NEAR EAST UNIVERSITY

FACULTY OF ECONOMICS & ADMINISTRATIVE SCIENCES

DEPARTMENT OF BUSINESS ADMINISTRATION

PRODUCTIVITY CASE of TOFAŞ

GRADUATION PROJECT

MAN 400

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ABSTRACT

Productivity is important for personal gain as well as communal and national gain. Productive individuals lead to productive enterprises and productive enterprises lead to productive nations. There are many requirements for a productive environment. Appropriate working environment, adequate technology, and appropriate human resources are the main requirements. Among all these the human resource management is the most important issue in productivity.

Tofaş, the "Turkish Automotive Factories" were established in 1968 by the biggest business group of Turkey, the "Koç Group". Factories are located in Bursa. They are in close contact and collaboration with the World famous automobile manufacturers, Fiat of Italy. In the first years of production, the factories were merely involved in assembling the parts that were imported from Italy. Production today is almost 100% locally produced. There are many smaller units of factories which work in association, that produces parts for the assembly.

Most of the company's 2002 sales were in foreign countries: in 2002, this region's sales were 1.10 quadtrillion Turkish Liras, which is equivalent to 72.3% of total sales. Tofaş Turk Otomobil Fabrikasi A.S. currently has 4,395 employees. With sales of 1.53 quadtrillion Turkish Liras (US$1.09 billion), this equates to sales of US$248,944 per employee. This is higher than the three comparable companies, which had sales between US$49,307 and US$195,412 per employee. Note that some of the figures stated herein could be distorted based on exact classification of employees and subcontractors.

1. INTRODUCTION

Productivity is important for personal gain as well as communal and national gain. Productive individuals lead to productive enterprises and productive enterprises lead to productive nations. There are many requirements for a productive environment. Appropriate working environment, adequate technology, and appropriate human resources are the main requirements. Among all these the human resource management is the most important issue in productivity.

The only meaningful concept of competitiveness is productivity. Productivity is the prime determinant in a nations standarts of living for it is the root of national per capita income.

Productivity is the true source of competitive advantage and the key to long term economic viability.

A company (or an economy) can only increase its competitiveness through enhancing its productivity by raising the value-added content of its activities. It cannot increase the pay for its employees and hence cannot retain good people.

The following study is about the productivity, its importance, how it is measured and how can it be improved. TOFAS which is owned by the Koc Group will be focused on to evaluate its productivity. This study will provide information about the Tofas and compare it with its competitors.

The methodology of the study is to make research by using the annual year book, the information available at the internet and also use the textbooks.

The study will start with definition of productivity. The next section will be a part about the automobile industry. This will be followed by the information about the background of Tofas. After evaluating the business strategy this will be followed by productivity

assessment. Benchmarking part will be followed by recommendation and a conclusion.

2. What is Productivity

"The single greatest challenge facing managers in the developed countries of the world is to raise the productivity of knowledge and service workers. This challenge, which will dominate the management agenda for the next several decades, will ultimately determine the competitive performance of companies. Even more important, it will determine the very fabric of society and the quality of life in every industrialized nation."[1]

Peter Drucker, World Renowned Management Expert
"The only meaningful concept of competitiveness is productivity."
"Productivity is the prime determinant in a nation's standards of living, for it is the root of national per capita income."

Productivity is the true source of competitive advantage and the key to long term economic viability. A company (or an economy) can only increase its competitiveness through enhancing its productivity by raising the value-added content of its products/services faster than its competitors. If a company fails to increase the value-added content of its activities:

- it cannot increase the pay for its employees and hence cannot retain good people
- it cannot increase its re-investment without borrowing

[1] *Drucker, P. (1985) Innovation and Entrepreneurship, Heinemann, London.*

- it cannot effectively raise fund from the finance market for further investment because it cannot pay good dividends to its shareholders
- it cannot create better value to its customers
- It is clear that productivity is directly linked to the standard of living. No worker can for long be paid more than the value he adds to a product or service without his employer going out of his business. Higher productivity will expand our business, attract more investment, leading to more employment opportunities and a higher standard of living. [2]

2.1 How is the productivity measured

Productivity is the relationship between output and input. It should be viewed as value adding in addition to optimizing. It is a total concept that addresses the key elements of competition, i.e. innovation, cost, quality and delivery.[3]

Productivity = Value added/Input +1

Therefore, an increase in productivity can be achieved by enhancing the value-added content of products/services, or by decreasing the unit cost of production, or a combination of both.

