



# NEAR EAST UNIVERSITY



*Faculty Of Economics & Administrative Sciences*

*Department of Economics*

## *Graduation Project*

*Dissertation presented in partial fulfillment of the requirements of  
B. Sc of Economics*

*“Economic Development Concept and Application to TRNC”*

*Submitted to: Asst. Prof. Dr. Erdal GÜRYAY*

*Submitted by: Behiye TÜZEL / 980080*

*February 5, 2002-Nicosia, TRNC*





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In support *To my parents...*

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*February/05/2002*

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## Preface

This study is related with “Economic Development Concept and Application to Turkish Republic of Northern Cyprus (TRNC)”. In this way;

Chp 1; Theories of economic development will be evaluated.

Chp 2; Economic Development and Measurement will be presented.

Chp 3; Economic Development in TRNC (Sectoral Analysis) will be interpreted.

Chp 4; Economic Analysis of Ireland, Malta and South Cyprus will be expressed.

At the end in the light of these informations, conclusion and recommendations part will be evaluated.

## Executive Summary

In Economic Development Concept, main theories that are analyzed in this project are; Traditional Theory of International Trade (Adam Smith). The Classical Theory (D.Ricardo), Rastow's Stages of Economic Growth, Balanced Growth, Harrod-Domar Growth Model, The Lewis Model, The Neoclassical Growth Theory, The New (Endogenous) Growth Theory, Dependency Theory, The Linear Stages Theory, The Neoclassical Counterrevolution, Kuznet's Six Characteristics of Modern Economic Growth and Globalization Theory. Today's globalization world, globalization and economic development are strongly interdependent; in general, most of the economic development theories based on saving and investment and emphasized the importance of investment for economic growth.

Development means the condition for the realization of the human personality. Its evaluation must therefore take into account three linked economic criteria: reduction in (i) poverty, (ii) unemployment, (iii) inequality. Measures of development at the family level based on nutrition, health, infant mortality, access to education and political participation.

The main sectors of TRNC that are analyzed in this study are agriculture, industry, manufacturing, trade, tourism and education sectors. Some of the sectors has a problem with low fixed capital investment and others has a problem with low production, low marketing and restricted international markets. Because of their share in GNP, industry, trade, agriculture and transport communication sectors are important. Tourism and education sectors are creating value to GNP and covers development process of TRNC.

In the light of above information as a case study the country of Ireland, Malta and South Cyprus will be presented by regarding their economic and social indicators.

As a result of this, analyzed sectors needs to improve. In agriculture and industry sectors, technological equipments will increase total production, so investment in these sectors will help to improve. When the transportation problem will solved, tourism sector automatically get better. In generally TRNC should be concentrate on how to convert savings into investment in the sectoral basis.

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## Acronyms

**C£:** Cyprus Pound

**EMU:** Eastern Mediterranean University

**EU:** European Union

**FCI:** Fixed Capital Investment

**GAU:** Girne American University

**GD:** Government Donum

**GDP:** Gross Domestic Product

**GNP:** Gross National Product

**IACs:** Industrially Advanced Countries

**IAU:** International American University

**ICU:** International Cyprus University

**IR£:** Ireland Pound

**LDC:** Less Developed Countries

**LEU:** Lefke European University

**LM:** Maltese National Currency, Lira

**mn:** Million

**MNCs:** Multinational Corporations

**OECD:** Organization of Economic Cooperation and Development

**OPEC:** Organization of Petroleum Exporting Countries

**PM:** Prime Ministry

**SCSE:** South Cyprus Stock Exchange

**SPO:** State Planning Organization

**TL:** Turkish Lira

**TRNC:** Turkish Republic of Northern Cyprus

**UK:** United Kingdom

**US:** United States

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This project is my first comprehensive and serious study. Because of this reason it is very significant for me.

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# Theories of Economic Development

# Theories of Economic Development

## **1.1 The Traditional Theory of International Trade – Adam Smith**

### **(Comparative Advantage: The Classical Labor – Cost Model):**

Why do people trade? Basically, because it is profitable to do so. Different people possess different abilities and resources and may want to consume goods in different abilities and resources and may want to consume goods in different proportions. Diverse preferences as well as varied physical and financial endowments open up the possibility of profitable trade. People usually find it profitable to trade the thing they possess in large quantities (i.e., relative to their tastes or needs) in return for things they want more urgently. Since it is virtually impossible for each individual or family to provide itself with all the consumption requirements of even the simplest life, they usually find it profitable to engage in those activities for which they are best suited or have a “comparative advantage” in terms of their natural abilities and/or resource endowments. They can then exchange any surplus of these home-produced commodities for products which others may be relatively more suited to produce. The phenomenon of specialization based on comparative advantage arises, therefore, to some extent in even the most primitive of subsistence economies.

These same principles of specialization and comparative advantages have long been applied by economists to the exchange of goods between individual nations. In answer to the question of what determines which goods are traded and why some countries produce some things while others produce different things, economists since the time of Adam Smith have sought the answer in terms of international differences in costs of production and prices of different products. Countries, like people, specialize in a limited range of production activities because it is to their advantage to do so. They specialize in those activities where the gains from specialization are likely to be largest.

The concept of relative cost and price differences is basic to the theory of international trade. It is known as the principle of “comparative advantage” and it asserts that a country will specialize in the export of this product it can produce at the lowest relative cost.

Free trade based on the principle of comparative advantage, has two major theoretical benefits. The first is that trade enables all countries to escape from the confines of their resource endowments and consume commodities in combinations that lie outside their production possibility frontiers. This, free international trade will benefit all nations of the world, even though the benefits may be disproportionately distributed depending on world demand conditions and cost differences for different commodities in different countries. The second major implication of the classical theory is that free trade will maximize global output by permitting every country to specialize in what it does best (i.e. , by focusing on the production of those goods in which it has a comparative advantage). Specialization and trade can therefore lead to world output increases for all traded commodities.<sup>1</sup>

Adam Smith emphasized the importance of free trade in increasing the wealth of all trading nations. According to Adam Smith mutually beneficial trade is based on the principle of absolute advantage. According to Adam Smith a country may be more efficient in the production of some commodities relative to another nation. Irrespective of the cause of the difference in efficiency, both countries can benefit if each specializes in production of what it can do more efficiently than the other country with increased outputs of both commodities both countries can enjoy higher standards of living.

The classical theory of international trade is based on the labor theory of value, which asserts that labor is the only factor of production and that in a closed economy (that is an economy that exports and imports nothing) goods exchange for one another according to the relative amounts of labor they embody.<sup>2</sup>

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<sup>1</sup> Michael P. Todaro, *Economic Development in the Third World*, New York 1981 pp:343-344

<sup>2</sup> Miltiades Chacholiades, *International Economics*, Singapore 1990, pp. 13-14

## 1.2 The Classical Theory of Economic Development:

The classical theory based on the work of 19<sup>th</sup> century English economist David Ricardo, was pessimistic about the possibility of sustained economic growth. For Ricardo, who assumed little continuing technical progress, growth was limited by land scarcity.

In the late 18<sup>th</sup> century, A. Smith argued that in a competitive economy, with no collusion or monopoly, each individual by acting in his or her own interest, promoted the public interest. A producer who charges more than others will not find buyers, a worker who asks more than the going wage will not find work, and an employer who pays less than competitors will not find anyone to work. It was as if an invisible hand was behind the self-interest of capitalist, merchants, landlords and workers, directing their actions toward maximum economic growth.<sup>3</sup> Smith advocated a Laissez faire and free trade policy except where labor capital and product markets are monopolistic, a proviso some present-day disciples of Smith overlook.

The classical model also took into account (1) the use of paper money, (2) the development of institutions to supply it in appropriate quantities, (3) capital accumulation based on output in excess of wages, and (4) division of labor. A major tenet of Ricardo was the law of diminishing returns, referring to successively lower extra outputs from adding on equal extra input to fixed land. For him diminishing returns from population growth and a constant amount of land threatened economic growth. Since Ricardo believed that technological change or improved production technique could only temporarily check diminishing returns, increasing capital was seen as the only way of offsetting this long run threat.

Ricardo's reasoning took the following path. In the long run the natural wage is at subsistence- the cost of perpetuating the labor force (or population, which increases at the same rate). The wage may deviate but eventually returns to a natural rate at subsistence. On the one hand, if the wage rises food production exceeds what is essential for maintaining the population. Extra food means fewer deaths, and the population increases more people food and the average wage falls. Population growth continues to reduce wages until they reach the subsistence level once again. On the other hand a wage below subsistence increases deaths and eventually contributes to a labor shortage which raises the wage. Population decline

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<sup>3</sup> Adam Smith, *Wealth of Nations*, Cannan Edition New York, 1937

increases wages once again to the subsistence level. In both instance, the tendency is for the wage to return to the natural subsistence rate.

With this iron law of wages, total wages increase in proportion to the labor force. Output increases with population, but other things being equal, output per worker declines with diminishing returns on fixed land. Thus the surplus value (output- wages) per person declines with increased population. At the same time, land rents per acre increase with population growth, since land becomes more scarce relative to other factors.

The only way of offsetting diminishing returns is by accumulating increased capital per person. However, capitalists require minimum profits and interest payments to maintain or increase capital stock. Since profits and interest per person declines and rents increase with population growth, there is a diminishing surplus (profits, Ricardo feared that this declining surplus reduces the inducement to accumulate capital. Labor force expansion leads to a decline in capital per worker or a decrease in worker productivity and income per capita. The Ricardian model indicates eventual economic stagnation or decline.

Ricardo underestimated the impact of technological advance in offsetting diminishing returns. Since Ricardo's time rapid technological progress contributed to unprecedented economic growth. Furthermore the iron law of wages did not fore see the extent to which population growth could be limited, at least in the West, through voluntary birth control.

Moreover it did not occur to Ricardo that private ownership of land and capital is not an economic necessity. Land and capital would still be used even if rents and interest were not paid as in state ownership of these means of production. Ironically Ricardian stagnation might result in Marxian scenario, where usages and investment would be maintained only if property were confiscated by society and payments to private capitalists and landlords stopped.<sup>4</sup>

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<sup>4</sup> Principles and Concepts of Development, Nafgizer pp. 87-88

### 1.3 Rostow's Stages of Economic Growth:

Rostow's stages theory of economic growth was intended as a direct counter to the Marxist stage theory of capitalist development, and his 1960 publication was entitled "The Stages of Growth". Rostow's basic proposition was that all countries are located in one of a hierarchy of development stages. These were identified as;

- i- The traditional society
- ii- The transitional stage : the precondition for take off
- iii- The take off
- iv- The drive to maturity
- v- The stage of high mass consumption

The currently wealthy industrial countries are identified as those which have passed through the take-off stage and are ensconced in stage 4 or 5. Since most of these countries are capitalist, the argument that in stages 4 and 5 they achieve a stable condition for self-sustaining growth and wealth presented a direct challenge to the Marxist argument of a violent end to the capitalist system.

The poor countries are required in Rostow's scheme to build a launching platform for development in the preconditions stage. In this, radical facilitating changes are required to occur in agriculture, transport and international trade and entrepreneurial spirit and capacity has to emerge. The required changes in agriculture are towards a market-oriented economy which food and agricultural raw materials become increasingly available to other sectors of the economy; the development of the transport sector and other social infrastructure has an obvious and vital role in economic growth, while export expansion is seen as a necessary accompaniment to increased capital imports and industrial specialization. The critical stage is seen as the take off, when in the space of one or two decades the rate of investment increases sharply from about 5% of Gross National Product (GNP) to over 10%. During this stage, leading economic sectors are assumed to emerge which create investment opportunities elsewhere in the economy and provide the basis for further investment and self-sustaining growth in stage 4 and 5.

In the absence of any clear distinction between the end of one phase and the beginning of the next, the theory becomes tautological; the rich countries have definitionally achieved the transition from an earlier condition, which may be described as traditional, to one of maturity or high mass consumption, whereas the poor countries have equally self-evidently failed to accomplish the transition or achieve take off. Even for the rich countries, it is by no means certain that they have achieved a self-sustained growth and thus escaped the fate predicted by the Marxists, for a Kuznets observes "no growth is purely self-sustaining or self-limiting".

Another important line of criticism is that Rostow's theory in effect assumes that the still underdeveloped countries are in a traditional (or, more probably, preconditions) stage, essentially the same as that from which the now rich countries started their development. This is an implication which is widely disputed as will be made clearer below. For instance, it may be argued that in the traditional stage countries are not totally stagnant but changed, in response to historic forces which differ from one country to another. But more importantly it is argued that the condition of the now poor countries has been shaped by markedly different forces from those which prevailed in which countries before their industrial revolution.<sup>5</sup>

Rostow's theory was the vogue among many U.S government officials in the 1960s, especially in the international aid agencies, since it promised hope for sustained growth in Less Developed Countries (LDC), after substantial initial infusions of foreign assistance.

Rostow's stages, imprecisely defined, are difficult to test scientifically. For a theory to be meaningful, it must be possible to prove it wrong. If the stages are to explain how economic development is caused, the relationships can not be circular. The stages must be defined in terms other than economic development, the variable the theory is trying to explain.

Much of Rostow's thesis about conditions for take off is contradicted by empirical data. Increases in investment rates and growth do not occur in the 20 - to 30 year span Rostow designates for take off. Growth in investment rates and net national product in great Britain, Germany, Sweden, Japan indicate a slow and relatively steady acceleration rather than an abrupt take off. Frequently the characteristics of one of Rostow's stages are not unique to it.<sup>6</sup>

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<sup>5</sup> Economics of change in LDC, Colman pp.42-43

<sup>6</sup> Principles and Concepts of Development, Nafziger pp. 92-93

#### 1.4 Balanced Growth:

The synchronized application of capital to a wide range of different industries is called balanced growth by its advocates. Ragnar Nurkse considers this strategy the only way of escaping from the vicious circle of poverty. He does not consider the expansion of exports promising, since the price elasticity of demand for the LDCs' predominantly primary exports are less than one thus reducing export earnings with increased volume, other things being equal.

Advocates of balanced growth emphasize a varied package of industrial investments at the expense of investment in agriculture, especially exports. But a country can not grow rapidly if it fails to specialize where production is most efficient. Recent experience indicates that LDCs can not neglect agricultural investment if they are to feed their population, supply industrial inputs, and earn foreign currency. Recent demand for primary product export increased so that their value grew as fast as GNP.

Some critics argue that the resources required for carrying out a policy of balanced growth are so vast that a country that could invest the required capital would not be underdeveloped. We can not forget that although new industries may be complementary on the demand side, they are competitors for limited resources on the supply side.<sup>7</sup>

Advocates of balanced growth assume LDCs start from scratch. In reality every developing country starts from a position that reflects previous investment decision. At any time there are highly desirable investments programs not balanced in themselves but well integrated with existing capital imbalances.<sup>8</sup>

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<sup>7</sup> Nafziger-Principles and Concepts of Development, pp. 96 - 98

<sup>8</sup> Hans Singer, The Concepts of Balanced Growth and Economic Development Theory and fact, New York, 1968, pp 333-335

### 1.5. Harrod – Domar Growth Model:

An important early stimulus to economic theory about development was the Harrod-Domar growth model, so-called because essentially the same theory was independently produced by the two authors (Harrod, 1939; Domar, 1946). In neither case were the authors concerned with developing countries. Their prime intention was to explore the conditions for stable economic growth in developed countries. The basic assumptions were as follows;

- i- That aggregate supply and demand would be balanced when investment in any period equaled the change in national income times the capital-output ratio.
- ii- That at equilibrium in a closed economy intended investment would equal intended savings.

The immediate attraction of the model is that it relates one of the primary objectives of development, the rate of economic growth, to what is often considered its major limiting factor investment. There is some doubt as to whether it is the level of savings which restricts investment in LDCs, as application of the Harrod-Domar formula would seem to imply, or it is limited opportunities for profit that restrain level investment, which saving levels adjusting to the scale of investment opportunities that exist.

The significance of this is that imports can only exceed exports if a country is in receipt of either aid, credit or foreign investment. Such a capital transfer enables additional investment to be made. The income generating effects of these additional investments may be assumed to be the same as that from investment financed by domestic savings. This opening up of the model indicates a strategic growth-generating role for aid and credit to poor countries. However this particular treatment of the internal sector fails to portray the full importance of that sector. According to Bruton's own theorizing, it is apparent that despite import-substituting industrialization, poor nations need to import raw materials plus the many capital and intermediate product which they can not manufacture themselves and that their ratio of imports to national income may well not decline as income increases. It is argued that domestic savings and transfer of foreign capital are not perfect substitutes for one another and that economic growth may be constrained by a foreign exchange gap. Conversely, a savings gap may be said to exist where savings are inadequate to support the level of growth which could be permitted given the import-purchasing power or an economy at the level of other

resources. This two-gap theory that investment and development are restricted by levels of either savings or import-purchase capacity is clearly not explained by the Harrod-Domar model.

