

# A FIELD STUDY ON ASSESSMENT OF THE FACTORS INCREASING PRODUCTIVITY OF SME'S: CASE OF ISTANBUL

Yılmaz GÖBENEZ\*

## Abstract

The competitive environment which grows in size and intensity every day with globalization, and the rapid change in technology require SMEs to fully adapt to the present conditions. SMEs, which are among the most fundamental factors in our economy, and the productivity of SMEs, which is one of the most important targets for SMEs, are investigated in this study. In this respect, a questionnaire study was conducted through vis-à-vis interviews held at 108 SMEs in Istanbul, the province that shelters the highest number of SMEs in our country. In this analysis, a general evaluation was made on the SMEs in Turkey.

**Key Words:** Small and Medium Sized Enterprises (SME), Productivity, Productivity Factors

## 1. Introduction

Rapidly changing and developing technology in the present time, and the need to keep up with the competitive environment brought about by developments and interactions within other fields require businesses to continue their operations in an efficient manner.

SMEs have become the focal point of economic and social development in the world and in our country due to their dynamic and flexible structure, and adaptation ability to competition, technology and the market. (1) The efforts for improving the technological level, enhancing the quality, and increasing the productivity in SMEs have gained momentum in recent years.

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\* Marmara University, Vocational School of Technical Sciences, Istanbul, Turkey.

Particularly, membership negotiations with EU and **opening up the economy to outside world** have become even more important under global competition conditions. It is evident that the SMEs have to operate efficiently and productively in order to keep up with the said rapid developments. (2)

In our study, productivity increasing techniques in SMEs are discussed with respect to internal and external factors. Especially internal factors have been dealt with in greater detail since they serve as the control function in determination of the productivity areas of a business.

### **1.1. Definition of SME**

Today, SMEs have a significant place in economic growth and increasing the employment level of developed and developing countries. SMEs, constituting the 95.5% of the businesses operating in manufacturing industry in Turkey, has 66.1% share in employment. (2)

In certain cases it is not feasible for large size enterprises to produce the products which they need. The fact that SMEs manufacture such products or are considered and supported as businesses which function as supplier industry or perform custom manufacturing make them even more important.

Even though they constitute the central pillar of all economies today, there is not a single definition in the literature on SMEs for which global consensus is assured. (3)

Depending on the level of industrialization, business sectors that the enterprises are associated, and the production techniques, definition of SME vary among the countries, even among different regions and business sectors in the same country. (4)

According to KOSGEB (Small and Medium Size Industry Development and Support Authority), an SME (Small and Medium Size Enterprise) is an economic unit employing less than two hundred and fifty workers, generating no more than twenty five million TRL net sales or having the same amount as the financial balance sheet size per year, and is classified as micro business, small business or medium size business in this regulation. (5)

Other than the aforesaid definition, a SME has many different definitions based on many factors such as the level of industrialization, time, economic level, technology employed, number of machinery, workbench,

size of the market, the business line of operation, production technique employed and production capacity, features of the products manufactured, and number of employees etc. There is not a globally accepted definition.

## 2. Productivity

One of the key concepts that will solve the economic problems of the contemporary world is “productivity”. The productivity is really accepted as one of the most reliable criteria of development, becoming a developed country or society today. Also the productivity is the driving force of the development. Productivity increases in one sector of the national economy can play a role activating the other segments as well. Increased productivity speeds up the development and takes it to more advanced dimensions under a rationalist and contemporary administration. High productivity means production strength which does not shake by temporary difficulties.

In technical terms, “productivity” is defined as the ratio between the amount of the goods & services produced and the input used for producing the said goods & services, and this measurement is generally formulized as output/input.

The productivity definition which is popularly accepted in recent years is considered together with increasing the quality of the goods and services produced, preservation of the environment and the natural structure, providing the best living and working conditions for employees, and the efforts to increase the amount of production per unit of input.

Within the concept of total productivity, we can define the productivity as a composition of various production and environmental factors, technological, economic and organizational capacities. Thus, everyone benefits from the gains obtained by productivity increase.