A focus on productivity as essentially a value-adding process is important because it puts a focus on wealth creation:

Value added = income- prepaid expenses

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[2] *Drucker, P. (1985) Innovation and Entrepreneurship, Heinemann, London.*

[3] *Atkinson, S. and G. Wills (1988) "Entrepreneurs: a blueprint for action", Management Decision, 26 (4).*

= value of gross output-resources taken

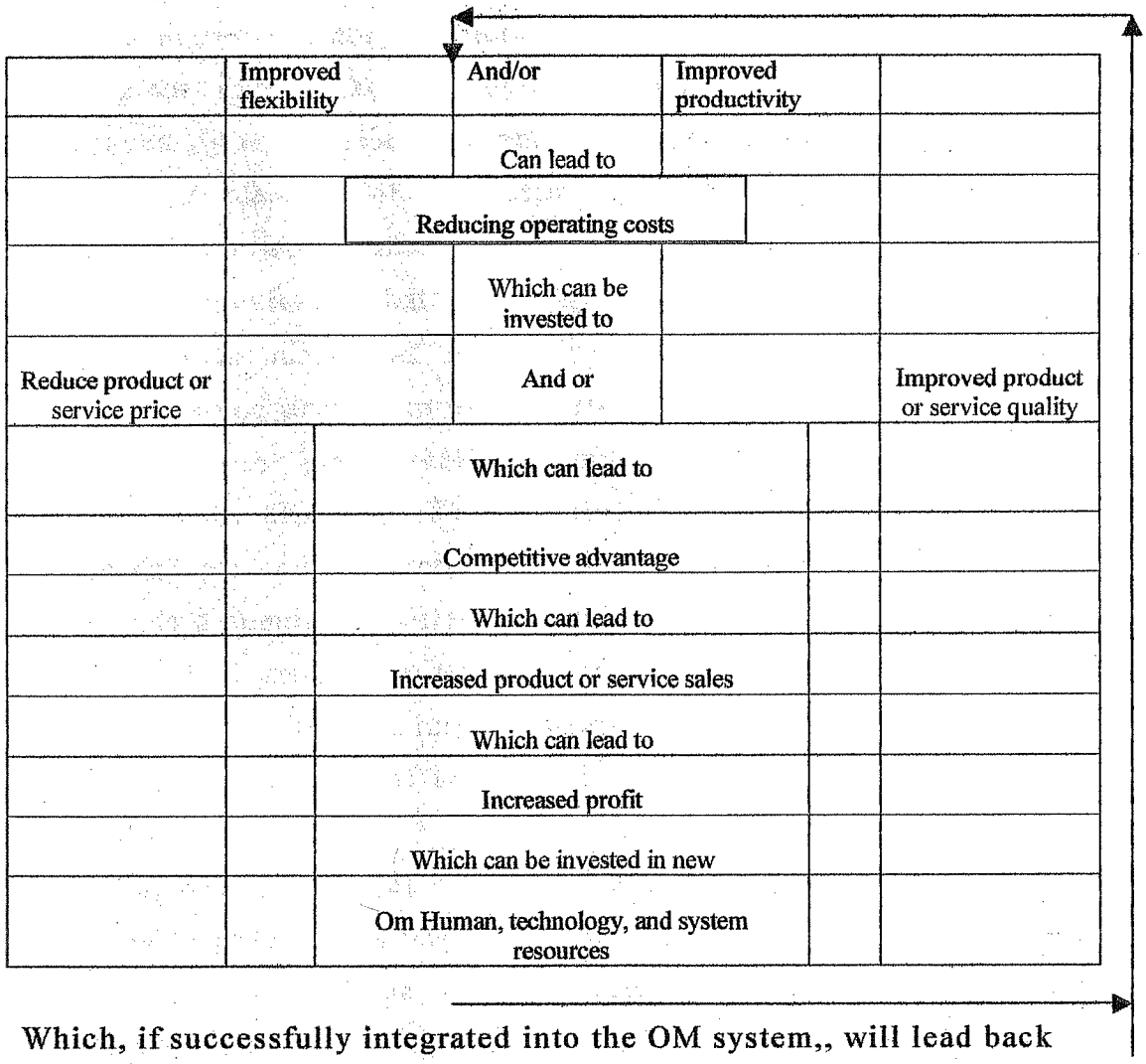
= wealth creation

1.3 Maximizing the productivity Cycle

The impact on an organization of increasing productivity is characterized by the concept of productivity cycling. The productivity cycle represent a logical sequence of events by which organization can get benefits because of an increase in productivity. The sequence of events can occur in any order but includes the following:

1. Improvements in productivity or flexibility (or both) are incurred by improved product quality, increased skills of human resources, improved work systems or procedures, or the introduction of new technology.
2. the improvements permit organization to reduce its inputs relative to its output, which can reduce operating costs. Improved product or service quality, for example, can reduce rework and scrap costs, improved flexibility can reduce setup costs during changeovers for different products.

The following is the productivity cycle:



Which, if successfully integrated into the OM system,, will lead back to

3. THE AUTOMOBILE INDUSTRY

I have selected the auto production industry for my project. The environmental changes are taking place for this sector due to the CU of Turkey with EU. The duty and tariffs will gradually diminish towards the EU member countries. The protection of the automotive sector in response to the third party countries will continue. On the other hand, used automobiles will not be imported to Turkey from the European Union with customs duty and fund exemptions. Thus, it has prevented to a great extent the automotive sector from being negatively influenced by the Customs Union. It is expected that this sector will develop by making joint investments and cooperation with the European Union companies.