If import-purchasing capacity is deemed to be the limiting constraint upon economic growth, then the two gap theory indicates a strategic role for aid and other forms of foreign capital, namely to finance a deficit in the current a kind of the balance of payments to cover a higher rate of capital goods imports. This important argument has been used to justify persistent current account deficits for a large number of LDCs. However, the increasing problem of external indebtedness in many of these LDCs has led to questioning of this justification.<sup>9</sup>

### 1.6 The Lewis Model:

The purpose of the Lewis model is to explain whole economic growth gets started in a less developed country with a traditional agricultural sector and an industrial capitalist sector. Economic growth occurs because of the increase in the size of the industrial sector, which accumulates capital, relative to the subsistence agricultural sectors, which amasses no capital at all. The source of capital in the industrial sector is profits from the low wages paid an unlimited supply of surplus labor from traditional agriculture.

Urban industrialists increase their labor supply by attracting workers from agriculture who migrate to urban areas when wages there his explanation of labor transfer from agriculture to industry in a newly industrializing country. Lewis, writing in 1954, is concerned about possible labor shortages in the expanding in the industrial sector.

Lewis believes in zero (or negligible) marginal productivity of labor in subsistence agriculture, a sector virtually without capital and technological progress. He contends that the wage in agriculture is positive and subsistence. For this to be through, it is essential only that the average product of labor be at a subsistence level, since agricultural workers divide the produce equally among themselves until food availability is above subsistence. Lewis feels equilibrium wages in agriculture stay at subsistence through the classical mechanism of the iron law of wages, in which higher wages are brought down by population growth, and lower

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<sup>9</sup> COLMAN, Economics of change in Less Developed Countries, pp. 27 - 29

wages raised as output spread over a smaller population is reduced by an increased mortality rate.

For the more capital-intensive urban industrial sector to attract labor from the rural area, it is essential to pay subsistence plus a 30 percent inducement. This higher wage compensates for the higher cost of living as well as the physiological cost of moving to a more regimented environment. At this high wage the urban employer can attract an unlimited supply of unskilled rural labor.

Lewis assumes that the capitalist saves all the surplus (profits, interest and rent) and the worker saves nothing. He suggests that all the surplus is reinvested, increasing the amount of capital per worker and the marginal product of labor. This process enlarges the surplus, adds to capital formation, raises labor's marginal productivity, increases the labor hired, enlarges the surplus and so on, and through the cycle until all surplus labor is absorbed into the industrial sector.

In the Lewis model, capital is created by using surplus labor (with little social cost). Capital goods are created without giving up the production of consumer goods. However, to finance surplus labor, additional credit may sometimes be needed.

The significance of Lewis's model is that growth takes place as a result of structural change. An economy consisting primarily of subsistence agricultural sector (which does not save) is transformed into one predominantly in the modern capitalist sector (which does save). As the relative size of capitalist sector grows, the ratio profits and other surplus to national income grows.

Critics question the theoretical underpinning of the Lewis model, the assumption of an unlimited labor supply. They believe the capitalist wage rate must rise before all surplus rural labor is absorbed. As workers with zero marginal productivity migrate from the subsistence agricultural sector, those workers remaining in this sector will then divide constant output among fewer persons resulting in a higher wage. Industrial wages, then, must increase to motivate rural workers to migrate. Lewis's critics argue that the larger industrial labor force contributes the greater food demand, but the capacity to produce food is unchanged. Thus

food prices rise. Accordingly the industrial sector must increase wages to pay for the increased price of food. Lewis overestimates the extent that the availability of cheap rural migrant labor can stimulate industrial growth.<sup>10</sup>

### 1.7 The Neoclassical Growth Theory:

Economist Robert Solow won a Nobel prize for his formulation of the neoclassical theory of growth, which stressed the importance of saving and capital formation for economic development, and for empirical measures of source of growth. Unlike the Harrod-Domar model of growth which focused on capital formation, Solow allowed changes in wage and interest rates, substitutions of labor and capital for each other, variable factor proportions, and flexible factor prices. He showed that growth need not be unstable, since as labor force outgrew capital, wages would fall relative to the interest rate, or if capital outgrew labor, wages would rise.

The rigidities of the Harrod-Domar growth model led economists to explore theories that permitted greater flexibility. When the prices of labor and capital changed and when correspondingly appropriate substitutions were made between the factors of production, the outcome in terms of growth in output held considerable interest. Robert Solow was one of the first to work along these lines.<sup>11</sup> Combining variable proportions of the factors and using flexible factor prices, he showed that the growth path of output was not inherently unstable. If the labor force grew faster than the stock of capital (the interest rate); while if capital outgrew labor, the wage rate would rise. Changes in factor prices in directions made intuitively plausible by the presumed operations of market forces could mitigate the intellectual discomforts implicit in the likely departures from the Harrod-Domar growth path.

Solow and many others have used a particular mathematical formulation in their theoretical and empirical research. The Cobb-Douglas production function, named after the economist and the mathematician who first suggested its use has a series of convenient mathematical properties that by happy coincidence replicate reasonably closely the workings of some advanced economies.<sup>12</sup> In equation form,

$$Y = AK^\alpha L^\beta$$

<sup>10</sup> Nafziger, Principles and Concepts of Development pp. 98 - 101

<sup>11</sup> Robert Solow, a contribution to the Theory of Economic Growth, 1956, pp. 65 - 94

<sup>12</sup> Paul Douglas, The Theory of Wages, New York 1934, pp. 131

where  $Y$ ,  $K$  and  $L$  are, respectively, the total value of output, the size of the nation's capital stock, and the number of workers in the labor force. This is no more than a particular functional form for the aggregate production.  $A$  is a constant, different for different economies and different units of measurement, and  $\alpha$  and  $\beta$  are exponents that indicate the output elasticities of labor and capital. As a special feature of the function,  $\alpha$  and  $\beta$  are required to sum to 1 and are sometimes written as  $\alpha$  and  $1-\alpha$ . This means that increases in the incomes attributable to the respective factors of production are exactly equal to the marginal physical productivity of the factors times their respective increases. Conveniently, this implies that the function that the economy it portrays in simple form, displays constant returns to scale.

The neoclassical explanation of economic growth has been extended and generalized. Cambridge University's Nobel Laureate James Meade was among the first to do.<sup>13</sup> This model treats a single aggregated output which can be used either for consumption or capital formation.<sup>14</sup>

The neoclassical growth model has several weaknesses, including the assumptions that markets are perfectly competitive, that technological changes are exogenous (explained outside the model) and the level of technology is the same through-out the world. Neoclassical technical progress takes place completely independent of decisions by people, firms and governments.<sup>15</sup>

### 1.8 The New (Endogenous) Growth Theory:

Robert Lucas finds that international wage differences and migration are difficult to reconcile with neoclassical theory. If the same technology were available globally, skilled people embodying human capital would not move from LDCs, where human capital is scarce, to LDCs, where human capital is abundant. Harvard's Robert Barro and Xavier Sala-i-Martin observe that diminishing returns to capital in the neoclassical model, in contrast to the lack of convergence found in the real world.<sup>16</sup> Most LDCs attract no net capital inflows, and many LDCs even experience domestic capital flight. New growth theorists think their model is closer to the realities of international flow of people and capital than the neoclassical model.

<sup>13</sup> J. E. Meade, *A Neo-classical Theory of Economical Growth*, 2<sup>nd</sup> ed., London 1962

<sup>14</sup> Bruce Herrick / Charles P. Kindleberger, *Economic Development*, 4<sup>th</sup> ed., 1983, pp. 34 - 37

<sup>15</sup> *Principles and Concepts of Development*, NAFZIGER, pp. 113 - 114

<sup>16</sup> Robert J. Barro and Xavier Sala-i-Martin, "Convergence", *Journal of Political Economy* (1992) pp. 223 - 251.

Paul Romer, economist, believes that if technology is endogenous, explained within the model, economist can elucidate growth where the neoclassical model fails. When the level of technology is allowed to vary, you can explain more of growth allowed to vary, you can explain more of growth, as LDCs have higher level than LDCs. Variable technology means that the speed of convergence between LDCs and LDCs is determined primarily by the rate of diffusion of knowledge "For new growth theorists like Romer, innovation or technological change, the embodiment in production of some new idea or invention that enhances capital and labor productivity, is the engine of growth.

Neoclassical theorists assume that technological discoveries are global public goods, so that all people can use new technology at the same time. For new growth economist, however technological discovery results from a LDCs government policies and industrial research.

Neoclassical economists assume that the innovator receives no monopoly profits from their discoveries. However, because individuals and firms control information flows, petition for patents to restrict growth economist assume a temporary monopoly associated with innovation.

Neoclassical economists emphasize capital formation. New growth economist, on the other hand, stress external economies to capital accumulation that can permanently keep the marginal product of physical or human capital above the interest rate, and prevent diminishing returns from generating stagnation.

The endogenous growth model like neoclassical model enhanced by human capital, generates plausible numbers and is consistent with persistent plausible numbers and is consistent with persistent differences in income per capital between nations. Both models are consistent with a large number of observations concerning aggregate output and capital. Furthermore, the endogenous growth theory, similar to the neoclassical growth theory, fails to discuss how changes in incentives or institutions affect the variables of the model and the rate of economic growth.<sup>17</sup>

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<sup>17</sup> Principles and Concepts of Development, Nafziger, pp. 115-117

### 1.9 Dependency Theory:

Dos Santos (1973) defines dependence as a “conditioning situation, in which the economies of one group of countries are conditioned by the development and expansion of others”. Dependence is based on an international division of labor which allows industrial development to take place in some countries while restricting it in others “whose growth is conditioned by and subjected to the power centre of the world”.<sup>18</sup>

A major dependency theorist, Andre Gunder Frank, writing in the mid 1960s, criticized the view of many development scholars that contemporary underdeveloped countries resemble the earlier stages of now-developed countries. Many of these scholars viewed modernization in LDCs as simply the adoption of economic and political systems developed in Western Europe and North America.

For Frank the presently developed countries were never underdeveloped, though they may have been undeveloped. His basic thesis is that under-development does not mean traditional economic, political and social intuitions but LDCs subjection to the colonial rule and imperial domination of foreign powers. In essence Frank sees under-development as the effect of the penetration of modern capitalism into the archaic economic structures of the third world.

More plainly stated, the economic development of the rich countries contributes to the under-development of the poor. Development in an LDCs is not self-generating nor autonomies but ancillary. The LDCs are economic satellites of the highly developed regions of Northern America and Western Europe in the International capitalist system.

Frank suggests that satellite countries experience their greatest economic development when they are least dependent on the world capitalist system. Significantly the most underdeveloped regions today are those that have had the closest ties to western capitalism in the past. They were the greatest exporters of primary products to, and the biggest sources of capital for developed countries and were abandoned by them when for one reason or another business fell off.

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<sup>18</sup> Colman, *Economics of Change in Less Developed Countries*, pp. 54 - 55

According to Frank, a third-world country can develop only by withdrawing from the capitalist system. Perforce such a withdrawal means a large reduction in trade, aid, investment and technology from the developed capitalist countries.

Many economic historians would agree with Frank that colonies paid dearly for economic dependency under foreign rule. They grant that development was not self-directed. Production was directed toward external rather than domestic needs, economic policies inhibited local industrial activity and led to uneven ethnic and regional economic progress; an elite oriented to foreign interest arose.

Moreover it is unfair to compare the experience of these countries under colonialism to what might have happened without foreign domination. The internal economic political weaknesses of Afro-Asian and Latin American countries during the last part of the 19<sup>th</sup> and early part of the 20<sup>th</sup> centuries probably made it inevitable that most of them would be economically dependent on some foreign power. The acute underdevelopment of Afghanistan, Thailand and Ethiopia which were not colonized, though they were influenced by the west, suggests that colonialism by itself may not have had so negative an impact as Frank indicates.

Some changes to cut dependence have not had the anticipated effect. Dependence has taken new forms in the last quarter of the 20<sup>th</sup> century.

Dependency theory fails to distinguish between regional powers in the third world, such as Brazil and Organization of Petroleum Exporting Countries (OPEC) and more dependent countries, such as Senegal, Niger, Nepal.

Most developed countries are also dependent on foreign economic ties. In fact Canada and Belgium may be more dependent on ties. In fact Canada and Belgium may be more dependent on foreign investment than India or Pakistan, but Frank does not consider them dependent countries. Rather than divide the world into dependent and independent countries, it seems more sensible to think in terms of a continuum of dependence from the weakest LDCs to the most powerful capitalist countries.<sup>19</sup>

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<sup>19</sup> Principles and Concepts of Development, NAFZIGER, pp. 106 - 109

### 1.10 The Linear-Stages Theory:

Economists in the industrialized nation were caught off guard. They had no readily available conceptual apparatus with which to analyze the process of economic growth in largely peasant, agrarian societies characterized by the virtual absence of modern economic structures. All modern industrial nations historical experience in transforming their economies from poor agricultural subsistence societies to modern industrial giants had important lessons for the countries of Asia, Africa and Latin America. The logic and simplicity of these two stands of thought the utility of massive injections of capital and the historical pattern of the now developed countries was too irresistible to be refuted by scholars, politicians, and administrators in rich countries to whom people and ways of life in the Third World were often no more real than UN statistics.<sup>20</sup>

### 1.11 The Neoclassical Counterrevolution

In the 1980s, the political ascendancy of conservative governments in the United States, Canada, Britain and West Germany brought with it a neoclassical counterrevolution in economic theory and policy. This counterrevolution favored supply-side macroeconomics and the privatization of public corporations in developed nations and called for the dismantling of public corporations in developed nations and called for the dismantling of public ownership, statistic planning and government regulation of economic activities in developing countries. The central argument of the neoclassical counterrevolution is that underdevelopment results from poor resource allocation due to incorrect pricing policies and too much state intervention by overly active Third World governments. Rather, the leading writers of the counterrevolution school argue that it is this very state intervention in economic activity that shows the pace of economic growth. The neoconservatives argue that by permitting competitive free markets to flourish, privatizing state-owned enterprises, promoting free trade and export expansion, welcoming investors from developed countries and export expansion, welcoming invertors from developed countries and eliminating the plethora of government regulations and price distortions in factor, product and financial markets; both economic efficiency and economic growth will be stimulated. The neoclassical counterrevolutionaries argue that the Third World is underdeveloped not because of the predatory activities of the First World and the international agencies that it controls but rather because of the heavy hand of the state and corruption, inefficiency, and lack of economic incentives that permeate the

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<sup>20</sup> Principles and Concepts, Thodaro , pp 69

economies of developing nations. What is needed, promoting free markets and laissez-faire economics within the context of permissive governments that allow the “magic of the marketplace” and the invisible hand of market prices to guide resource allocation and stimulate economic development.<sup>21</sup>

### 1.12 Kuznets Six Characteristic of Modern Economic Growth:

Professor Simon Kuznets, who received the Nobel Prize in economics in 1971 for his pioneering work in the measurement and analysis of the historical growth of national incomes in developed nations, has defined a country's economic growth as “a long-term rise in capacity to supply increasingly diverse economic goods to its population, this growing capacity based on advancing technology and the institutional and ideological adjustments that it demands”. All three principal components of this definition are of great importance.

- i- The sustained rise in national output is a manifestation of economic growth and the ability to provide a wide range of goods is a sign of economic maturity.
- ii- Advancing technology provides the basis or preconditions for continuous economic growth \_ a necessary but not sufficient condition. In order to realize the potential for growth inherent in new technology, however,
- iii- Institutional, attitudinal and ideological adjustments must be made. Technological innovation without concomitant social innovation is like a light bulb without electricity \_ the potential exists but without the complementary input nothing will happen.

In his exhaustive analysis Professor Kuznets has isolated six characteristic features manifested in the growth process of almost every contemporary developed nation. They include the following:

- i- High rates of growth of per capital output and population
- ii- High rates of rates of increase in total factor productivity, especially labor productivity, especially labor productivity.
- iii- High rates of structural transformation of the economy

<sup>21</sup> Principles and Concepts, Todaro, pp 85 - 86

- iv- High rates of social and ideological transformation
- v- The propensity of economically developed countries to reach out to the rest of the world for markets and raw materials
- vi- The limited spread of this economic growth to only a third of the world's population.

In the case of both per capital output and population growth, all contemporary developed countries have experienced large multiples of their previous historical rates during the epoch of modern economic growth – roughly from around 1770 to the present. For the non – communist developed countries, annual growth rates over the past 200 years averaged almost 2% for total output (i.e. real GNP). These rates, which imply a doubling time of roughly 35 years for per capital output, 70 years for population, and 24 years for real GNP, were far greater than those experienced during the entire era before the start of the industrial revolution in the late eighteenth century.

The second aggregate economic characteristic of modern growth is the relatively high rate of rise in total factor productivity (i.e., output per unit of all inputs). In the case of the major productive factor (labor), rates of productivity increase have also been large multiples of the rates in the pre modern era. In other words, technological progress including the upgrading of existing physical and human resources accounts for most of the measured historical increase in per capital GNP.

The high rate of structural and sectoral change inherent in the growth process. Some of the major components of this structural change include the gradual shift away from agricultural to nonagricultural activities and, more recently, away from industry to services; a significant change in the scale average size of productive units (i.e. away from small family and personal enterprises to the impersonal organization of huge national and multinational corporations); and finally, a corresponding shift in the spatial location and occupational status of the labor force away from rural, agricultural, and related nonagricultural activities toward urban-oriented manufacturing and service pursuits.