With implementation of the productivity efforts;

- Workers earn more by working less hours in better working conditions,
- Employer provides resources that allow new investments,
- Producers earn more with less costs,
- Consumers can find cheaper and plentiful goods,
- Countries develop faster with a healthier economical growth,
- And the society reaches to a higher level of wealth (6)

### 3. Factors Increasing Productivity

Productivity increase does not only mean to perform a work better, but more importantly it means to perform the right work better. In order to initiate a productivity increase program, initially the factors which impact the productivity have to be determined. Production process is a complex, adaptive and continuous social system. It is important that the relations among the labor, capital and socio-organizational environment are balanced and integrated. Productivity increase depends on the success achieved in determining and using the main factors of the socio-production system. Therefore, it is essential that we specify three main productivity factor groups:

- Related with the work,
- Related with the resource,
- Related with the environment.

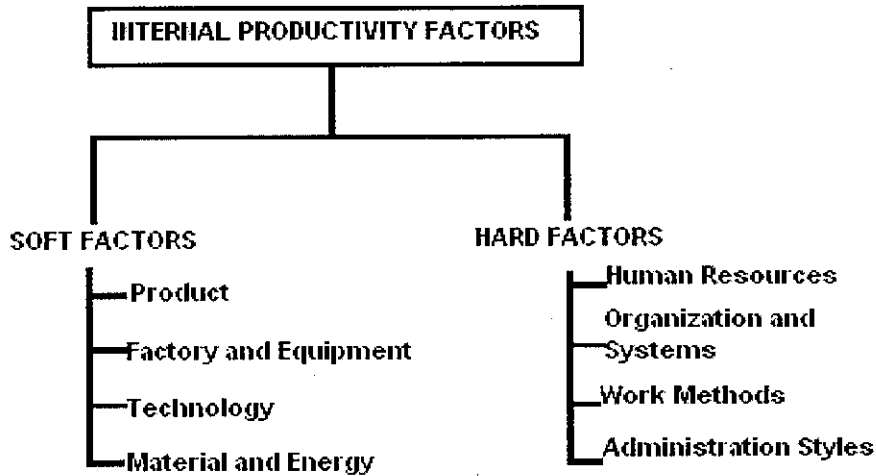
It is the economic analysis of the abovementioned administrative factors.

In our productivity analysis, the classification mentioned in the declaration of Mukherjee and Singh was used. Accordingly, productivity factors are grouped into two main segments:

- External factors
- Internal factors

The external factors are those which are outside the control of a business; whereas, internal factors are within the control of a business.

In productivity increasing work, first of all, the factors that create problems in the factor group have to be differentiated. Later, an analysis methodology out of the productivity increase techniques which is appropriate for a certain business is applied. Internal factors that are under control are grouped into two:

**Table 1.** S.K. Mukherjee and D.Singh.1975, page 93 (8)

### 3.1. Hard Factors

#### 3.1.1. Product

Productivity factor of a product is the degree that such product is suitable for the characteristics required for the output. What is referred by “location benefit”, “time benefit” and “price benefit” of a product is making a product available at the right price, at right place and the right time. Cost-benefit factor can be increased by providing more benefit with the same cost or the same benefit with less cost.

#### 3.1.2. Factory and Equipment

Factory and equipment productivity can be increased by paying attention to usage, age, modernization, cost, investment, equipment manufactured in the factory, maintaining and increasing the capacity, stock control, production planning and control, etc.

#### 3.1.3. Technology

Technological innovation is a very significant source of high productivity. The increase in the amount of the goods and services can be achieved by

increased automation and information technology such as quality development, new marketing methods etc. Automation also improves the material manipulation, storage, communication systems and the quality control.

#### **3.1.4. Material and Energy**

A minor effort to decrease the amount of material used and energy consumed can transform into a considerable productivity result. The most important sources of productivity are the raw materials and the indirect materials, which are the main elements of a business.