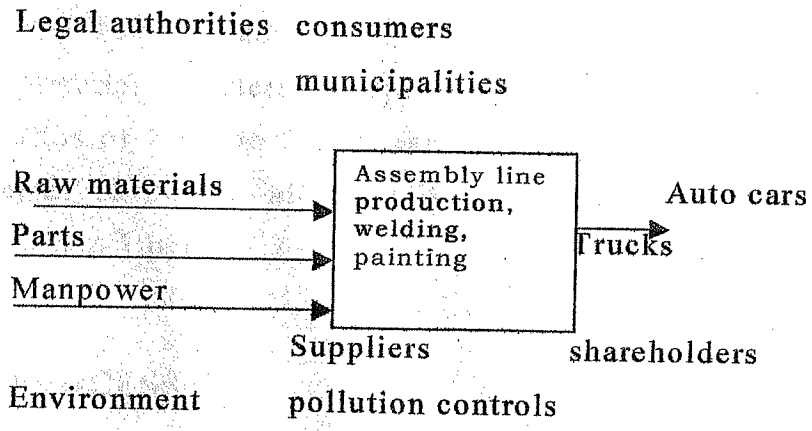
It is inevitable that in the legal framework of competition; Turkey has to adapt and comply with laws and policies of EU's. Preservation and promotion of competition is seen to be the necessary characteristics of the market economies. EU has based its common policies on the principle of competition and enacted laws in order to ensure and promote competition in the common market. Competition Policy has a special importance in the harmonization of the member states' internal market structures to the Community Common Market because, preservation and improvement of competition is a prerequisite for the free movement of goods, labour, services and capital in the internal market.

For the purpose of having an operational market system, the competition process has been regulated and managed in the European Community. For instance, cartel agreements preventing competition are leading to the misusing of economic power are prohibited.[4]

[4] http://www.igm.org.tr.automobileindustry

3.1 PRODUCTION, INPUT, PROCESS AND OUTPUT

Automobile production is a typical industry that uses the latest technology involves many parties such as the owners of the production, workers, the legal authorities and the environment in general. We can demonstrate the system as follows:



Since the middle of the 20th century, the automotive industry has been global in character, with the similarities between one country and another more pronounced than the differences. Once some degree of stability was achieved after World War II, motor vehicle production and use surged; Western Europe and Japan began to match the pattern established in the United States and Canada. One striking consequence was the steady erosion of the dominant position initially held by the United States. In 1950 the United States produced two-thirds of the world's motor vehicles. In 1980 its share of world production was just over one-fifth, although U.S. output was almost equivalent to the output of 1950. There have been some striking shifts in position among producing countries. In the 1960s West Germany overtook Great Britain to become the world's second largest motor vehicle manufacturer, a feat largely attributable to the phenomenal success of the Volkswagen. In the 1970s, Japan overtook West Germany and in

the 1980s passed the United States to take first place among motor vehicle producers.

Other countries with substantial automotive industries are Canada, France, Italy, Sweden, and Russia. Elsewhere, automobile manufacturing has largely been an offshoot of the big manufacturing firms in the major producing countries.

The heaviest concentrations of motor vehicles in use are in North America, Western Europe, Japan, Australia, and New Zealand, with ratios of 1 car to 2 to 4 persons. China, by contrast, numbers 1 car per 2,000 people--although if trucks and buses are included, the ratio rises to 1 per 359.[5]

3.1.1 PROCESS

The assembly-line technique, first introduced by Ford, has become virtually universal. Almost all passenger automobiles and most commercial vehicles are made in this way. The technique has been greatly refined so that, instead of the rigid uniformity with which the Model T was turned out, a wide variety of options can be programmed into individual bodies and chassis. Automation was introduced, initially for the manufacture of engines, in the early 1950s. Computer-controlled robot welding machines were first used in the 1970s; computerized machining of engine parts is a technology of the late 1980s.

The assembly-line technique introduced by Henry Ford continues to be used almost universally in Europe and America. Automation was introduced on the assembly line in the early 1950s, computer-

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[5] *Ries, A. and J. Trout (1986) Marketing Warfare, McGraw-Hill, Singapore*

controlled welding robots in the 1970s, and computerized machining of engine parts in the late 1980s.

The Japanese ability to impose high standards of quality control while at the same time improving productivity is challenging the standard assembly-line techniques. The success of the General Motors-Toyota plant--the New United Motor Manufacturing, Inc., or NUMMI--in Fremont, Calif., and of several other Japanese auto manufacturing plants in the United States is considered a triumph for their "team" approach to mass manufacturing. At NUMMI, after U.S. workers are trained in a range of skills, they form small teams that are each responsible for the assembly of a major portion of a car. The team approach requires an educated work force, considerable training inside the factory, and a commitment on the part of management that trained personnel will not be subject to the layoffs and rehirings customary in conventional U.S. auto firms. This new approach to manufacturing had proved so satisfactory that workers in one Japanese-owned plant voted against unionization in 1989.[6]

3.1.2 ORGANIZATION

Organization generally is recognised as the foundation of management. The term, as it is used in industry and business, means the distribution of the functions of the business to the personnel logically qualified to handle them. It should be noted that the organization should be built around functions rather than individuals.