For a significant economic structural change to take place in any society concomitant transformations in attitudes, institutions, and ideologies are often necessary-obvious examples of these social adoption of the ideals, attitudes, and institutions of what has come to be known as "modernization".<sup>22</sup>

### 1.13 Globalization and Development

Globalization refers to worldwide processes that make the world. Its economic system and its society more uniform, more integrated, and more interdependent. Globalization is the process of the economy becoming worldwide in scope. The globalization process is a useful way to explain why the movement of people, goods, and ideas within and among world realms are becoming more and more important to not only economic systems but also cultural, political and environmental systems.

The world economy is at work in creating a global cultural uniformity. Companies, societies, and individuals that were once unaffected by events and economic activity elsewhere now share a singular economic world with other companies, societies and workers. The globalization of the economy has meant that national and state borders and differences between financial markets has become much less important because of a number of trends: (1) *the globalization of finance*, (2) *the increasing importance of transnational corporations*, (3) *global foreign direct investment from the core regions of the world*, (4) *global specialization in the location of production*, (5) *globalization of the tertiary sector of the economy*, (6) *the globalization of the office function*, (7) *global tourism*.

#### 1.13.1. Globalization of finance

In the past, companies had some difficulties moving small amounts of money from one country to another. International monetary exchanges frequently involved cumbersome procedures that could tie up the funds for weeks until all the paperwork had been approved.

Modern telecommunications and transportation allowed the technical aspects of moving money, materials, products, technology, and other economic assets-factor flows-around the world.

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<sup>22</sup> Michael P. Todaro, *Economic Development in the Third World*, 2<sup>nd</sup> ed. , Newyork 1981, pp. 93 - 95

The telecommunications revolution has allowed a single global capital market. Computers can now monitor and trade in national currencies stocks, bonds and annuities listed anywhere in the world instantaneously. Banks, financial houses, and corporations can operate worldwide partly because the decision centers that control the global economy.<sup>23</sup>

The explosive growth of global financial activity since the 1980s and the complexity of global financial markets have transformed the management of developed economies. This growth provides significant opportunities for governments and corporations to tap into large and liquid capital markets and allows investors to earn the best return worldwide. However, while global financial markets play a key role in the worldwide allocation of capital, they do so in a manner that has profound implications for national sovereignty and autonomy.

Contemporary global finance is marked by both high intensity and relatively high volatility in exchange rates, interest rates and other financial asset prices. Exchange rate often diverges from values consistent with either interest rate differentials or underlying national economic fundamentals. In a perfectly integrated global financial market this should not occur; rather, theory predicts that prices should adjust quickly to shifts in underlying economic conditions. But, as noted previously, large-scale speculative activity exists. As a result, national macroeconomic policy is vulnerable to changes in global financial conditions. Speculative flows can have immediate and dramatic of the East Asian currency turmoil of 1997. Contemporary financial globalization has altered the costs and benefits associated with different national macroeconomic policy options, at times so radically as to make some options prohibitively expensive. These costs and benefits, moreover, vary between countries and over time in a manner that is not entirely predictable. Besides these decisional impacts, contemporary patterns of financial globalization also have significant institutional, distributional and structural consequences for states in advanced capitalist societies.<sup>24</sup>

<sup>23</sup> Frederick P. Stutz-Anthony R.de Souza, *The world Economy*, 3<sup>rd</sup> ed., New Jersey 1998, pp. 8-10

<sup>24</sup> David Held &Anthony McGREW,David Goldblatt & Jonethan Perraton, *Global Transformations*, UK 1999, pp. 227-228

### 1.13.2. Globalization of Production

Today, globalization of production is organized in large measure by Multinational Cooperations (MNCs). Their pre-eminence in world output, trade, investment and technology transfer is unprecedented. Even when MNCs have a clear national base, their interest is in global profitability above all. MNCs have grown from national firms to global concerns using international investment to exploit their competitive advantages. Increasingly, however, they are using joint ventures and strategic alliances to develop and exploit those advantages or to share the costs of technological innovation. But the growing globalization of production is not limited to MNC activity, for over the last three decades there has been a significant growth in producer-driven and buyer-driven global production and distribution networks. The globalization of business is thus no longer confined to the MNC but also embraces small and medium-sized enterprises.

MNCs, however, are the linchpins of the contemporary world economy. Around 53,000 MNCs account for at least 20 per cent of world output and on some estimates up to 70 per cent of world trade. Despite regional concentrations of production, transnational business networks span the three core regions of the world economy, linking the fortunes of disparate communities and nations in complex webs of interconnectedness. Contrary to the skeptic, MNCs are not simply “national firms with international operations”, nor are they, as the hyperglobalizers argue, “footloose corporations” which wander the globe in search of maximum profits. Rather MNCs play a much more central role in the operation of the world economy than in the past and they figure prominently in organizing extensive and intensive transnational network of coordinated production and distribution that are historically unique. MNCs and global production networks are critical to the organization, location and distribution of productive power in the contemporary world economy.<sup>25</sup>

The MNCs are able to provide the developing world with new technology (called technology transfer). Today, MNCs develop profits from the foreign use of technologies that they have developed in the home country but that are now used in the foreign-based plants under their own control by a foreign subsidiary.

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<sup>25</sup> David Held & Anthony McGrew-David Goldblatt & Jonathan Perraton, *Global Transformations*, UK 1999, p: 282

Transnational corporations evolve in four stages;

- i- Demand abroad, was satisfied by export of a commodity from the corporations home country to a new foreign market
- ii- The transnational corporation established production facilities abroad to supply these new markets. Export of the same item from the home country dropped.
- iii- The foreign production facilities supplied foreign markets other than the local market first serviced.
- iv- The foreign production facilities exported back to the home country products produced more efficiently.<sup>26</sup>

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<sup>26</sup> Fredrick P. Stutz-Anthony R. de Souza, The World Economy, 3rd. Edition, New Jersey, 1998, pp:11-14

## Chapter 2

# *Economic Development & Measurements*

## 2.1 The Goals of Development:

Development means the condition for the realization of the human personality. Its evaluation must therefore take into account three linked economic criteria: Whether there has been a reduction in (i) poverty, (ii) unemployment, (iii) inequality. Some countries have experienced not only rapid growth of per capita income, but also increases in poverty, unemployment, and inequality. Measures of development at the family level based on nutrition, health, infant mortality, access to education and political participation.

A related view of development goals expressed by Denis Goulet (1971), who echoed Seers's concern : there may be considerable merit, in asking whether higher living standards, self-sustained growth, and modern institutions are good in themselves or necessarily constitute the higher priorities. Goulet argued for three general development goals : life sustenance, esteem and freedom.<sup>27</sup>

- (i) **Life Sustenance:** There can no dispute that food, health, adequate shelter, and protection are essential to human well being. When they are sufficient to meet human needs, a state of development exists; when they are insufficient, a degree of underdevelopment prevails.
- (ii) **Esteem:** All people value respect Esteem or recognition is closely associated with material prosperity. It is often difficult for these who are materially deprived or underdeveloped to experience a sense of pride or self-worth. Mass poverty prevents people and societies from receiving due recognition or esteem. These people may even reject development for example; if people are humiliated or disillusioned through their contacts with the "progress" introduced by foreigners, they may return to their traditional ways in order to regain a sense of self-respect.
- (iii) **Freedom:** Freedom can be defined as "the capacity, the opportunity to developed and express one's potentialities". As with life sustenance and esteem, the degree to which freedom exists in a society can be used to access development.

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<sup>27</sup> Dennis Goulet, *The Cruel Choice* 1971, New York, p: 85

Freedom of expression and achievement of a human lifestyle are ultimate essentially irresolvable issues. More down-to-earth development goals includes the following:

- i- a balanced healthful diet
- ii- adequate medical care
- iii- environmental sanitation and disease control
- iv- labor opportunities
- v- sufficient educational opportunities
- vi- individual freedom of conscience and freedom from fear
- vii- decent housing
- viii- economic activities in harmony with the natural environmental
- ix- social and political milieus promoting equality

In conventional usage, development is a synonym for economic growth. But growth is not development, except insofar as it enables a country to achieve the nine goals. If these goals are not the objectives of development, if modernization is merely a process of technological diffusion, and if spatial integration of world power and world economy is devoid of human referents, then development should be redefined. The realities of the contemporary world, however, do not offer much hope for achieving these human objectives anytime soon.<sup>28</sup>

## **2.2 Characteristic of Less Developed Countries:**

### **I. Rapid Population Growth:**

The present rapid increase of population is most apparent in developing countries, many of which have average annual population growth rates of at least 2.5%. It seems there are just too many millions of people in developing countries who must be fed, housed, clothed, educated, employed, cared for in illness, and finally, looked after in old age. Most people would argue that these populations should be controlled if development is to take place. A steady 2% annual population increase will double the population in 35 years. A 3% annual population increase means that the population will double in about 17 years. Population densities are also high in LDCs.

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<sup>28</sup> Fredrick P. Stutz-Anthony R. de Souza, *The World Economy*, 3rd. Edition, New Jersey, 1998, pp:528-529

Rapid population growth also reduces the ability of household to save; therefore, the economy cannot accumulate investment capital. In addition, with rapid population growth, more investment is required by the government to maintain a level of real capital per person. If government investment fails to keep pace with the population growth each worker will be less productive, having fewer tools and equipment with which to produce goods. This declining productivity results in reduced per capita incomes and economic stagnation.

Rapid population growth in agriculturally dependent countries means that the land must be further subdivided and used more heavily than ever. Smaller plots from subdivision inevitably lead to overgrazing over planting and the pressing need to increase food production for a growing population from a limited amount of space.

Many LDCs are rapidly urbanizing. Rapid population growth means large flows of rural farmers to urban areas and more than urban problems. Housing, congestion, pollution, crime, and lack of medical attention are all seriously worsened by the rapid urban population growth.

## **II. Unemployment and Underemployment:**

Unemployment and underemployment are major problems in LDCs unemployment is a condition in which people who want to work cannot find job. Underemployment means that people who are working are not able to work as many hours as they would like, usually much less than 8 hours per day. Reliable statistics on unemployment and underemployment in LDCs are difficult to obtain, but many scientist suggest that unemployment in these countries is approximately 20%.

Many of the cities in LDCs have recently experienced rapid flows of migrants from rural areas as a result of poor agricultural output and lack of land reform. This large number of migrants is created by the expectation of jobs and higher salaries in the cities. However, the cities usually have much higher unemployment rate than their rural counterparts. In the cites, many of the migrants cannot find work and contribute to the unemployment situation.

Certainly, unemployment and underemployment do not lend themselves to development. However, they are not the sole reasons for the problems of LDCs.

### **III. Low Labor Productivity:**

A developing country produces very little compared with a day's work in a developed country.

The populations of LDCs are not equipped for high productivity for several reasons. One reason is the small scale of operations. Another is that physical capital investment is extremely low. Rapid population growth has reduced the amount of investment available to maintain productivity. Most developing countries lack the machines, engines, power lines, and factories that enable people and resources to produce more than is possible with bare hands simple tools. LDCs are less able to invest in human capital. Investment in human capital such as education, health, and other social services, including provision of food-prepare population to be productive workers. When an LDC lacks human capital, productivity is low.

Low labor productivity in LDCs is exacerbated by a lack of organizational skills and the absence of a management class, both of which are necessary for increased productivity. Workers have low skill levels and few are able to handle supervisory jobs. Many of the most intelligent workers immigrate to Industrially Advanced Countries (IACs).

### **IV. Adverse Climate and Lack of Natural Resources:**

The uneven allocation of the gifts of the nature makes development more difficult in some areas than in others.

Some LDCs have sizable natural-resource endowments of minerals such as bauxite, copper, tin, nitrates and petroleum. The Organization of Petroleum Exporting Countries (OPEC) is an example of LDCs that have used their resource endowments for rapid economic growth. In other cases, natural resources in LDCs are controlled by MNCs, who divert their profits abroad to their home countries. Still other LDCs just lack mineral and petroleum deposits and have little arable land.

Limited natural resources can pose a serious development problem for LDCs. An LDC may be able to receive grants from more prosperous nations and to train workers to increase output, but increasing the supply of natural resources is impossible in most cases. It is untenable to attribute development problems solely to a lack of resources or a poor climate.

### **V. Lack of Capital and Investment:**

Most LDCs suffer from a lack of capital accumulation in the form of machinery, equipment, factories, public utilities, and infrastructure in general. The more capital, the more tools available for each worker, thus a close relationship exists between output per worker and per capita income. If a nation expects to increase its output, it must find ways to increase per capita income. Furthermore, an increase in the investment of an individual country will increase its gross domestic product (GDP).

Capital accumulation for an LDC must come from savings and investment. If an LDC can save, rather than spend all its income, and invest some of its earnings, resources will be available for the production of capital goods.

An LDC has even less margin for saving and investing, particularly when domestic output is so low that all of it must be used to support the many needs of the country.

Investment obstacles in LDCs have impeded capital accumulation the two main problems with investment in LDCs are (1) lack of investment opportunities and (2) lack of incentives to invest locally. Usually LDCs have lower levels of domestic spending per person, so their markets are weak compared with those of advanced nations. Factors that keep the markets weak are a lack of demand, a lack of trained personnel to manage and sell products at the local level, and a lack of government support to ensure stability. There is also lack of infrastructure to provide transportation, management, energy, energy production, and community services-housing, education, public health-which are needed to improve the environment for investment activity.

A shortage of capital and low investment are not causative factors of underdevelopment. But the important point is to understand what prevents capital from accumulating in LDCs.

### **VI. Lack of Technology:**

LDCs lack the basic technological advances necessary for creating capital and for applying methods to increase productivity and accumulate wealth.

In LDCs, there is a strong inertia to maintain traditional production methods in agriculture and in industry, so that a basic level of food can be maintained and starvation can be avoided. If a new technological application fails, even only temporarily, malnutrition and starvation will not hesitate to overcome these countries.

### **VII. Cultural Factors:**

Economic factors and forces of nature are not sufficient in themselves to explain the poverty cycle and attributes of LDCs. Economic development frequently involves a new world view and a willingness to accept changes in resource utilization, and changes in custom and traditions that frequently hamper the development process. Whether we like it or not, we must acknowledge that economic development is a change of the person-the way he or she thinks, does business, operates, and maintains relationships with other members of society. If the will to change is strong, economic development is more likely to take place. If there is little will to develop and a particular group within society is unwilling to change its ways of doing things, economic development is less likely to occur.

### **VIII. Political Factors:**

Throughout much of the developing world, land reform, which is vitally important to increased agricultural output, is lacking because the government is too inept to redistribute the land owned by a few wealthy families for some nations, land reform is the single most pressing problem deterring them from economic development.

### **IX. Vicious Cycle of Poverty:**

The idea of causal links between attributes of underdevelopment is summarized in the often-used expression vicious cycle of poverty. Vicious-cycle explanations emphasize the multi-causality of underdevelopment. These explanations suggest that it is not just a lack of ambition or just an absence of specialization or just a low output per capita or just a population problem that holds back underdeveloped countries. Rather, a combination of interwoven limiting factors thwarts development.<sup>29</sup>

### **2.3 How Economic Development is Measured:**

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<sup>29</sup> Frederick P. Stutz- Anthony R. de Souza, *The World Economy*, 1998 pp, 529-535

Geographers measure economic development through a number of social, economic, demographic and politic indexes.

### **I. Per Capita Income:**

Per capita income is a statistic that is seldom readily available to economic geographers. However the GNP and the population of a country are more easily acquired. Consequently, by dividing GNP by the number of people in a country, the economic geographer can determine GNP per capita.

Per capita purchasing power is a more meaningful measure of actual income per person. Per capita purchasing power includes not only income, but the price of goods in a country. However, it surpasses all countries in per capita purchasing power because goods and services are relatively inexpensive in American compared with those in other IACs.

### **II. Economic Structure of Labor Force:**

The economic structure of a country also bespeaks its economic development. Economic geographers divide employment into five categories;

- i- The primary sector mainly involves the extraction of materials from the earth-mining, lumbering, agriculture and fishing.
- ii- The secondary sector includes assembling raw materials and manufacturing.
- iii- The tertiary sector is devoted to the provision of services most notably wholesaling, retailing, and professional and personal services, including medical, legal and entertainment.
- iv- The quaternary sector of the economy includes information processing, such as finance, insurance, real estate and computer related fields.
- v- The quinary sector includes medical care, research, education, arts and recreation.

### **III. Consumer Goods Produced:**

The quantity and quality of consumer goods purchased and distributed in a society is a good measure of the level of economic development in that society. A large amount of consumer goods means that a country's economic resources have fulfilled the basic human needs of shelter, clothing, and food and more resources are left over to provide nonessential household goods and services.

In developing nations, only a few of these products exist for a thousand people. For instance, the ratio of persons to television sets in developing countries is 150 to 1 and population to automobiles is 400 to 1. In California, the ratio for these consumer items is almost 1 to 1. The number of consumer goods such as telephones and televisions per capita is a good indicator of a country's level of economic development.