### **3.2. Soft Factors**

#### **3.2.1. Human Resources**

The main element of productivity increase efforts is the human being itself. Everyone working in a business and all relationships among them have the first degree importance for increasing the productivity. The matter should be dealt in two aspects as compatibility and effectiveness.

The compatibility is the degree in which people devote themselves to their works. People are also different with respect to their willingness to work, not only in relation to their abilities. Therefore, when people are blocked or satisfied, their motivations decrease.

Top level management, in other words the managers and engineers, should develop a system of values which will change the attitude of workers and lead to high productivity to increase and maintain the motivation. This is because motivation is the foundation of all human behaviors and thus the efforts to increase productivity. The success of workers in achieving productivity increase should be rewarded right away. The rewards should not only be in terms of financial benefits, but also come in the form of recognition, participation, training opportunities should be provided, and negative rewards should be eliminated.

Effectiveness in increasing the productivity is the degree at which human effort is capable of realizing the output and quality targets. Ability to perform productive work should be supported by training and development programs, job rotation and placement, systematic job development and career planning.

### **3.2.2. Organization and Systems**

An organization has to be re-organized, its condition has to be maintained and required facilities have to be provided from time to time in order to operate it in a dynamic way, direct it to realization of its targets and realize its new goals.

The underlying reason of low productivity in many organizations is the rigidity of the organization. Such organizations fail to understand and respond to the changes in the market, and can not notice the new capacities in the labor force, new developments in technology and other external factors. Since communication is weak in rigid organizations, it slows down the decision making process and causes lack of productivity.

### **3.2.3. Work Methods**

In developing economies where capital is scarce, and intermediate technology and labor intensive methods are dominant; advanced work methods are the most suitable area for productivity increase. The work method techniques aim to increase the productivity of the work by improving the way a work is performed, actions of workers, tools used, arrangement of the work place, work material manipulation, and the way machines are used.

### **3.2.4. Administration Styles**

It is responsible from efficient use of all resources which are under control of a business. Administration style and applications affect the organizational design, personnel policy, work design, planning and control of operations, maintenance and procurement policies, capital costs, capital resources, budget systems and cost control techniques. (7)

This model functions as the control mechanism for the best productivity areas which the administration can analyze, plan and intervene. For this purpose, in this study, the internal factors are taken into consideration for determining the productivity areas in SMEs.

## **4. Productivity Research At Sme's – Istanbul Case**

### **4.1. Purpose of the Research**

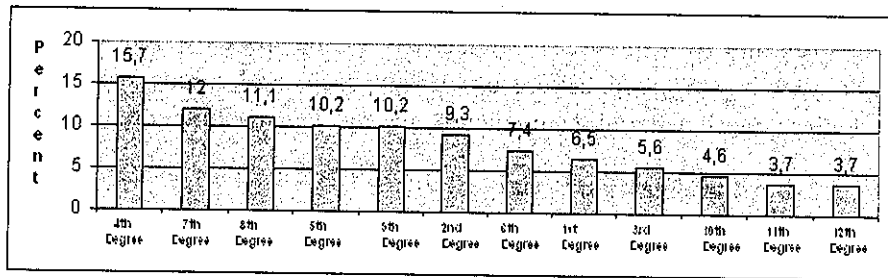
Purpose of this study is to evaluate the work performed in the field of productivity by the Small and Medium Size Enterprises which operate in our country, and determine the problems that they deal with.

## 4.2. Methodology of the Research

In this study, theoretical and empirical research has been performed. The theoretical research was obtained from various scientific researches. Findings were evaluated and presented. Simple percent and graphics were used to evaluate the data.