The majority of progressive concerns today are organised on a line-and-staff basis. The relationships usually are shown on an organization chart, which reveals the relationships of the major

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[6] Drucker, P. (1985) Innovation and Entrepreneurship, Heinemann, London

divisions and departments and the lines of direct authority from superior to subordinate. Lines of authority usually are shown as vertical lines. Staff authority frequently is indicated by a dotted line, which distinguishes it from direct authority. This same procedure is usually used to indicate committee relationships. Departments or activities are clearly identified within framed rectangles. The names of individuals responsible for a given department or activity often are included with their job organization titles. Although the organization chart shows the relationship of organization units, it does not clearly define the responsibilities of the individuals and the groups. Thus organization charts must be supplemented with carefully prepared job descriptions for all members of the organization. Job descriptions are written definitions of jobs enumerating the duties and responsibilities of each position.

A fine organization comprises those individuals, groups, and supervising employees concerned directly with the productive operation of the business. The paths of authority are clearly defined, as each individual has but one superior from whom he obtains orders and instructions. This superior reports to but one individual, who has complete jurisdiction over his operation and supplies necessary technical information. In large and middle-sized organisations, a pure line-type enterprise cannot exist because of the complexity of our business society.

A staff organization involves personnel, departments, or activities that assist the line supervisor in an advisory, service, coordinating, or control capacity. It should be noted that a staff position is a full-time job and is essentially the work of a specialist. Typical staff functions are performed by the company's legal department, controller, and production control. Figure 1 illustrates a typical line-staff activity.

Committees are used in some instances. A committee is a group of individuals which meets to discuss problems or projects within its area of assigned responsibility in order to arrive at recommendations or decisions. A committee operates on a staff basis. Although committees are time-consuming and frequently delay action, their use combines the experience and judgment of several persons, rather than a single individual, in reaching decisions.

The control of organization is the responsibility of two groups of management:

(1) administrative management, which has the responsibility for determining policy and coordinating sales, finance, production, and distribution, and

(2) production Management, which has the responsibility for executing the policies established by administration.

In building an efficient organization, management should abide by certain principles, namely:

1. Clear separation of the various functions of the business should be established to avoid overlap or conflict in the accomplishment of tasks or in the issuance or reception of orders.

2. Each managerial position should have a definite location within the organization, with a written job specification.

3. There should be a clear distinction between line and staff operation and control.

4. A clear understanding of the authority under each position should prevail.

5. Selection of all personnel should be based on unbiased techniques.

6. A recognised line of authority should prevail from the top of the organization to the bottom, with an equally clear line of responsibility from the bottom to the top.

7. A system of communication should be well established and definitely known-it should be short, yet able to reach rapidly everyone in the organization.

Staff members usually have no authority over any portion of the organization that the staff unit assists. However, the department or division that is being assisted by the staff can make demands upon the staff to provide certain services. There are instances where a control type of staff may be delegated to direct the actions of certain individuals in the organization that they are servicing. When this takes place, the delegated authority may be termed staff authority; it is also frequently known as functional authority because its scope is determined by the functional speciality of the staff involved.[7]

Good organization requires that

(1) responsibilities be clearly defined;

(2) responsibility be coupled with corresponding authority;

(3) a change in responsibility be made only after a definite understanding exists to that effect by all persons concerned;

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[7] Buzzel, R.D. and B.T. Gale, (1987) The PIMS Principles, Free Press, New York

(4) no employee be subject to definite orders from more than one source;

(5) orders not be given to subordinates over the head of another executive;

(6) all criticism be made in a constructive manner and be made privately;

(7) promotions, wage changes, and disciplinary action always be approved by the executive immediately superior to the one directly responsible;

(8) any employee whose work is subject to regular inspection or appraisal be given the facilities to maintain an independent check of the quality of his work.

4. Case of Tofas

4.1Bacground of Tofas

Tofaş, the "Turkish Automotive Factories" were established in 1968 by the biggest business group of Turkey, the "Koç Group". Factories are located in Bursa. They are in close contact and collaboration with the World famous automobile manufacturers, Fiat of Italy. In the first years of production, the factories were merely involved in assembling the parts that were imported from Italy. Production today is almost 100% locally produced. There are many smaller units of factories which work in association, that produces parts for the assembly.[8]

As in any country, automotive sectors are the major sectors and indicators of the economy . One can have a good idea about the economy, by looking at the car manufacturing. This sector is doing well in Turkey. Until a few years ago, the car manufacturers of Turkey were only producing old models. Today they are producing

[8] http://www.tofas.com.tr.annualreport

the newest models, and also started exporting their products. As it will be explained later, Tofaş is taking a leading role in exporting cars and also they are preparing to be world manufacturers of certain types, for the Fiat company.

4.1.1 PRESENT SITUATION IN THE SECTOR

The industry accounts a prominent place in all of the Turkish manufacturing sector. Also, the industry has been the most rapid growing sector in the recent years. It has also positive effects on the industrialization process and on Turkish economy general with income, employment, value added creating aspects. Some figures will be helpful to give some idea to the reader about the scope and dimension of the industry in Turkey.