#### **IV. Education and Literacy of a Population :**

The more men and women who attend school, usually the higher the level of economic development in a country.

The literacy rate of a country is the proportion of people in the society who can read and write. Because more people can read and write, a proliferation of newspaper, magazines and scholarly journals improve and faster communication and exchange, which leads to further development.

#### **V. Health and Welfare of a Population:**

Measure of health and welfare, in general, are much higher in developed nations than in LDCs. People in developed nations also have better access to doctor, hospitals, and medical specialist. For relatively developed nations, there is one doctor for 1000 people, but in developing countries, each person shares a doctor with many thousands of others.

#### **VI. Demographic Characteristics:**

IACs have much lower infant mortality rates than those of LDCs. In developed nations, on the average, fewer than 10 babies in 1000 die within the first 100 days. In many less developed nations, more than 100 babies die per 1000 live births. Some developing nations show a 3% per annum growth, which means that the population doubles in 17 years, although the average for LDCs is closer to 2%, with a doubling time to 35 years. In contrast, most developed nations have a less than 0.8% relative increase per year, and a few nations are at zero population growth.<sup>30</sup>

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<sup>30</sup> Frederick P. Stutz- Anthony R. de Souza, *The World Economy*, 1998 pp, 537-542

Age structures also differ substantially. In developing nations as many as 50% of the people are younger than age 15. In IACs, however, median ages range from 30 to 40, and life expectancy is longer.

## **VII. Political Characteristic:**

Political development, involves the creation of specialized and differentiated government institutions that effectively carry out such functions as raising tax revenue, defending the national borders, maintaining political stability, stimulating economic development, improving the quality of human life, and communicating with the citizenry.

Developed governments must be responsive to broad segments of society and must respect the population's fundamental freedom and civil rights.

But while early definitions of political development stipulated that governments be responsive, representative and not repressive, they generally did not insist that government should be democratic.

Democracies should encompass the following basic components:

- i- honest and competitive elections in which opposition parties have a reasonable chance of winning.
- ii- universal or nearly universal suffrage.
- iii- wide spread opportunities for political participation.
- iv- a free and open mass media .
- v- and government respect for human rights.

It is imperative to achieve political stability first, even if that requires military rule or other forms of authoritarianism.

It seems obvious that political, economic and social underdevelopment is interrelated. More economically advanced countries can educate more of their population and provide better health care. An educated citizenry, in turn, contributes to economic growth and participates in politics more responsibly. Wealthier LDC's tend to have greater life expectancy, higher literacy rates and more stable and democratic governments. But these correlations are not absolute. For example, country's literacy and infant mortality depend not only on its economic

resources, but also on government policies in the areas of education, public health and welfare.

Political development also tends to correlate with economic and social development. More educated countries tend to be more stable, responsive, and democratic than the desperately poor nations, indeed. Third world countries are very unlikely to become democracies unless they have attained a minimal threshold of socioeconomic development. That economic threshold is a necessary, but not sufficient, condition for democratization. That does not imply that wealthier countries are assured of becoming or being democratic.

Moreover, there is at least correlation between economic and political development. As countries become more developed, economically there is seldom a steady movement toward greater stability, democracy or the other components of political development.<sup>31</sup>

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<sup>31</sup> Econ 409 Economic Development, Lecture Notes, NEU, Nicosia, 2001

## *Chapter 3*

# *Economic Development in TRNC (Sectoral Analysis)*

Table 2.1.2 Land Use Pattern in 1976

### TYPE OF LAND

Total

1. Agriculture

2. Forest

3. Grassy land

4. Town, Village, Hamlet

and Lake

5. Coastal Land

Source: 1976 Statistical Yearbook of the Republic of Turkey, Vol. 1, Ankara, 1977

Yearbook 1976, Ankara, 1977

### 3.1 Agriculture

The world population is rapidly increases in recent years and this increasing population has a problem in stable nutrition, because of the limited agricultural land. We need to increase our efficiency in production. Technological and scientific studies helps us to increase efficiency in production. People try to use effective use of natural resource and agricultural land.

Cyprus has a Mediterranean climate with hot dry summers and warm-rainy winters. Summer normally lasts from June to September and winters from November to March. Autumn is considerably short and falls in with October. The rain falls mainly between October and March.

TRNC has restricted water resources and agricultural land. This restricted agricultural land is preventing the growth of agriculture sector. Very big portion of water resources, which are fill up by the yearly falling. TRNC have not enough river, the flow of existing streams to be seen only in winter. Summertime and rainless sessions existence of the production in agriculture to be possible by the use of the reinforcement irrigation techniques.

According to the data of April 1999. TRNC is the owner of 2,465,550 Government donum (G.D) total land, agricultural land is 1,398,123 (G.D) and it is the 56.71 % of total land. Unused land is the 8.15 % of total land. (see Table 3.1)

As it can be seen from Table 3.2, Arable Land is 847,345 (G.D) and Uncultivated Land is 550,778 (G.D) which is the 39.39 % of total.

**Table 3.1 Land Distribution (1999)**

TYPE OF LAND	AREA(G.D)	%
Total	2,465,552	100
1. Agricultural Land	1,398,123	56,71
2. Forests	480,740	19,50
3. Grazing Land	122,157	4,95
4. Towns Villages, Rivers and Lakes	263,471	10,69
5. Unused Land	201,061	8,15

Source: State Planning Organization (SPO) Prime Ministry (PM) of TRNC, Statistical Yearbook 1999, Nicosia 2001

Table 3.2 Use of Land (1999)

Type of Land	Area (G.D.)	%
Total	1,398,123	100
<b>A. Arable Land</b>	847,345	60,61
1. Land for Crops	589,152	42,13
2. Fallow Land	70,739	5,05
3. Legumes For Folder	72,529	5,19
4. Legumes For Food	1,928	0,13
5. Vegetable Land	10,523	0,76
6. Land For Melons	2,986	0,21
7. Industrial Crops Land	5,418	0,39
8. Orchards	46,980	3,36
9. Vineyard	2,054	0,14
10. Citrus	45,036	3,22
<b>B. Uncultivated Land</b>	550,778	39,39

Source: SPO PM of TRNC Statistical Yearbook 1999, Nicosia 2001

The main features of developing countries are; big portion of exports are agricultural products, the percentage of agriculture in GNP is high and the main portion of population is working in agricultural sector.

In the economic development period of TRNC, agriculture have active role. As it can be seen from Table 3.3, historical development of GDP, agriculture has one of the corner points. Since 1980 s agriculture had a big portion of GDP, such as in 1980 agriculture had 18.6% of GDP while industry had 9.8%, construction had 3.2%, tourism and trade had 18.4% of GDP.

**Table 3.3 Sectoral Distribution of GDP**

	<b>1980</b>	<b>1985</b>	<b>1990</b>	<b>1995</b>	<b>1999</b>
<b>1. Agriculture</b>	18.6	16.0	9.2	10.5	9.1
<b>2. Industry</b>	14.6	10.2	13.7	13.6	11.7
<b>3. Construction</b>	3.2	5.3	7.3	6.9	7.8
<b>4. Trade-Tourism</b>	18.4	19.1	19.2	18.9	17.3
<b>5. Transport-Communication</b>	6.8	9.5	11.4	11.0	11.6
<b>6. Financial Institutions</b>	3.6	4.4	4.5	5.6	6.3
<b>7. Ownership of Dwellings</b>	7.8	6.8	5.5	5.6	5.0
<b>8. Business and Personal Services</b>	3.6	3.4	3.7	3.8	8.7
<b>9. Public Services</b>	21.3	22.3	18.4	17.9	16.0
<b>10. Import Duties</b>	2.1	3.0	7.1	5.8	6.5
<b>GDP</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>

**Source: SPO PM of TRNC Statistical Yearbook 1999, Nicosia 2001**

According to Table 3.3, it can be seen that the agriculture follows the declining trend, which had become less over each 5 years period.

Agriculture sector have an important restrictions that preventing the growth of agriculture in economy. Water resources, store of water, transportation of water, marketing, credit conditions, agricultural disuse, and technological disabilities and insufficient inputs are the main problems of agriculture that prevent the development.

Agriculture sector divides sections, which are; (1) Agriculture and Livestock, (2) forestry, (3) fishing.

Agriculture and Livestock have a main role within the agriculture in order to any change or growth in agriculture and livestock, directly affects the total agriculture sector.

In the total exports of TRNC, agriculture has a main position. (See Table 3.4). Agricultural products have a 38.4% of total exports. Citrus has a 23.1% of total agricultural products exported in 1999.

**Table 3.4 Compositions of Exports (1999)**

	%
<b>1. Agricultural Products</b>	<b>38.4</b>
1.1. Citrus	23.1
1.2. Potatoes	0.2
1.3. Live Animal	—
1.4. Other	15.1
<b>2. Industrial Products</b>	<b>61.2</b>
2.1. Processed Agricultural Goods	23.8
2.2. Other	37.4
<b>3. Minerals</b>	<b>0.4</b>
<b>Total</b>	<b>100.0</b>

**Source: SPO PM of TRNC Statistical Yearbook 1999, Nicosia 2001**

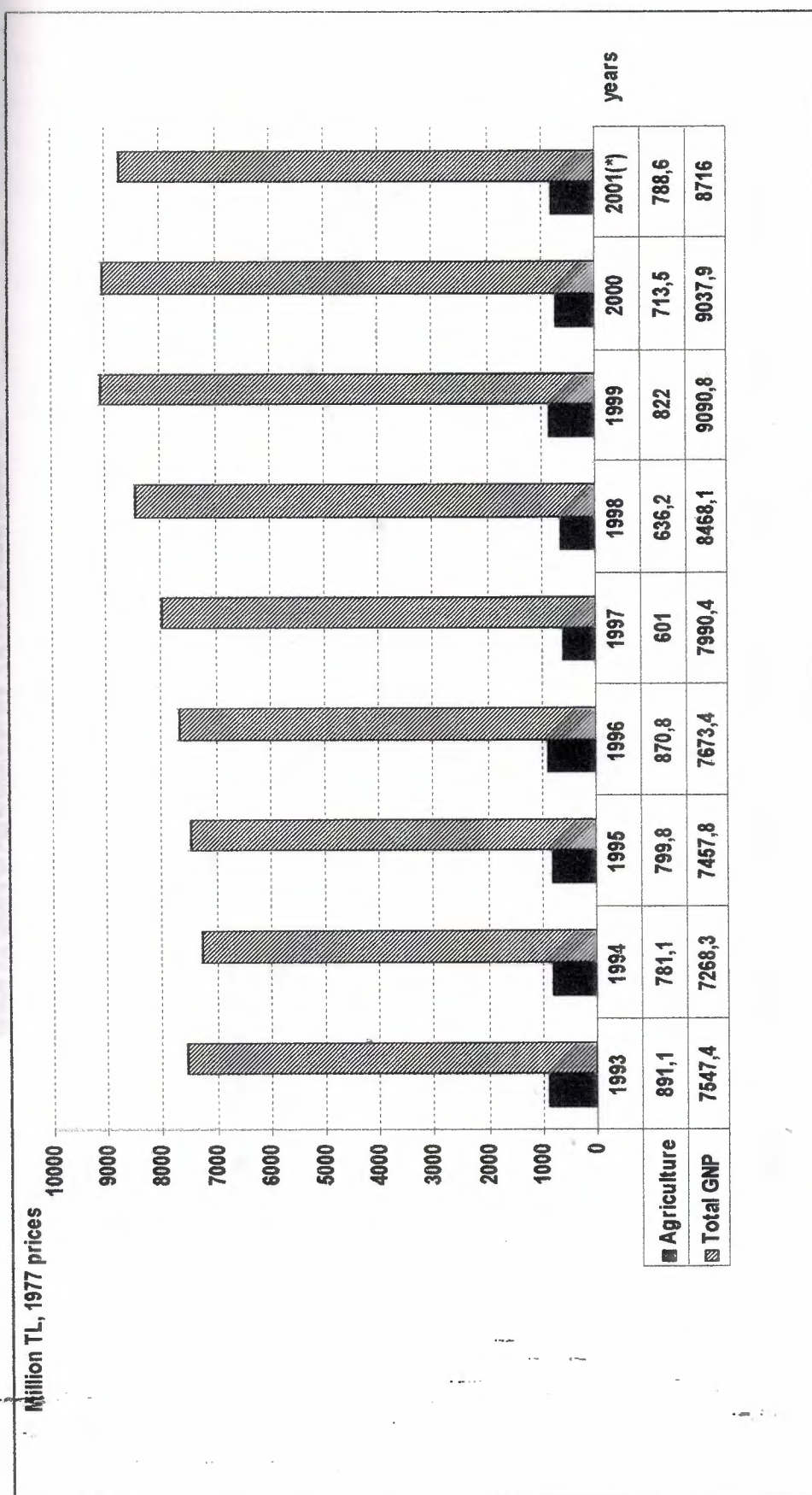
All the beginning of 1994, Turkey was faced very effective economic crisis and this economic crisis was directly effect the TRNC's whole economy. After the crisis European Union Court of Justice made a decision about the exports of TRNC, that decisions was restricted our trade and made a recession in economy.

As a result of those factors Gross National Product of TRNC decreased and also all sect oral development was stopped.

Decision of European Union Court of Justice restricts our trade. Suddenly, the portion of EU nations into the TRNCs export had dropped.

Agricultural products are the main export products of TRNC and agriculture sector had affected those crises and decisions of Court of Justice mostly. As it can be seen from Graph 3.1, the portion of agriculture in GNP was 891.1 (Million TL, 1977 prices) in 1993 but in 1994 it was falled into 781.1 (Million TL, 1977 prices). However TRNC has not completely been recovered from the effects of those crises and decision yet.

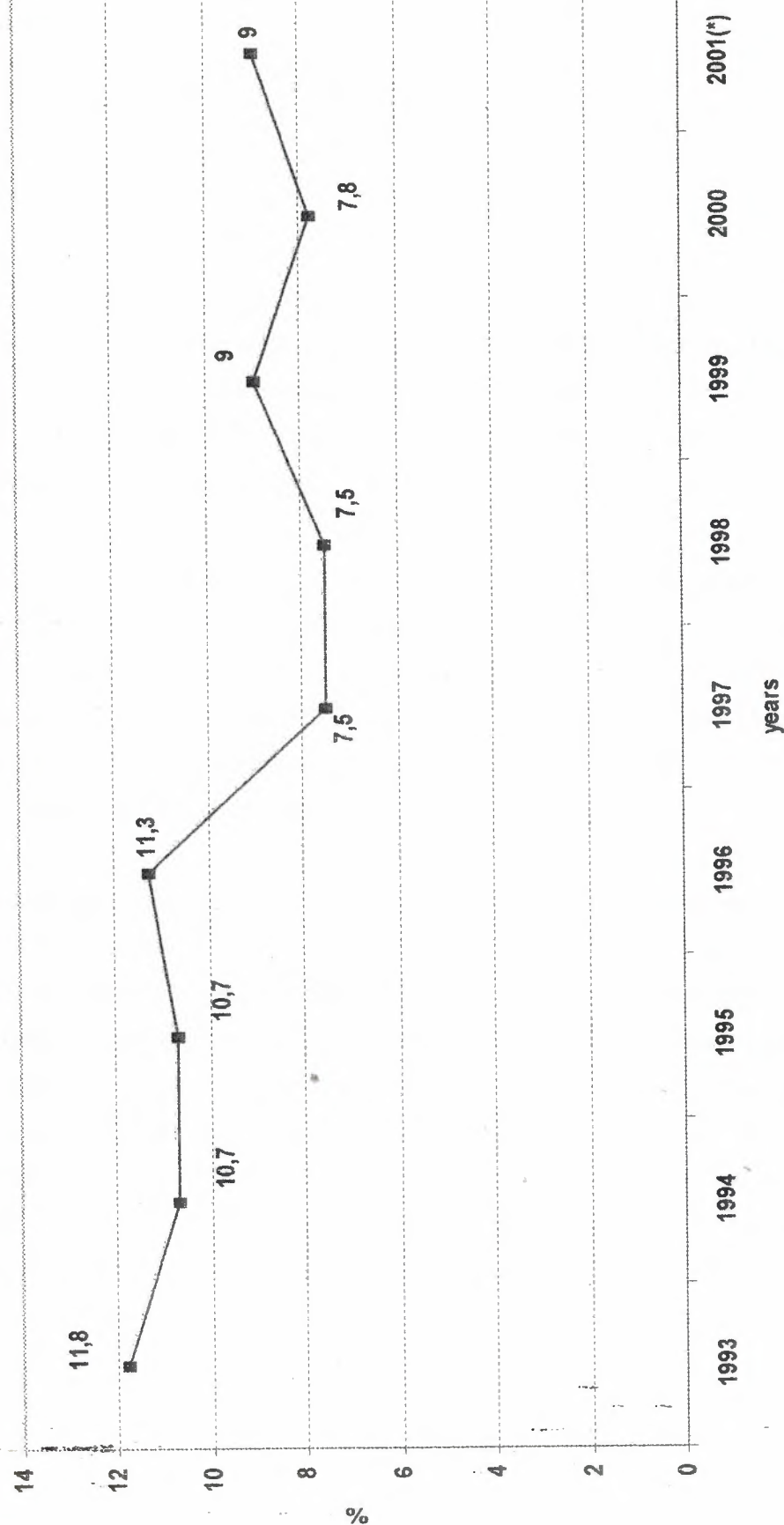
Graph 3.1 Agriculture in GNP (1977 prices, Million TL)