## 4.3. Results of the Research, and the Findings

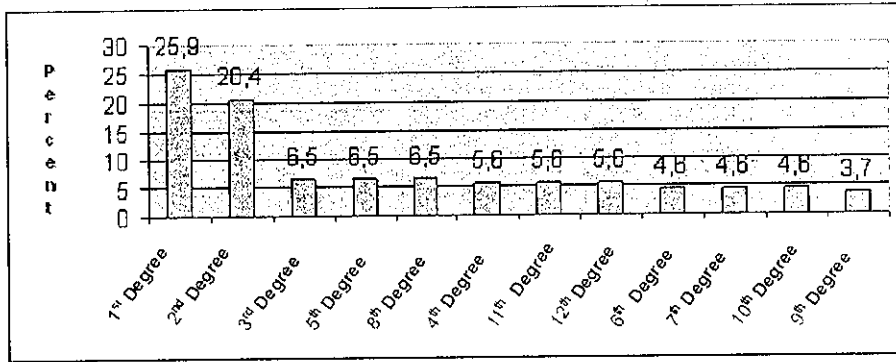
108 Small and Medium Size Enterprises operating in Istanbul were included in the scope of this research. Industrial types of the SMEs which are included in our research were classified as machine and spare parts industry, metal work industry, clothing industry, food and non-alcoholic beverages industry, furniture industry, electrical materials industry, construction materials industry, agricultural tools and machinery industry, leather industry, chemical industry, and other.



### Degrees of Importance

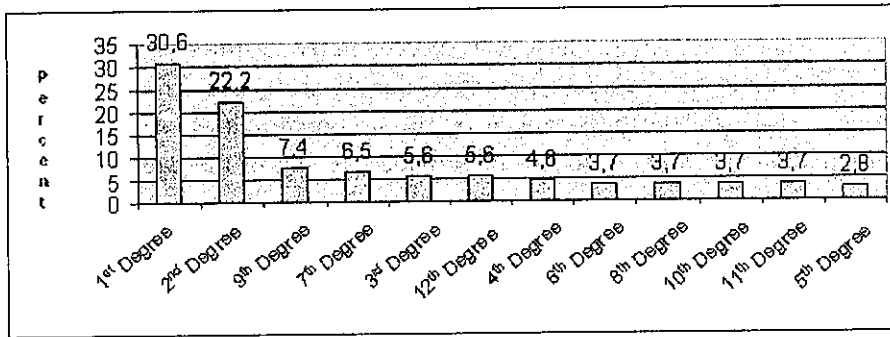
The result of the study in which businesses are ordered according to their degree of importance is given above. Impact of design, product features or product development is considered as important at fourth degree with 15.7%. Impact of the fact that SMEs usually perform custom manufacturing or operate as supplier industry is seen here. Also, among other reasons are the facts that research and development departments are only recently established and business owners lack information on this matter.





**Degree of Importance**

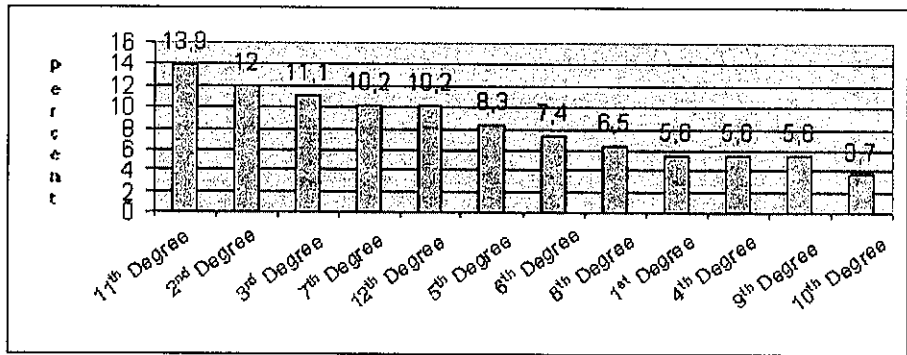
Since the importance of establishing a good maintenance system, operation of the factory and the equipment at optimum process conditions, increasing the capacity of the factory or efficient use of the factory and machinery have been understood, it was ordered as the 1<sup>st</sup> Degree with 25.9%.