- Among all of the manufacturing industries, after the food and textile industries, automotive industry is in the third order in respects of turnover, with an annual production value of 4.6 billion US in 1992. The turnover of manufacturers in the main industry was 3.0 billion $ in 1991, its 1.8 billion $ was paid to suppliers by manufacturers in the main industry. This value increased to 2.3 billion $ in 1992. The total turnover of suppliers including after market sales is around 4 billion $.

- Automotive industry is the most rapid growing sector with an average annual growth rate of

12.5% between the years 1987-1992.

- Especially by the year 1990, investments began to increase substantially. Investments realized in the sector hold 3,5 billion US$ between the years 1990-1993. With the new entrant firms, which have got permission for investment from the Treasury, and which are willing to invest, investments are expected to rise more. In 1992, manufacturers in the main industry invested 240 million $ for new model

investments and capacity increases and introduced IS new models and 23 model changes into the markets.

- The sector is the fifth largest in terms of employment, the seventh largest in terms of the value added accounting for 37% of all value added of total Turkish Manufacturing Industry. At present, approximately 25,000 persons have been working in primary automotive industry and 500,000 persons in various secondary industrial sectors.

- Since the establishment of the industry, the local contribution rate of industry has been in the trend of increase until today. The local contribution rate as composed of such components as tires, battery, seats, painting work and sheet metalwork in initial products within the years of 1966-70 was 15% only; however this rate has reached over 90% today with present capability of automotive sub-industry to manufacture all required components except spark plug and battery."

- Automobile sub-sector has a major share in the automotive industry. Automobiles constitute 80% of the whole automotive products produced in 1994.

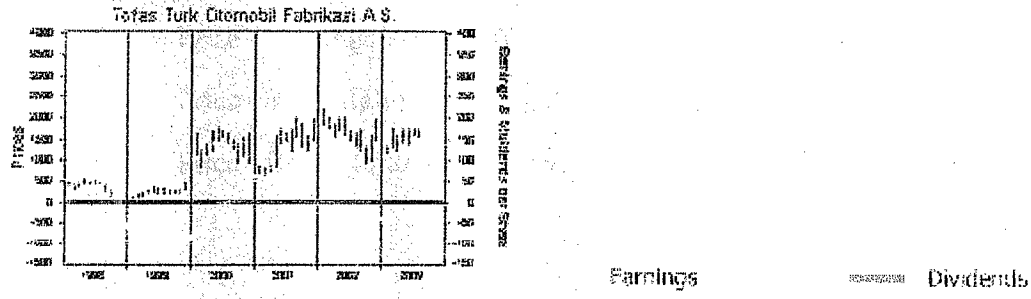
Automotive firms are noticed with their large scales in the industry. In the 500 largest establishments of Turkey, in the first 10 private firms ranked according to sales, four automotive firms (three of them manufacture automobiles) takes place. In this ranking, the first firm is an automobile
manufacturer.

4.2 COMPANY PROFILE:

The Group's principal activity is the manufacture and assembly of automobiles, product groups and engines, parts, spare parts and accessories for these vehicles under the license of Fiat. The Group is also involved in the distribution,

marketing and sale of the vehicles manufactured in the domestic and international market.[9]

Stock Chart



Source: http://www.borsa.net/hisse_ozet.asp?Company=TOFAS

Stock Price (8/15/03): 1,820.00

Recent stock performance

1 Week	-0.5%
4 Weeks	7.1%
13 Weeks	27.3%
52 Weeks	26.5%

Officers

Chairman: Sena Kirac

[9] http://www.borsa.net/hisse_ozet.asp?Company=TOFAS

Vice Chairman: Pietro Sighicelli

General Manager: Jan Nahum

Earnings / Dividends (as of 12/31/02)

	Earnings	Dividends
Most Recent Qtr	n.a.	0.00
Last 12 Months	-43.1	0.00

Ratio Analysis

Price / Earnings Ratio	N/A	Dividend Yield	0.00%
Price / Sales Ratio	0.54	Payout Ratio	N/A
Price / Book Ratio	2.06	% Held by Insiders	75.44%

2002 Sales: 1,525,956,165,000,000

Major Industry: Automotive

Sub Industry: Diversified Automotive Mfrs.

Employees:4,395

4.2.1 Company Description

The Group's principal activity is the manufacture and assembly of automobiles, product groups and engines, parts, spare parts and accessories for these vehicles under the license of Fiat . The Group is also involved in the distribution,

marketing and sale of the vehicles manufactured in the domestic and international market .

4.3 Competitor Analysis

Tofas Turk Otomobil Fabrikasi A.S. operates in the Motor vehicles and car bodies sector. This analysis compares Tofas Turk Otomobil Fabrikasi A.S. with three other automobile manufacturers in Africa / Mid East: Karsan Otomotiv (2002 sales of 153.71 trillion Turkish Liras [US$110.21 million]), Metair Investments Limited of South Africa (1.61 billion South African Rands [US$219.91 million] of which 100% was Motor vehicle components), and Bosch Fren Sistemleri (35.25 trillion Turkish Liras [US$25.28 million]).[10]

4.3.1 Sales Analysis

Tofas Turk Otomobil Fabrikasi A.S. reported sales of 1.53 quadtrillion Turkish Liras (US$1.09 billion) for the year ending December of 2002. This represents an increase of 38.4% versus 2001, when the company's sales were 1.10 quadtrillion Turkish Liras. Sales at Tofas Turk Otomobil Fabrikasi A.S. have increased during each of the previous five years (and since 1997, sales have increased a total of 1,259%).