(\*) estimated

Source: SPO PM of TRNC Economic and Social Indicators, 2000

Graph 3.2 Share of Agriculture in GNP (% 1977 prices, million TL)



(\*) estimated

Source: SPO PM of TRNC. Economic and Social Indicators 2000

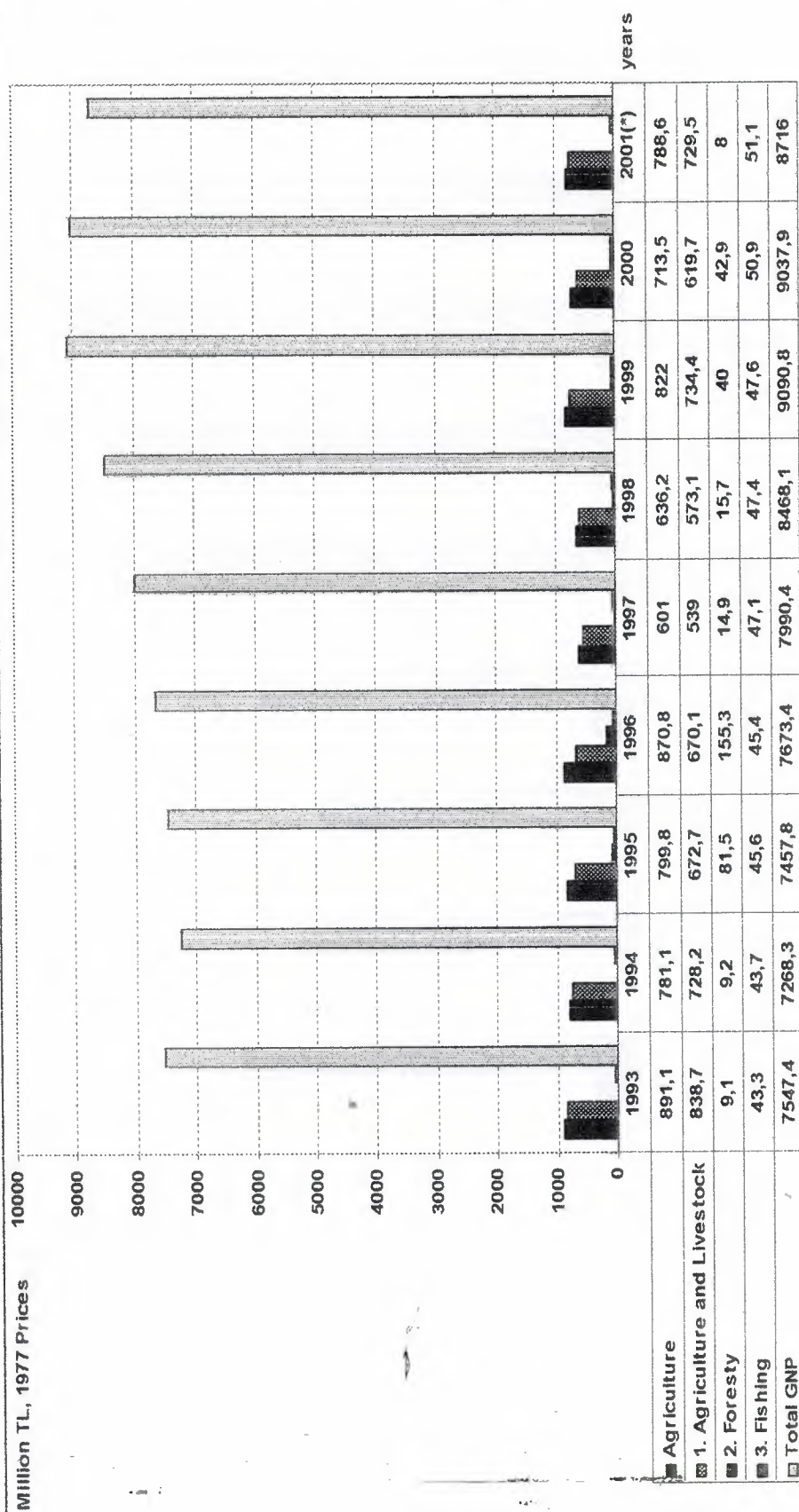
In 1994, one of the factors that effect the agriculture was the recession in agriculture and livestock sector as a result of drought. Agriculture and livestock has the main contribution into agriculture sector, but because of rainless this sector could not produce as much as 1993. (See Graph 3.3). In 1993 agriculture and livestock has 838.7 (Million TL, 1977 prices) into the 891.1 (Million TL, 1977 prices) whole agriculture sector. But this portion was felled in 1994, agriculture and livestock has 728.2 (Million TL, 1977 prices) into the 781.1 (Million TL, 1977) in 1994.

The addition of agriculture in GNP was 870.8 (Million TL, 1977 prices) but this amount was felt into 601.0 (Million TL, 1977 prices). This recession was depend on the agriculture and livestock and forestry sectors losses. Forestry sector to regress from 155.3 (Million TL, 1977 prices) to 14.9 (Million TL, 1977 prices) in 1997. These agricultural recessions was the reason of drought and forestry losses.

As a result of a development of agriculture and livestock sector, agriculture made a growth in 1999. Production in agriculture and livestock was increase with available climate condition. As we can see from Graph 3.3, agriculture and livestock to become 734,4 (1997 prices, million TL) in 1999 which was 573,1 (million TL, 1977 prices) in 1998. There is a descent and ascent in agricultural contribution in GNP between 1999 and 2001. This activity was the result of the effects of climate into the agriculture and livestock sector.

Sectoral distribution of fixed capital investment depends on the capital-production relations of sectors. Each sector has different capital-production ratio, in order to those different ratios, fixed capital investment distribute differently from one sector to other sector. As we can see from Graph 3.4, the highest fixed capital investment (FCI) in agriculture sector created in 1996, which was 117,4 ( 1997 prices, million TL). In order to recession in overall capital investment, agriculture sector has also affected by those recession. In 1993 fixed capital investment in agriculture sector was 116,9 (million TL, 1977 Prices) however it has felt to 47,5 (Million TL, 1977 prices) in 1994 this amount was the 4,8% of total fixed capital investment. The highest FCI was given in 1996 which was 117,4 (Million TL, 1977 prices) and 10,9% of total FCI..

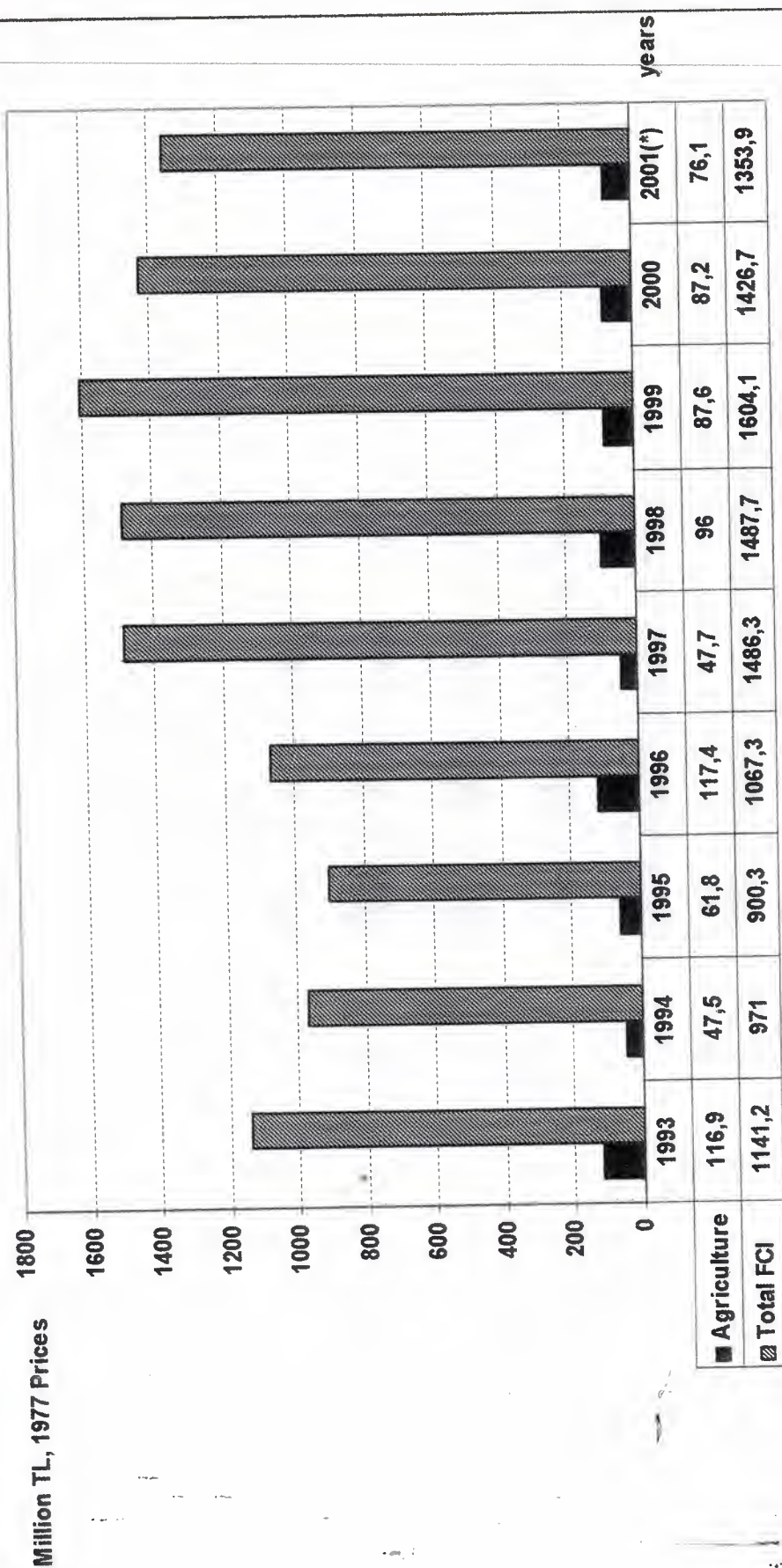
Graph 3.3 Contribution of Agriculture in GNP (1977 prices million TL)



(\*) estimated

Source: SPO PM of TRNC Economic and Social Indicators, 2000

Graph 3.4 Fixed Capital Investment in Agriculture (1977 prices million TL)

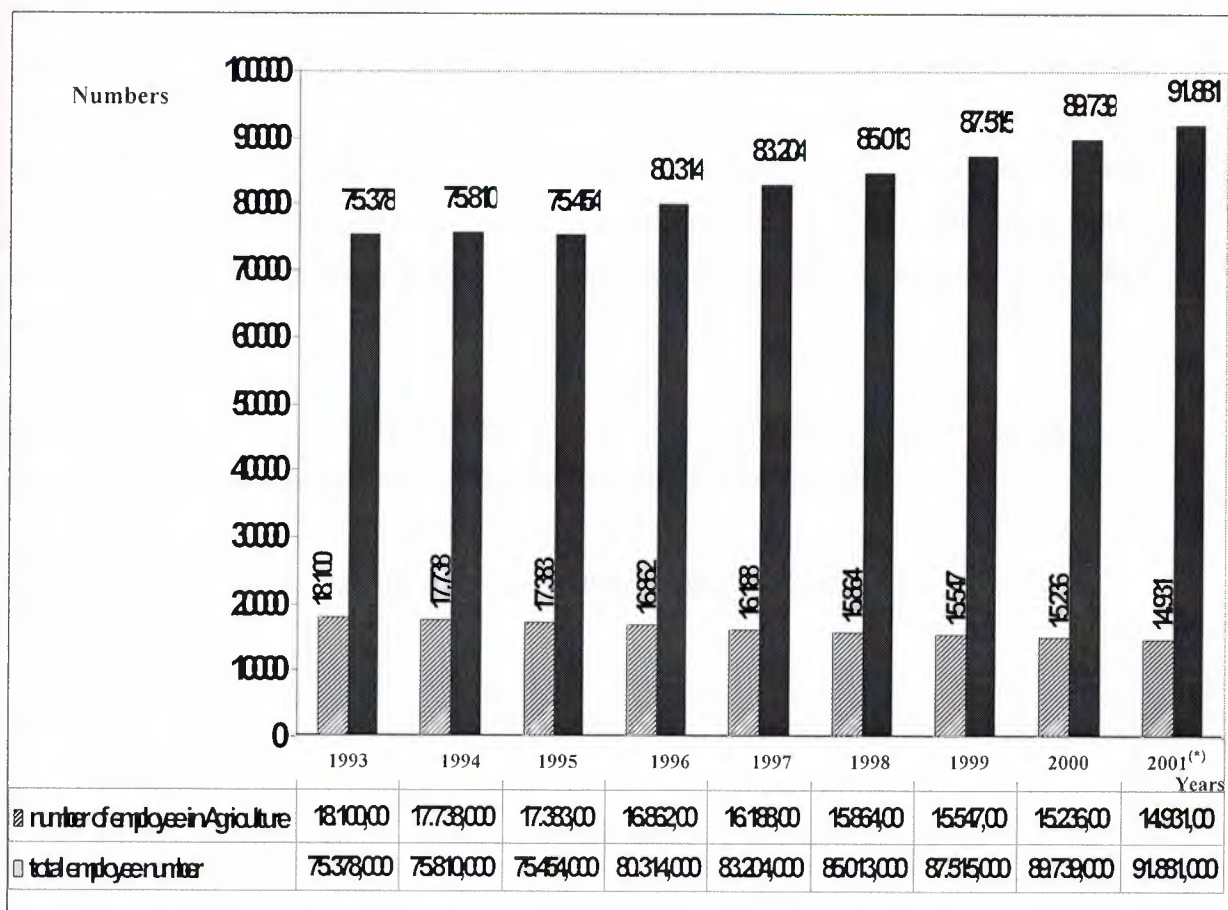


(\*) estimated

Source: SPO PM of TRNC Economic and Social Indicators, 2000

According to Graph 3.5 percentage of agriculture employees in total employees has been falling steadily. Number of employees in 1993 was 18,100, this amount was the 24% of total employees in 1998, number of employees in agriculture sector was 15,864 which was the 18,7% of total employees and in 2001 it is expected to fall in 15,9%.

**Graph 4 Employment in Agriculture**



(\*) estimated

Source: SPO PM of TRNC Economic and Social Indicators 1999, Nicosia 2001

### 3.1 Industry:

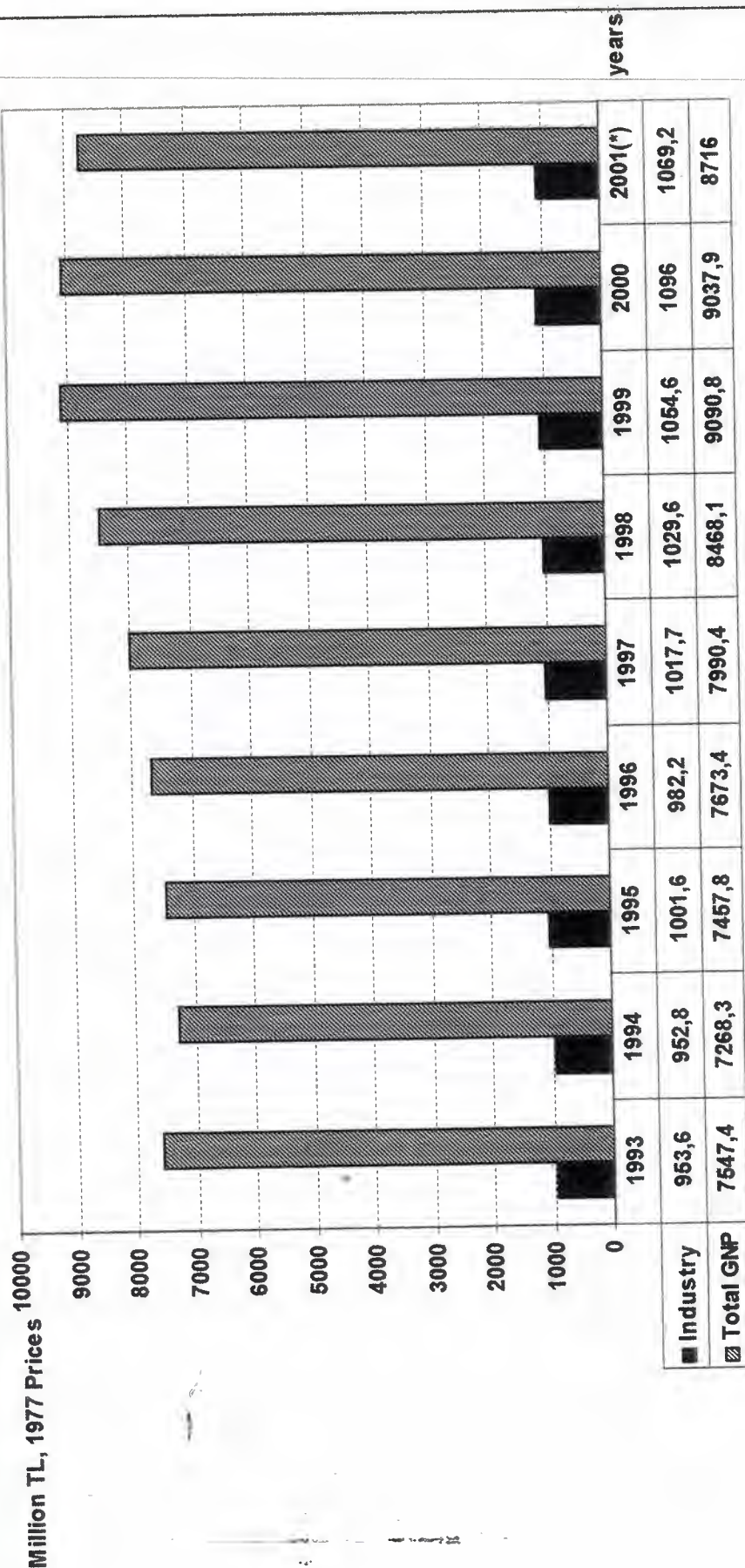
The growth effort of developed countries were based on industry. Industry accelerates the development and to hire the growing employees of country industry and specially production industry directly effects the employment to increase and also has positive effects to other sectors such as constructions, communication trade, etc.

