investigating all the circumstances related to this industry and the problems that impede its development, taking into consideration that this industry has many old traditions and accumulated experiences which form a solid base to build a successful industry.

Egyptian ceramic SMEs in specific encounter many obstacles and problems with different levels of difficulty; this has negatively affected any improvement of this sector and its economic role.

We can summarize the conclusion of this research in the following points:

SMEs are the first mover in developing new markets as it occupies serious importance in the economies of all societies.

SMEs should follow the development strategies of offering a total quality product, designed mainly to the poor, unless they can effectively deter the entry of bigger rivals.

When following the SMEs Integrated Business & Sustainability strategy, SMEs do not need to possess cost advantages in order to successfully enter markets dominated by bigger firms.

SMEs can follow the Purple Ocean Strategy of supplying differentiated products only if they possess sustainable competitive advantages over the bigger firms.

SMEs can successfully penetrate existing markets dominated by bigger firms by following the "base of pyramid BOP" strategy.

SMEs can still compete successfully against bigger firms by devising strategies which force the bigger firms to accommodate.

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