Recent Sales at Tofas Turk Otomobil Fabrikasi A.S.

112 168 224

502 1,103 1,526

[10] http://www.borsa.net/hisse_ozet.asp?Company=TOFAS

1997 1998 1999 2000 2001 2002

(Figures in Trillions of Turkish Liras)

Source: http://www.tofas.com.tr.annualreport

Most of the company's 2002 sales were in foreign countries: in 2002, this region's sales were 1.10 quadtrillion Turkish Liras, which is equivalent to 72.3% of total sales. In 2002, sales in Turkey were up at a rate that was much higher than the company as a whole: in this region, sales increased 86.1% to 466.99 trillion Turkish Liras. Geographic breakdowns may be skewed since the breakdown includes Adjustment accounts, which totalled -86.42 trillion Turkish Liras (equivalent to 5.7% of sales) in 2002.

4.3.2 Production/Employee

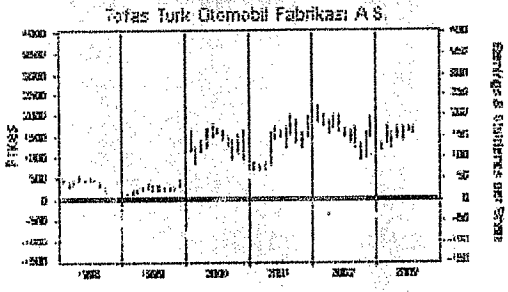
Tofas Turk Otomobil Fabrikasi A.S. currently has 4,395 employees. With sales of 1.53 quadtrillion Turkish Liras (US$1.09 billion), this equates to sales of US$248,944 per employee. This is higher than the three comparable companies, which had sales between US$49,307 and US$195,412 per employee. Note that some of the figures stated herein could be distorted based on exact classification of employees and subcontractors.[11]

Sales Comparisons (Fiscal Year ending 2002)

[11] http://www.borsa.net/hisse_ozet.asp?Company=TOFAS

Company	Sales (US$blns)	Sales Growth	Sales/ Emp (US$)	Largest Region
Tofas Turk Otomobil Fabrikasi A.S.	1.094	38.4%	248,944	Foreign countries (72.3%)
Karsan Otomotiv	0.110	100.8%	195,412	N/A
Metair Investments Limited	0.220	33.5%	49,307	N/A
Bosch Fren Sistemleri	0.025	106.1%	142,803	Foreign countries (52.3%)

Recent Stock Performance



Source: http://www.borsa.net/hisse_ozet.asp?Company=TOFAS

For the 52 weeks ending 8/15/03, the stock of this company was up 26.5% to

4.3.3 Summary of company valuations (as of 8/15/03).

Company	P/E	Price/ Book	Price/ Sales	52 Wk Pr Chg

Tofas Turk Otomobil Fabrikasi A.S.	N/A	2.06	0.54	26.50%
Karsan Otomotiv	N/A	1.41	0.43	-8.67%
Metair Investments Limited	6.2	0.95	0.34	3.30%
Bosch Fren Sistemleri	N/A	2.73	1.05	21.09%

Source: http://www.borsa.net/hisse_ozet.asp?Company=TOFAS

The market capitalization of this company is 819.11 trillion Turkish Liras (US$587.30 million) . Closely held shares (i.e., those held by officers, directors, pension and benefit plans and those shareholders who own more than 5% of the stock) amount to over 50% of the total shares outstanding: thus, it is impossible for an outsider to acquire a majority of the shares without the consent of management and other insiders. The capitalization of the floating stock (i.e., that which is not closely held) is 201.14 trillion Turkish Liras (US$144.22 million).

4.3.4 Profitability Analysis

On the 1.53 quadtrillion Turkish Liras in sales reported by the company in 2002, the cost of goods sold totalled 1.27 quadtrillion Turkish Liras, or 83.1% of sales (i.e., the gross profit was 16.9% of sales). This gross profit margin is lower than the company achieved in 2001, when cost of goods sold totalled 79.6% of sales.

The company's earnings before interest, taxes, depreciation and amorization (EBITDA) were 108.22 trillion Turkish Liras, or 7.1% of sales. This EBITDA margin is worse than the company achieved in 2001, when the EBITDA margin was equal to 10.6% of sales.

In 2002, earnings before extraordinary items at Tofas Turk Otomobil Fabrikasi A.S. were -19.38 trillion Turkish Liras, or -1.3% of sales. This profit margin is lower than the level the company achieved in 2001, when the profit margin was -0.1% of sales.

The company's return on equity in 2002 was -8.5%. This was significantly worse than the -0.5% return the company achieved in 2001. (Extraordinary items have been excluded).