In TRNC, industry be formed with very small, small and moderate scale of business. TRNC's industry activity improved specially the low capital investment, much wide consumption portion that is to respond the beginning capital investment quickly. It can be calling by light industry like food and textile. Government try to protect and improve those business with encouraging them by using different type of incentives like low interest credits and to set up industry areas. Industry sector has an important role in economic development and social welfare.

Industry divided into quarrying, manufacturing and electricity-water. In quarrying sector we produce the amount that satisfies the country's all sand and gravel needs.

Graph 3.6 shows that the industry sector in GNP from 1993 to 2001

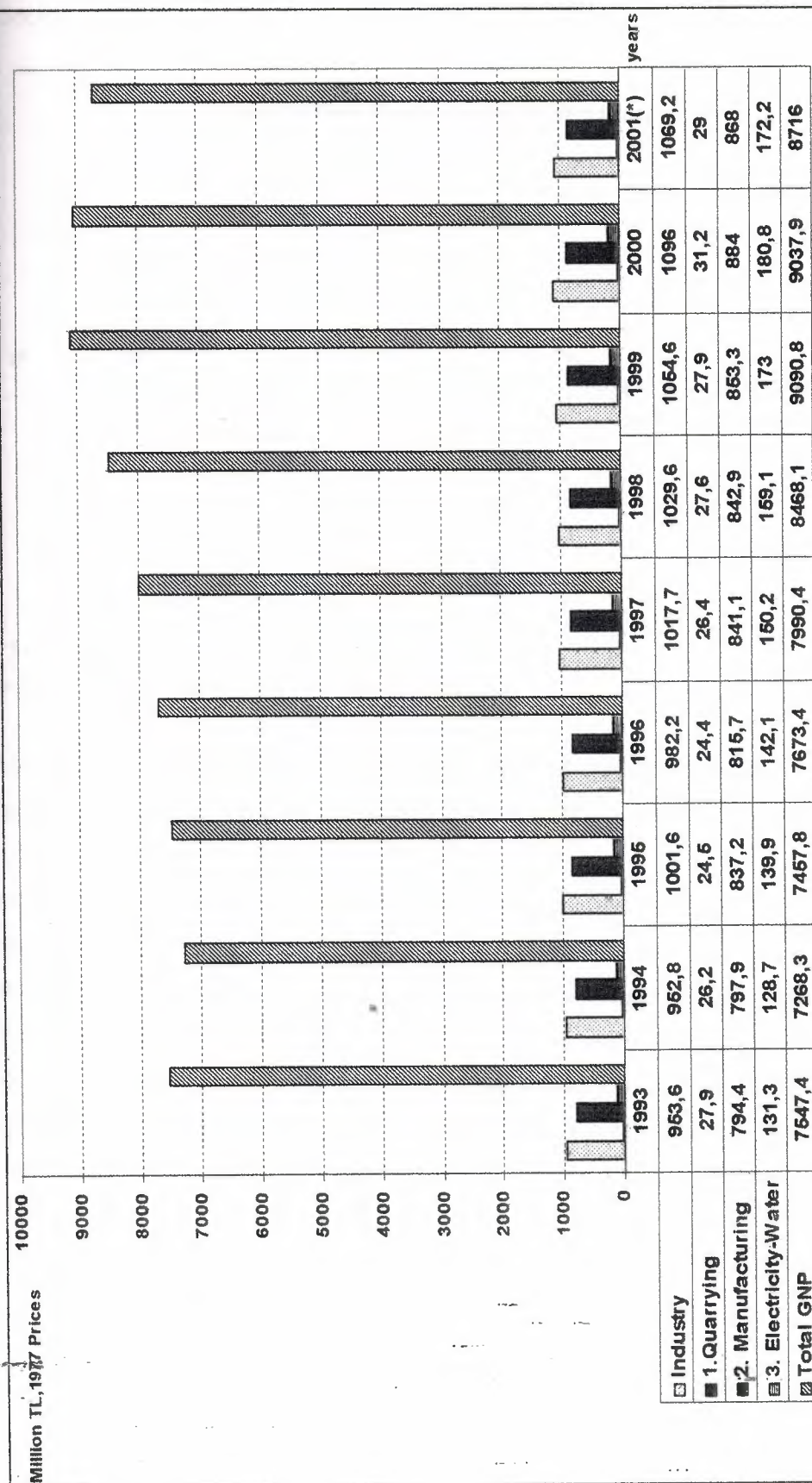
Graph 3.6 Industry in GNP (1977 prices, Million TL)



(\*) estimated

Source: SPO PM of TRNC Economic and Social Indicators, 2000

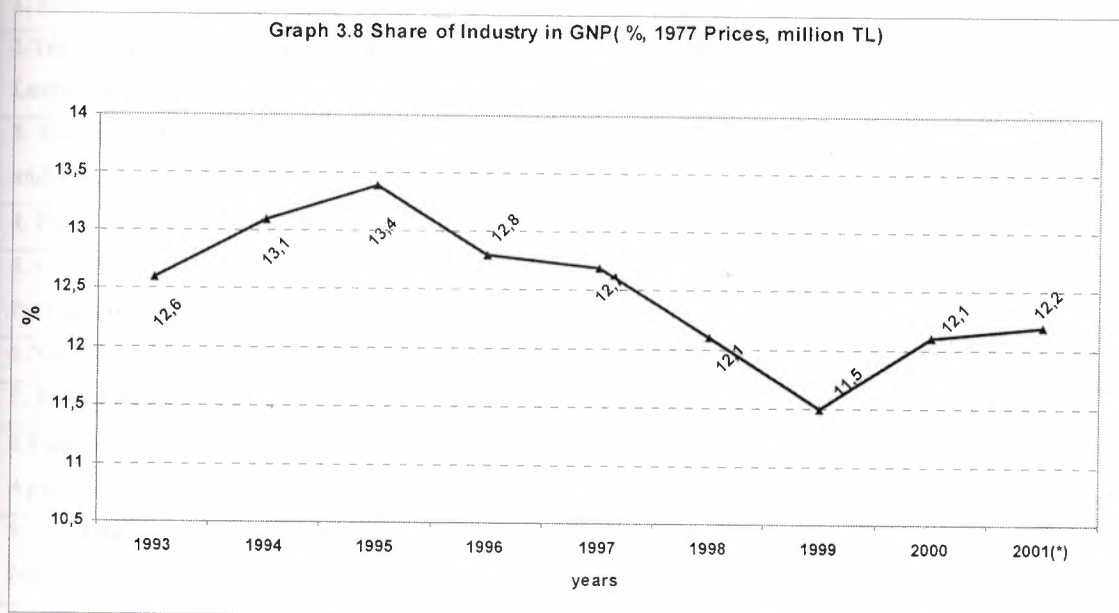
Graph 3.7 Contribution of Industry in GNP (Million TL, 1977 Prices)



(\*) estimated

Source: SPO PM of TRNC Economic and Social Indicators, 2000

As it can be seen from Graph 3.7, manufacturing is the main component of industry, which includes 884,0 (1977 Prices, Million TL) of total industry that was 1,096,0 (1977 Prices, Million TL ) in 2000. After the economic crises in Turkey and its effect in TRNC and also decision of the EU court of Justice, manufacturing sector was entered into the stagnant period.



(\*) estimated

Source: SPO PM of TRNC Economic and Social Indicators, 2000

According to the data of Graph 3.8, after 1994, industry sector follows declining trend. Percentage of industry in GNP was 13,4% in 1995 but it was felt to 12,1% in 2000.

Industry sector creates new job areas for growing population. (see Table 3.5). The number of establishments with number of employees, we can find out that the textile wearing apparel and Leather products sector has a higher number employees per establishment. Total number of establishments twice from 1998 to 1999. Number of establishments in 1998 was 493 and number establishments in 1999 was 740. As far as can be seen that there was many new establishment had been created in 1999, new job areas for population. But the growing of number of employees from 1998 to 1999 not as the growing of number of employees from 1998 to 1999 not as rapid as the growing of new establishment. Total number of employees in 1998 was 8112 and 1999 was 8571. There was a little change in number of employees according to number of establishments in manufacturing industry.

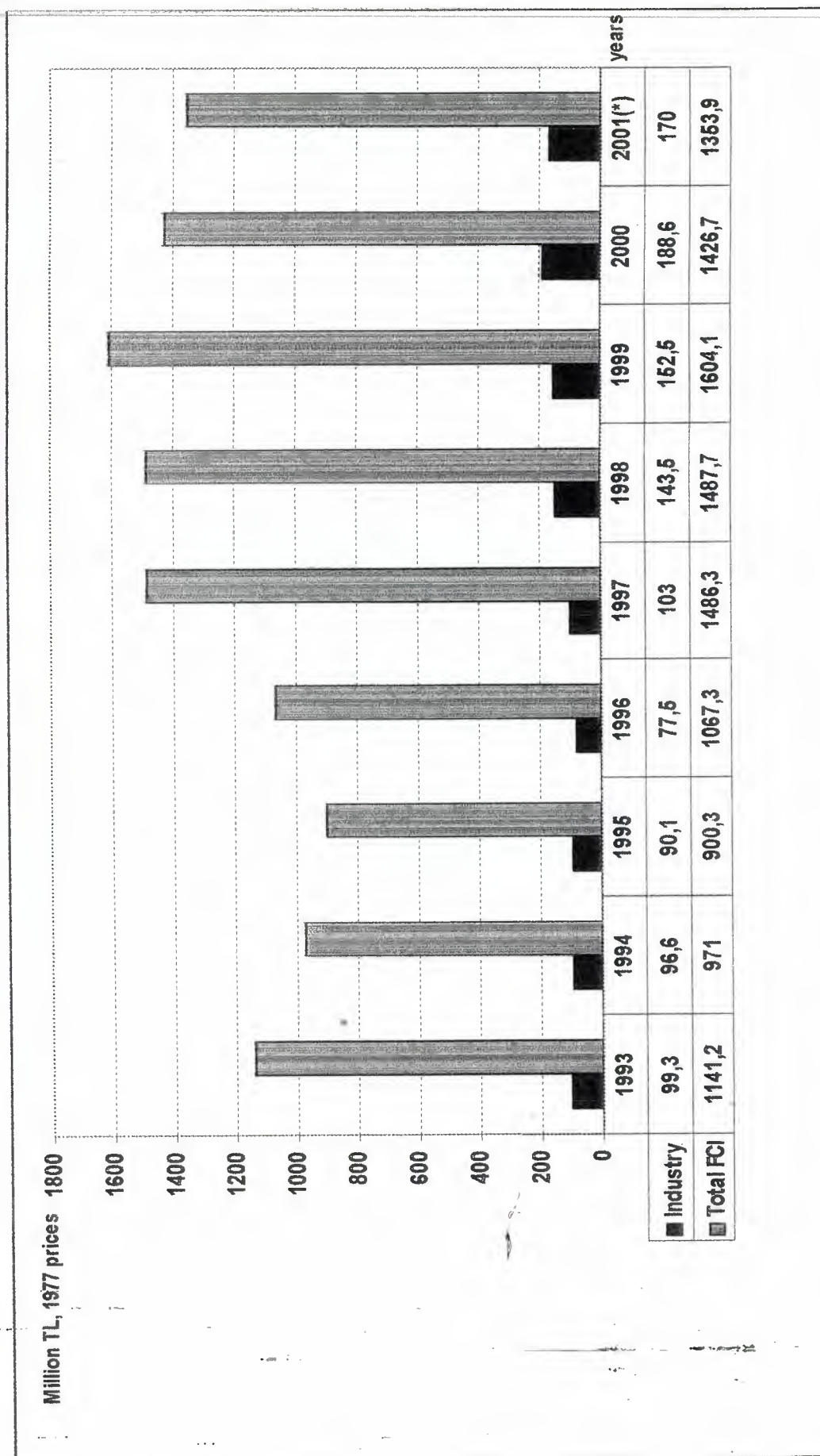
**Table 3.5 Number of Establishment and Employment in Manufacturing Industry  
(1998 - 1999)**

Industries	1998		1999	
	No of establishment	No of Employees	No of establishment	No of Employees
1. Food, Beverages and Tobacco	192	2976	264	2964
2. Textile, Wearing Apparel and Leather Products	55	2135	60	2467
3. Forest Products and Furniture and Fixtures	62	588	87	483
4. Paper and Paper Products	39	494	68	436
5. Chemicals Petroleum and Plastic	40	278	46	588
6. Non Metallic Mineral Products	51	1028	88	1014
7. Basic Metal Industries	22	218	85	242
8. Electrical Machinery and Appliances	6	57	9	64
9. Other Manufacturing Industries	26	338	33	313
<b>TOTAL</b>	493	8112	740	8571

Source : SPO PM of TRNC, Statistical Yearbook 1999, Nicosia 2001

Share of industry in GDP (see Graph 9) after 1995 decreased until 2000. After the decision of European court of Justice, trade has been restricted. Industry needs foreign trade, because it buys most of its resources from abroad and sells its products to other countries. After those limitations on export-import, industry faced difficulties. Sector entered the stagnant period. After 1999 the increases in the number of establishments (see Table-5) means that the production increased. Sector solves its some of the export problems with improving the relations with Turkey.