**Degree of Importance**

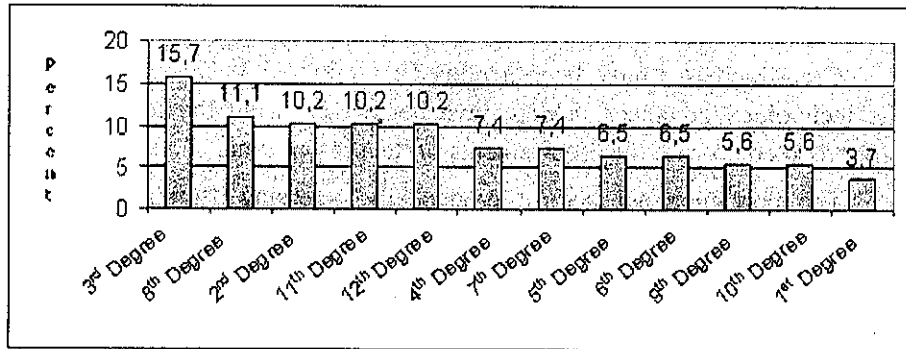
Great increases have been achieved in productivity in recent years as the technology advances. SMEs have begun following the technology in order to keep up with the requirements of the present time.

The most important factor in productivity increasing efforts is the human being. Since it is the most important element in the efforts for increasing the productivity, the human factor has been dealt with more detail. The analysis related to the human factor is given below:



**Degree of Importance**

Above table is about evaluation of the article related to incentive, recognition and rewarding at businesses. The businesses consider this factor as unimportant by placing it at eleventh place with 13.9%. Since people live in a social environment, their expectations vary depending on that, and they desire positive contributions are recognized by the environment or by those in the business. Therefore, those who succeed in their efforts for productivity increase should be rewarded. However, the rewards should not only be in terms of financial benefits, but also various opportunities of recognition, participation and training should be provided. Result of the questionnaire is given below. Incentive and reward system still are not considered as important at SME. Workers' share in increasing the productivity is overlooked. It should be noted that if the workers lose their motivation, the productivity would go down.

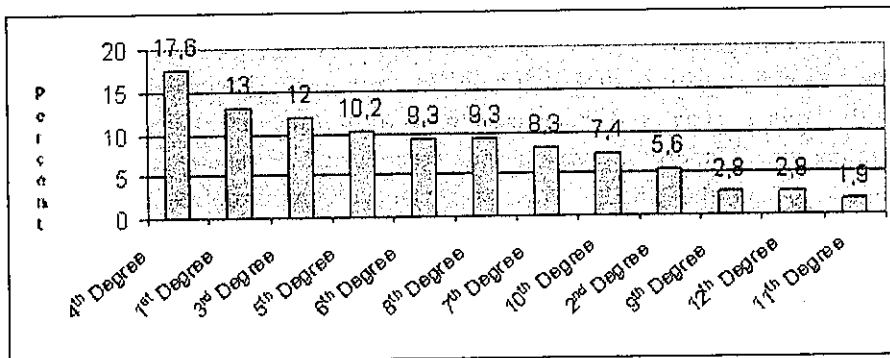


**Degree of Importance**

In our questionnaire, attention and support of top management is considered as the 3<sup>rd</sup> most important factor with 15.7% share. The top manager

and the other managers in the top management team are those who will achieve the goal of the business by ensuring performance of and leading the employees. Since people management is a difficult task, it requires certain abilities. Therefore, top management team has to take into account the behavior, attitudes and desires of its subordinates as well as the impact of internal and external factors on the subordinates, and should have the talent to transform that into coherent relationships at the right place and the right time. Businesses that fail to do that shall not succeed in achieving productivity. In order to build such a link, it has become a necessity to have expert problem listeners who will deal with personal problems of the workers and who know how to keep a secret at businesses. In other words, human resources department takes the lead at this point.