Profitability Comparison

Company	Year	Gross Profit Margin	EBITDA Margin	Earns bef. extra
Tofas Turk Otomobil Fabrikasi A.S.	2002		7.1%	-1.3%
Tofas Turk Otomobil Fabrikasi A.S.	2001	20.4%	10.6%	-0.1%
Karsan Otomotiv	2002	15.4%	7.3%	-0.9%
Metair Investments Limited	2002	N/A	N/A	5.5%
Bosch Fren Sistemleri	2002	22.2%	9.1%	-1.4%

Source: http://www.borsa.net/hisse_ozet.asp?Company=TOFAS

4.3.5 Inventory Analysis

As of the value of the company's inventory totalled 74.09 trillion Turkish Liras. Since the cost of goods sold was 1.27 quadtrillion Turkish Liras for the year, the company had 21 days of inventory on hand (another way to look at this is to say that the company turned over its inventory 17.1 times per year). In terms of inventory turnover, this is an improvement over , when the company's inventory was 72.74 trillion Turkish Liras, equivalent to 30 days in inventory.

4.3.6 Research and Development

Research and Development Expenses at Tofas Turk Otomobil Fabrikasi A.S. in 2002 were 11.23 trillion Turkish Liras, which is equivalent to 0.7% of sales. In 2002, R&D expenditures dropped both as a percentage of sales and in actual amounts: In 2001, Tofas Turk Otomobil Fabrikasi A.S. spent 17.03 trillion Turkish Liras on R&D, which was 1.5% of sales.

4.3.7 Financial Position

As of, the company's long term debt was 244.14 trillion Turkish Liras and total liabilities (i.e., all monies owed) were 845.25 trillion Turkish Liras. The long term debt to equity ratio of the company is 0.62.

As of, the accounts receivable for the company were 348.90 trillion Turkish Liras, which is equivalent to 83 days of sales. This is an improvement over the end of 2001, when Tofas Turk Otomobil Fabrikasi A.S. had 86 days of sales in accounts receivable. [12]

Financial Positions

Company	Year	LT Debt/ Equity	Days AR	Days Inv.	R&D/ Sales
Tofas Turk Otomobil Fabrikasi A.S.	2002	0.62	83	21	0.7%
Karsan Otomotiv	2002	0.46	25	26	N/A
Metair Investments Limited	2002	0.13	58	N/A	N/A

[12] http://www.tofas.com.tr.annualreport

Bosch Fren Sistemleri	2002 0.00	99	40	N/A

5. BENCHMARK- FIAT

Tofaş is closely linked to Fiat the biggest Italian automotive industry. They benchmark Fiat in order to improve their productivity. For this purpose a new shareholders agreement between Fiat Auto S.p.A. and Koç Holding A.Ş. introduced innovative concepts to adapt to the changing automobile environment.

The new shareholders agreement, which was signed on June 26,1997, not only makes Tofaş and Fiat equal partners, but it also integrates Turkey into the global automobile market. The agreement was the culmination of more than a year of discussions to establish new product, market and export strategies in line with the new market conditions.

Investment of $262 million to support the production of the Fiat 178 is an important step forward for Tofaş: currently being produced in Brazil, Argentina and Poland, the Fiat 178 is a high volume B+ category family car and as part of the worldwide Fiat system, Tofaş will become a main supplier, able to export both built-ups and parts to other countries. The Fiat 178, which will be produced in three versions - hatchback, sedan and station wagon - is a highly suitable car for the Turkish market and offers excellent export opportunities. In fact, the export of parts to Poland has begun before production that will start in the second half of 1998. The Customs Union with the European Union, which came into effect in 1996, initiated a new stage of national development for Turkey. The inevitable increase in imports makes it imperative to generate sufficient exports to offset them and the Fiat 178 will allow Tofaş to do this.

Imports now account for 35% of the total automobile market in Turkey, up from 23% in 1996 and 9% in 1995. Imports accounted for most of the growth in total automobile sales which reached 339,000 vehicles, an increase of 46% from the previous year. The continued popularity of Tofaş cars, which are valued by consumers for their reliability and hardiness, boosted production by 9% to 105,181 vehicles, including built-ups and kit assembly units. This equates to 40% of total local production. Tofaş exported $80 million worth of automobiles in 1997, more than the combined total of all other manufacturers put together.

6. Recommendations

As well as benchmarking the Tofas group should also enter into TQM (Total Quality Management). Total Quality management is the goal of improvement Of quality continuously. As it can be understood from the name it means total quality which implies zero defect. This is a big task. In the past, when the mass production was introduced, the management minimized the role of the people working there. It was expected from them to learn a specific work and perform this as fast as possible. People became part of the machinery. There was then a quality control unit where some of the products were randomly checked and controlled. The chances of a defective product reaching to consumer was very high.

Total quality concept is much different than this. It has two important principles. First principle is a product with no defect, a product which is considered to be in good quality. The second principle is the quality at the working place and management. In a total quality concept production unit everyone is as important. Cleaning person is not only a cleaning person, he or she knows that

their idea is important and management want them to be part of the system. Responsibility of the success or failure is to everybody.

It is the role of the managers to create the right kind of atmosphere to get best out of their employees. A worker may have many more values than the management is aware of. Extra few percent contribution from each worker may mean a huge benefit for the management.