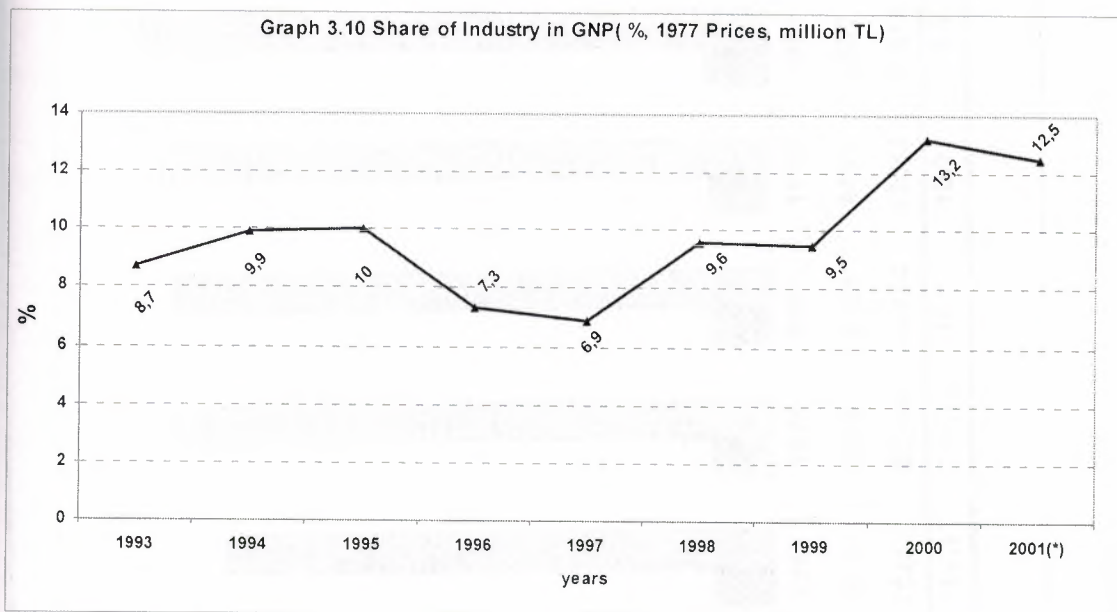
Graph 3.9 Fixed Capital Investment in Industry (1977 Prices, Million TL)



(\*) estimated

Source: SPO PM of TRNC Economic and Social Indicators, 2000

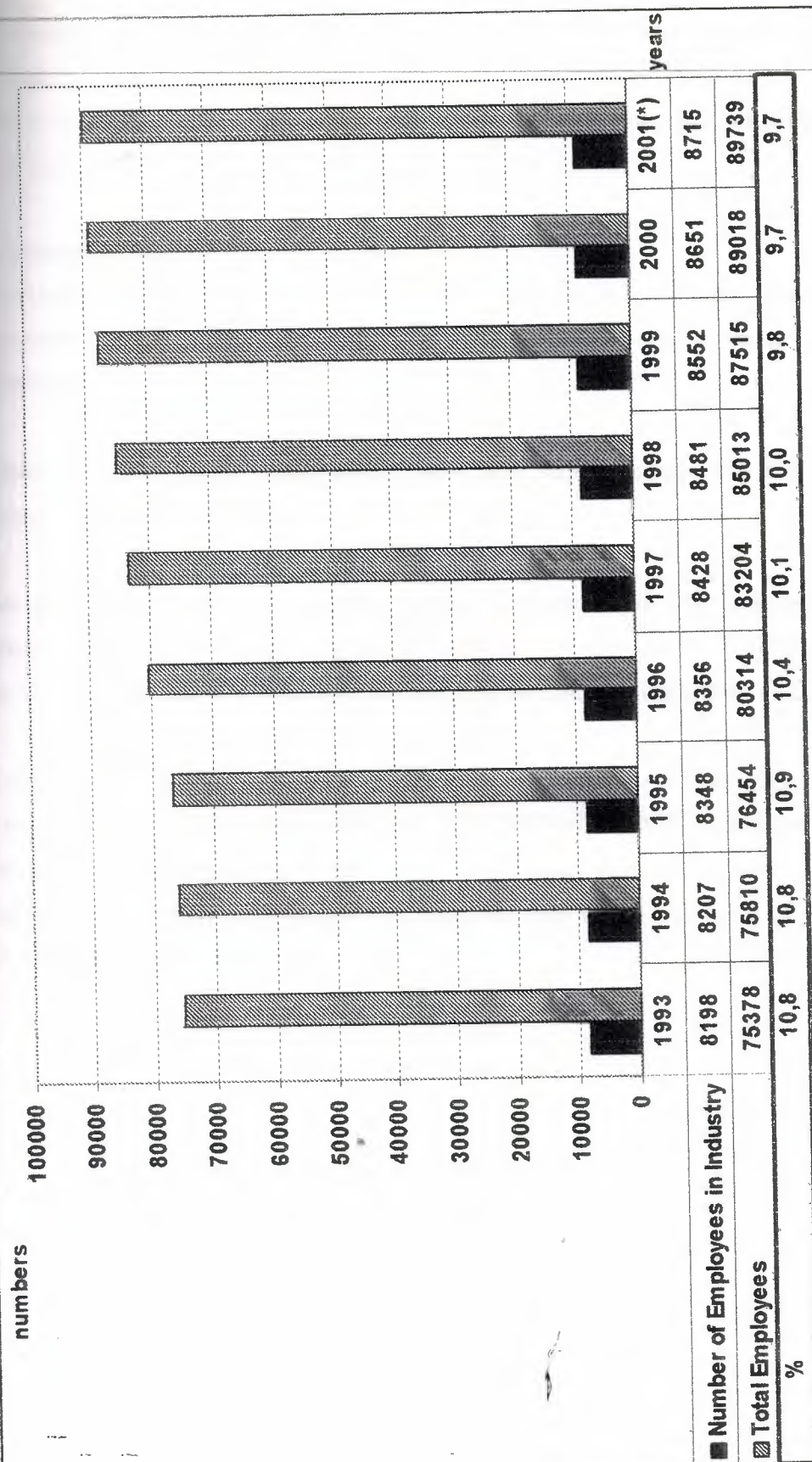
After 1994, there was economic stagnation in TRNC, foreign trade faced difficulties, expectations of industry was negativensess fixed capital investment was decreased in 1996 from 10% to 7,3%. In 1995 total fixed capital investment in industry was 90,1 (Million TL, 1977 Prices ) but that amount was declined to 77,5 ( Million, 1977 Prices) in 1996. (see Graph 3.10) Total fixed capital investment in industry sector was 188,6 (Million TL, 1977 Prices) in 2000, which in industry sector was the 13,2 % of total FCI in 2000.



(\*) estimated

Source: SPO PM of TRNC Economic and Social Indicators 2000

Graph 3.11 Employment in Industry (% of total employees)



(\*) estimated  
Source: SPO PM of TRNC 2001 Annual Program, Nicosia 2001

Percentage of employment in industry sector within the total employment is decreasing (see Graph 3.11). According to data's of Graph 3.11, number of employees in industry was 8198 and it was the 10,8 % of total employees. In 2000, the total number of employees in industry had increased to 8651 but percentage had decreased to 9,7 %.

### 3.2 Construction

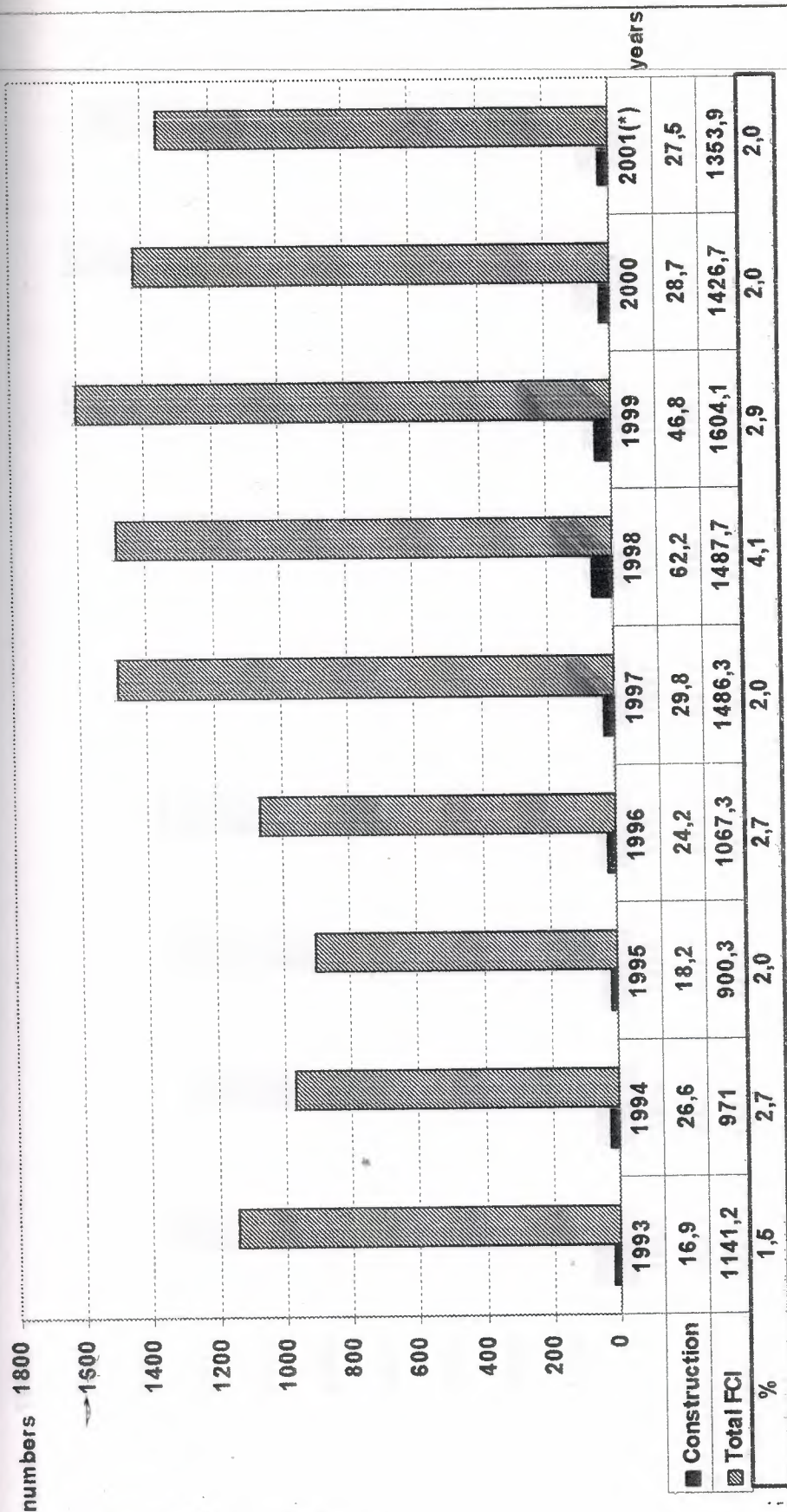
Construction is one of the main components of economic and social development. It affects the other sectors to grow up. Because of this feature construction is a strong corner point of economy.

Especially house, factory, road, sewer system, port, airport, barrage and other buildings are interested in construction sector.

Because of the present low capacity, quality and some of the other supplies that can not produce with inadequate resources of TRNC. Most of the demand of construction is covering by exterior suppliers. Exported materials increase the cost of constructions sector.

According to Graph 3.12, fixed capital investment in construction sector follows fluctuated ways. In 1993, FCI for construction was 16,9 (Million TL,1977 Prices) but in 1998 this amount highly increased to 62,2 (Million TL,1977 Prices) and again fell to 28,7 in 2000. The highest percentage of construction was made in 1998 which was 4,1% of total FCI and 62,2(Million TL, 1977 Prices)

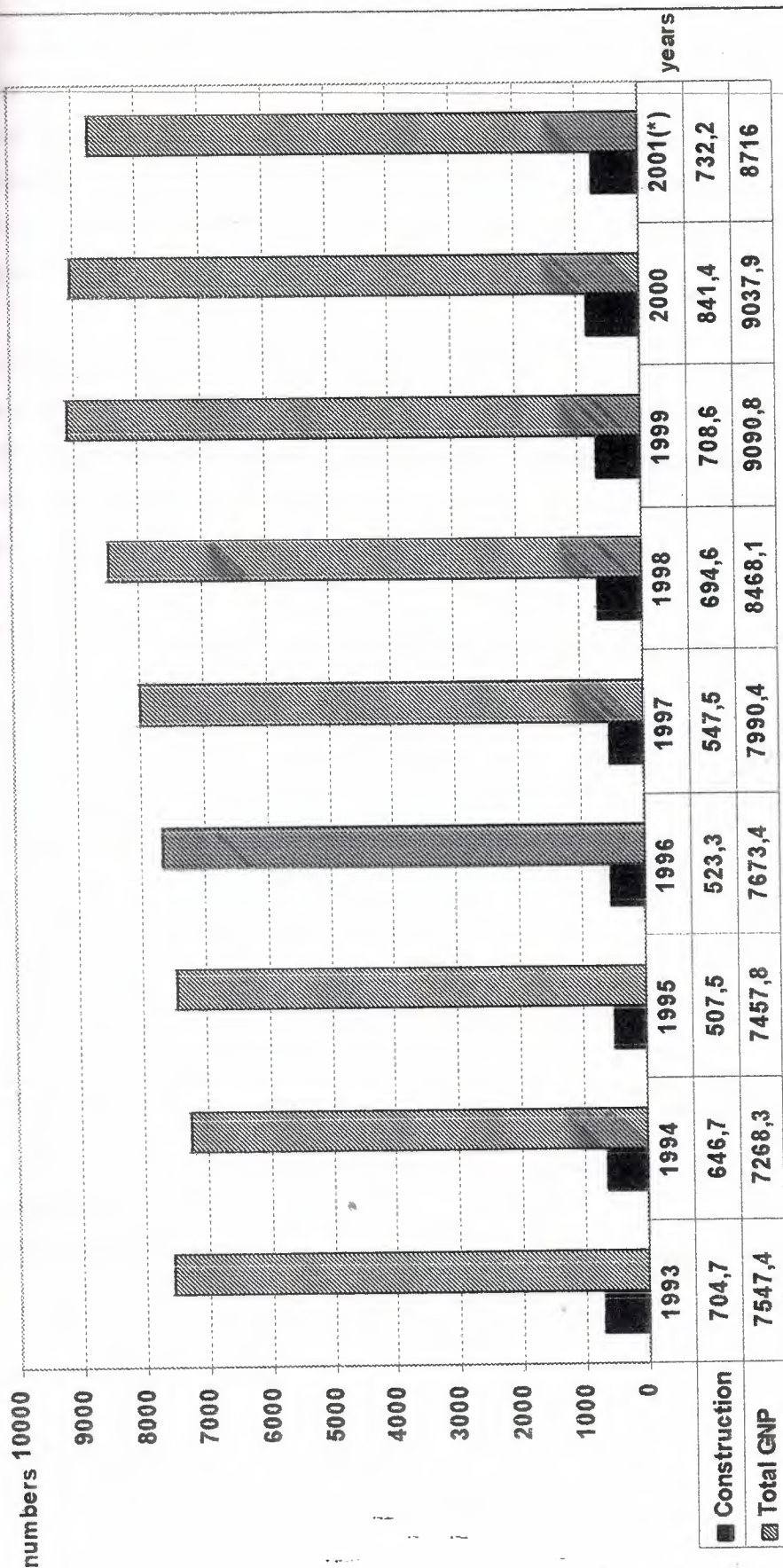
Graph 3.12 Fixed Capital Investment in Construction (1977 prices, Million)



(\*) estimated

Source: SPO PM of TRNC Economic and Social Indicators, 2000

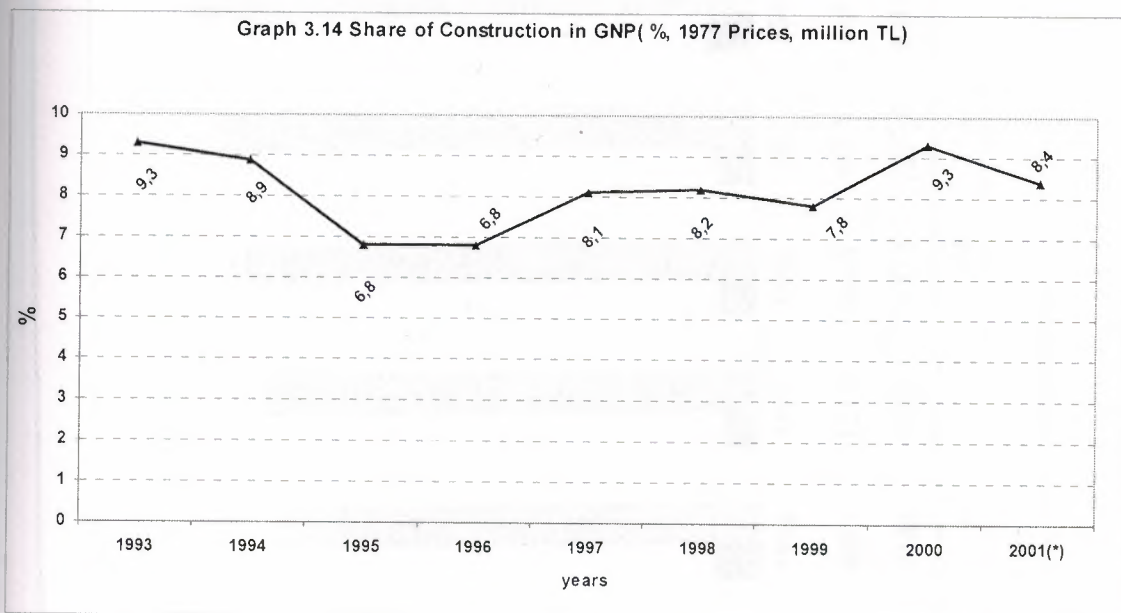
Graph 3.13 Construction in GNP (1977 prices, Million)



(\*) estimated  
Source: SPO PM of TRNC Economic and Social Indicators, 2000

As it can be seen from Graph 3.13, construction sector loses its share in GNP after 1993 until 1998. Because of economic stagnation and restrictive foreign trade, construction sector was faced difficulties. This sector strongly dependent on imported raw materials. The share of construction in GNP was 704,7 (Million TL,1977 Prices) in 1993, but in 1994 this amount was fell in 507,5 (Million TL,1977 Prices) in 1995. Economic agreements with Turkey was improved the sector after 1996.