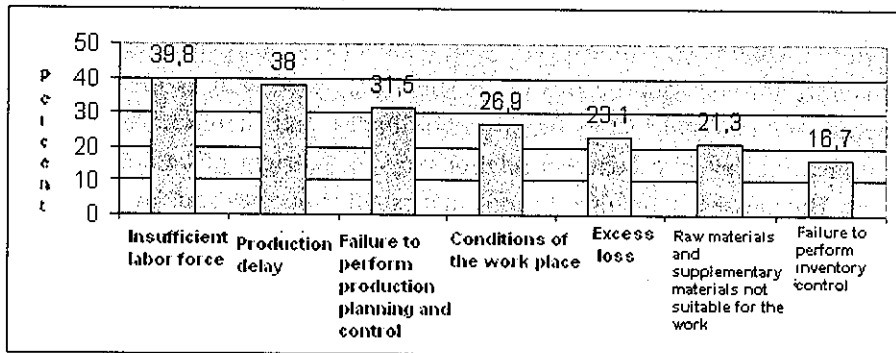
Based on the result obtained after reviewing the article related to establishment of good relations among workers and importance of communication in the business, its level of importance is 3<sup>rd</sup> with a percentile of 18.5. Implementation of new techniques and methods, and successful continuance of the same at SMEs depend on the communication among the workers. Sharing the targets, policies and strategies of the business among the personnel, increasing the authority and responsibility of individuals, leading them to the same targets, collection of the data in relation with the decisions taken and complying with the decisions, and taking joint actions for solving the problems emphasize the relations among the workers.



### Degree of Importance

Training of the labor force is extremely important for a business. Since personnel at SMEs are employed by reference of relatives, people from the same area or an acquaintance; abilities, knowledge and skills of new hires are not investigated. Therefore, businesses believe in the requirement to

provide training for such workers who become unskilled labor as the technology advances.



The factors that impact the productivity in production process are given in the table. The factors relating to the materials amount to 61.1% (23.1% excess loss, 21.3% raw material not suitable for the work, 16.7% failure to perform the inventory control). This shows that importance of the material productivity has not been understood in our country still. Increasing the quality of the material, low quality materials, use of cheap materials, increasing the stock turn-over ratio, and improving the stock management show the importance of the material factor in productivity.

## 5. Conclusions

According to the face to face questionnaire study made at 108 SMEs in Istanbul and statistical analysis of this questionnaire, it was determined that SMEs fail to pay sufficient attention to the factors that increase the productivity. Underlying reasons behind the lack of paying attention vary depending on the SMEs. Most important common deficiencies can be summarized as lack or scarcity of qualified personnel who focus on human and materials, lack of knowledge, non-existence of labor force planning, insufficient communication; in short, failure to implement the total quality management. Our era is the period of scientific and technological developments. Such developments lead to innovations in production process and production techniques and directly impact productivity. We can maintain our economic existence as long as we keep up with the scientific and technological improvements. Particularly, our current status being in the EU adaptation process requires us not to lag behind the developments of this era. The

current condition of SMEs in greater İstanbul, which is the locomotive of our economy, indicates that EU process will be painful and hard for the SMEs.

### References

1. Dr. Bektaş, Kazım: AB Uyum Sürecinde KOBİ'lerde Etkili Maliyet Düşürme ve Maliyet Hesaplama Yöntem ve Teknikleri, 146
2. [www.kosgeb.gov.tr](http://www.kosgeb.gov.tr).2003.
3. Sarıaslan, Halil: Orta ve Küçük Ölçekli İşletmelerin Finansal Sorunları Ankara, TOBB Yayınları, No. 281-25, Ankara, 1994
4. Karataş, Süleyman: Küçük ve Orta Ölçekli İşletmeler İstanbul: Veli Yayınları, 1991.
5. [www.kobifinans.com.tr](http://www.kobifinans.com.tr)
6. <http://www.mpm.org.tr/verimlilik/>
7. Prokopenko, Joseph: Verimlilik Yönetimi Uygulamalı El Kitabı (Productivity Management Applied Handbook) Milli Produktivite Merkezi Yayınları No: 476 ankara, 2003
8. S.K. Mukherjee and Duleep Singh: Towards high productivity, Report of a seminar on higher productivity in public sector production enterprises (New Delhi, Bureau of Public Enterprises) 1975