Quality control as it is, is a complex work of controlling, examining and testing to make sure that the end product is in good order to satisfy the consumers. A system for ensuring that pre-determined standards are met in a process. A number of stages can be involved: a check that materials received for the production process are of sufficient quality and consistency; a check that quality standards are being maintained during the production process; finally, a check that the finished product meets quality standards, carried out by inspecting a sample of each production batch. Modern techniques have concentrated on two areas to improve quality: the human and the mechanistic. Following Japanese methods, staff may be formed into 'quality circles' representing all grades of workers and concentrating together on the improvement of quality in specific areas. Total quality management (TQM) is a development of quality control in which these human factors are stressed. In this method responsibility for quality devolves on all employees so that it becomes part of the corporate ethos of an organization. Computers are also widely used to monitor the output of production machines, stopping the process when the statistically monitored quality level appears to be consistently deteriorating. Quality control is a vital activity. If defective products are not detected before delivery, not only are costs incurred, but the organization's reputation may suffer, causing a reduction in customer confidence and satisfaction levels.

TQM is an important tool to increase the productivity at the work place. It is conceivable for you to have more employees than the competition yet your company produces less and for you to have disgruntled, low-output employees even though you pay your employees more than the competition pays theirs. Productivity surveys and case studies indicate that increased worker motivation and satisfaction can increase worker output. Progressive, innovative managers now achieve productivity gains with human resource management techniques that go beyond pay incentives.

The essence of employee motivation and effectiveness is the manner in which they are managed. A direct relationship exists between effective management (i.e., providing a work environment that simultaneously achieves company goals and employees' goals) and modern human resource management.

Your skill and knowledge in recognizing and assessing issues that concern employees and by your ability to resolve these concerns with employee help and satisfaction judge your management success.

Do your employees know how you judge and measure their performance?

Do you provide and encourage individual development with training and educational programs? Do you trust your employees and rely upon their know-how? Do you let employees make decisions? Do you have timely, accurate, open two-way communication with your employees? If you answer no to all or most of these questions, you should improve your management skills because you probably have (or will have) employee-productivity problems.

Getting high quality job performance from your employees depends on giving employees opportunities for their personal growth, achievement, responsibility, recognition, and reward.

Pay--money--is the primary need and reward. Once the compensation (pay and benefits) is established properly, it is necessary to use other means to further motivate and improve your work force's output. The basis of all job enhancement efforts is your recognition of employees' desire to do good work, to assume responsibility, to achieve, and to succeed. Changes to consider in improving the quality of work life atmosphere include those listed below:

The quality of work life technique is to involve your employees by sharing management responsibility and authority with them--the workers who do the job.

As a key to achieving improved profit goals, a major manufacturer experimented with human resource management, making jobs more interesting and rewarding through quality of work life techniques.

Human resource management and quality of work life techniques are general approaches that affect all employees. A more specialized (and companion) motivational technique is benefits management. Here you can deal with individual employee concerns.

The tailoring of benefits to satisfy specific needs is part of the quality of work life technique. It is a way to maximize the amount of labor costs going to the employee and to maximize your return on these costs without increasing across-the-board expenses. By making a special effort to satisfy individual employee needs, you reinforce the motivational value of the flexible benefit.

Using quality of work life techniques to motivate and to reward employees can result in productivity gains. The ultimate goal, of course, is to achieve the maximum result from the least effort, the greatest profit for the least cost, the largest output from the smallest input. To work toward this goal you've got to know how productive

your company is. Thus you must define and measure productivity for comparison from time to time.

7. Conclusion

Definitions of and ways to measure productivity vary. A basic way to express productivity is productivity equals output divided by input, i.e., productivity is the ratio of output to input, or simply output over input.

The quantity of output is measured in units produced, dollars of sales, or any term that suits your need. The quality of output is measured by workmanship, adherence to standard, and absence of complaints. Input is measured by labor costs; hours worked, and number of employees. To be useful, measures must be as simple and as consistent as possible.

Modern Managements of today do not dictate what their workers should do. The approach is to allow everybody participate in the process. All the people from top to bottom are working towards improvement of quality. There are four basic key factors in implementing TQM successfully. The first is the determination of the top management, second is to put the quality as the top priority. Third factor is to be realistic about the implementation plan. Fourth factor which is very important is the participation of each and every individual in the process.

Total Quality management is not dealing only with the quality of the products, but it also involves the quality of the working conditions, the wages, the social security and many more aspects. So we can accept this as a new philosophy behind the human resource management.

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QUESTIONNAIRE

1. Who are the customers of the organization?: Internal Customers (Turkey) and External customers Europe and China.

2. What are the product and services?: collection production of various type of cars and spare parts

3. Place of Activity: Bursa

4. Technology used: Robot and high technology. Assembly lines are also used for mass-production.

5. Is the organization strong and attain growth?: Yes the company is very strong.

6. Values and beliefs: They give great importance to provide durable and safe cars with no quality problems.

7. Sensitivity towards environment: yes

8. Competitional advantages: they are price leaders and provide a choice of car for every need.

9. Employees: They are selected and promoted according to their skills and knowledge.

This information from the Mr. Mete Boyacı (Director of Tofaş)