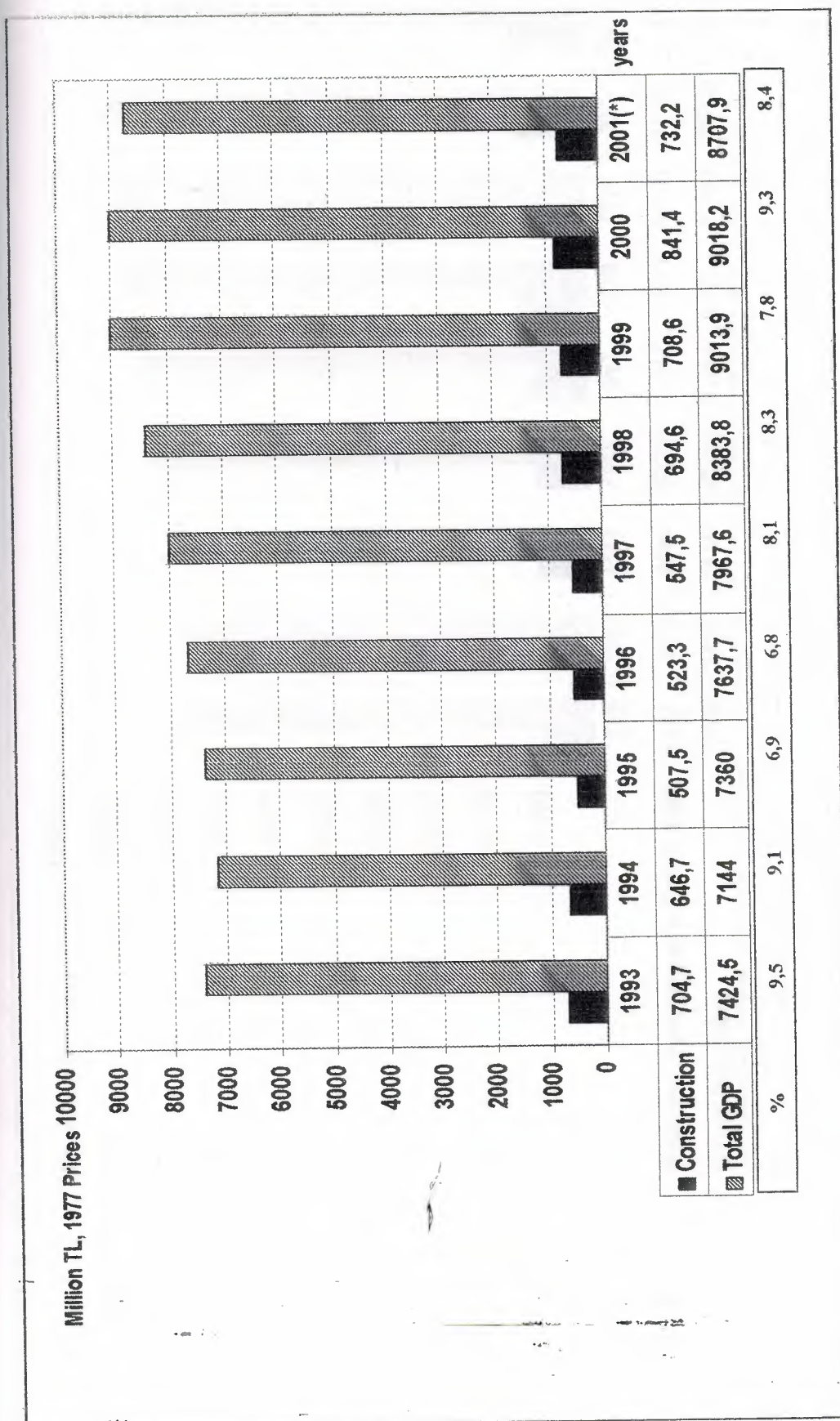
According to Graph 3.14, between 1995-1997 period, share of construction in GDP was fell. Share of construction in GDP was 9,1% in 1994 but in 1995 this share was fell in 6,9%. Total GDP was protecting its increasing position while construction sector has ascents and descents during years. Total construction in GDP was 507,5 (Million TL,1977 Prices) in 1995 but in 2000 it increased to 841,4 (million TL,1977 Prices). (see Graph 3.15)



(\*) estimated

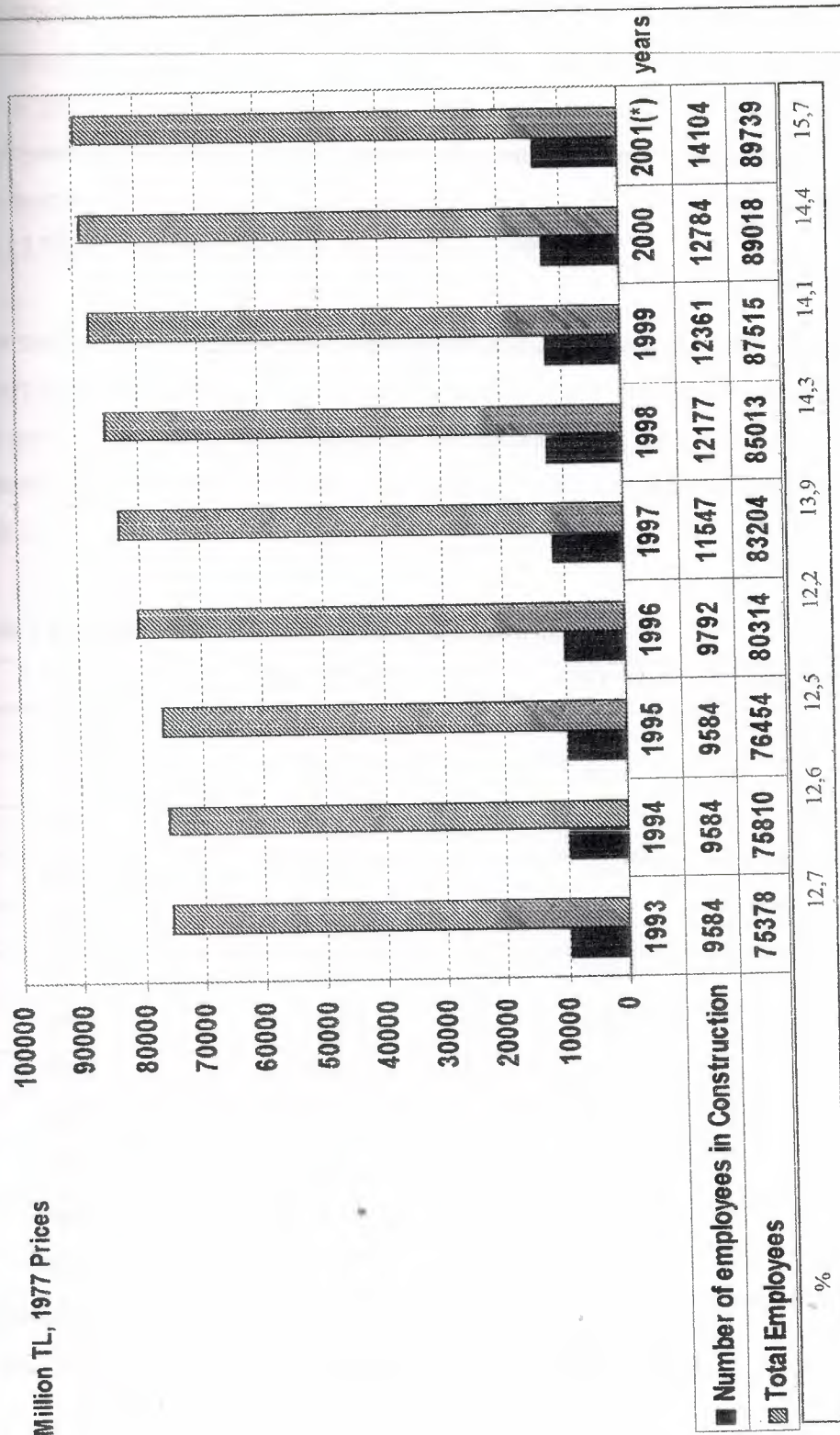
Source: SPO PM of TRNC, Economic and Social Indicators 2000

Graph 3.15 Construction in GDP (1977 prices, Million)



(\*) estimated  
Source: SPO PM of TRNC Economic and Social Indicators, 2000

Graph 3.16 Employment in Construction (% of total employees)



(\*) estimated  
Source: SPO PM of TRNC 2001 Annual Program, Nicosia 2001

Construction sector is forming an important portion of total employment (see Graph 3.16). In 1993 number of employees in construction was 9584, in 1997 this number increased to 11,547 and in 2001 it's estimated to be 14,104. Parallel with increase in total employees, number of employees in construction sector increases. Percentage of employees in construction sector to total number of employees was 12,7 % in 1993 but it increased to total number of employees was 12,7% in 1993 but it increased to 14,1 % in 1999.

After the decisions of European Union court of Justice, construction sector faced defaulters to import necessary raw materials cost of construction sector increase, in order to high cost also high prices, demand of construction sector decrease. On the other hand, the number of students who are studying in universities in rental houses and this increases construction. (see Table 3.6)

**Table 3.6 Production and Growth Rate of Construction**

Years	1977 Prices	GNP %	Real Growth Rate (%)
1990	506,5	7,3	1,0
1991	540,1	8,3	6,6
1992	655,2	9,3	21,3
1993	704,7	9,5	7,6
1994	646,7	9,1	-9,0
1995	507,5	6,9	-21,5
1996	523,3	6,9	3,1
1997	647,5	8,1	23,7
1998	694,6	8,3	7,3
1999	708,6	7,9	2,0
2000 *	841,4	9,3	4,6
2001 *	732,2	8,4	-13,0

(\*) estimated

Source: SPO PM of TRNC, 2001 Annual Program, Nicosia 2001

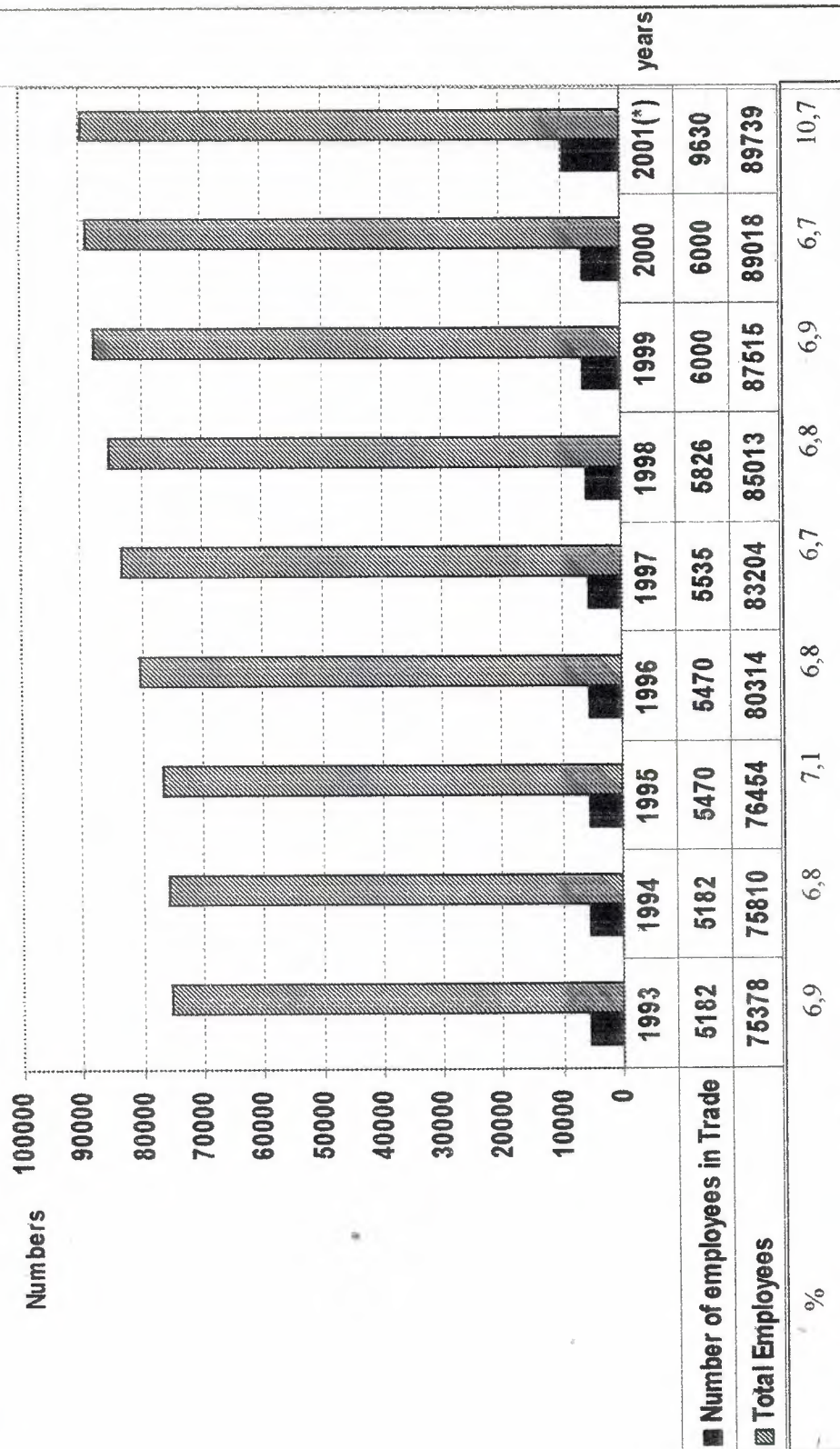
### 3.4. Trade

Wholesale and retail trade sector has an important role for create value added, employment and positive relationship between other sectors.

Geological structure of TRNC occurs with limited natural resources. As a result of inadequate natural resources, TRNC needs high level of import, to produce, to invest and to create resource at the optimum level. Trade sector has an important role for development of TRNC.

Employment in Trade sector has follows steady ratios from 1990 to 2001. There were some descents and ascents during this period. After the 1994 crises in Turkey and the European Union embargo had effects this sector, but the relations with Turkey put in running order of trade in TRNC. So, employment did not clearly affected from this embargos and crises

Graph 3.17 Employment in Trade Sector (% of total employees)

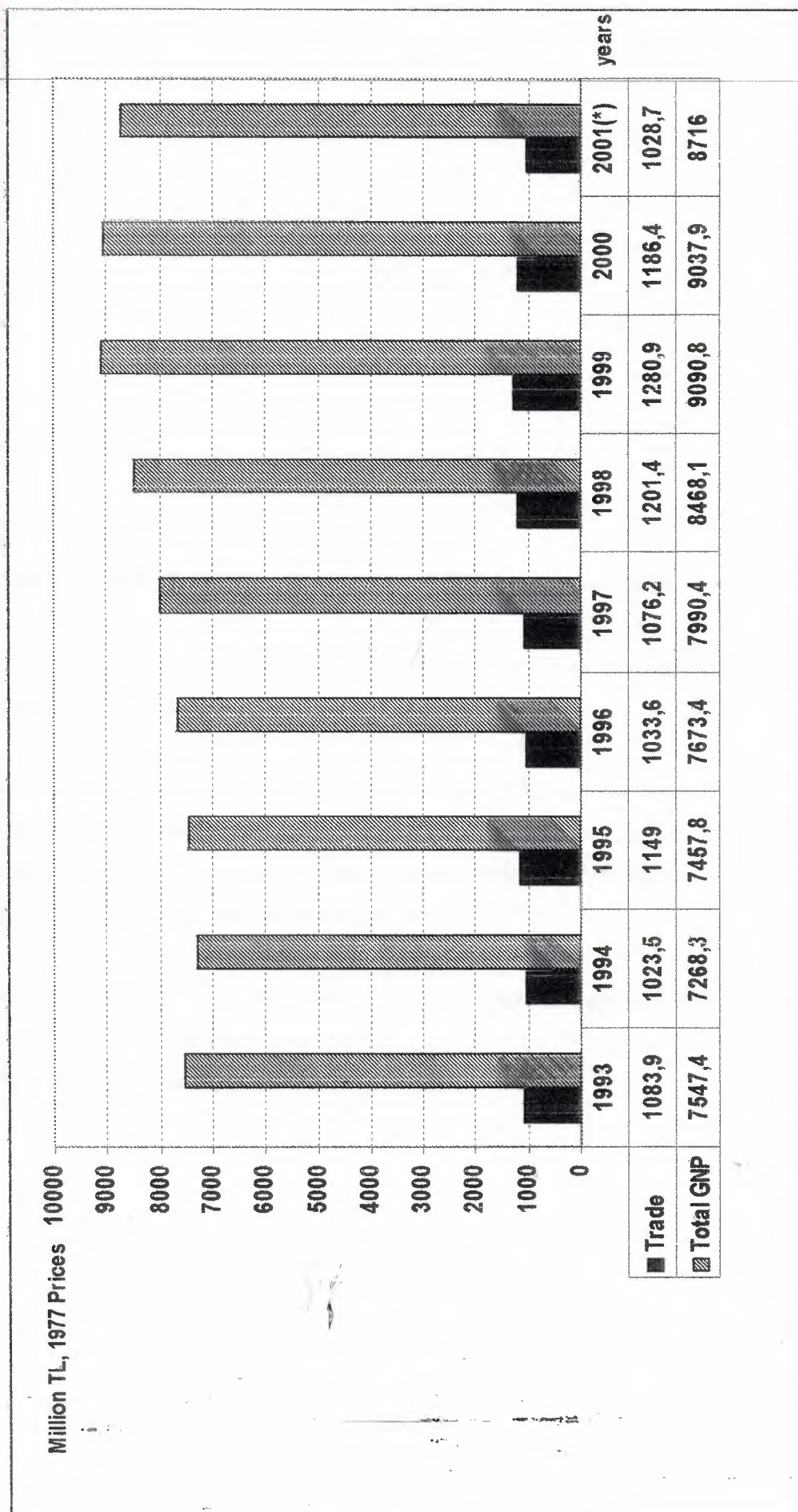


(\*) estimated

Source: SPO PM of TRNC 2001 Annual Program, Nicosia 2001

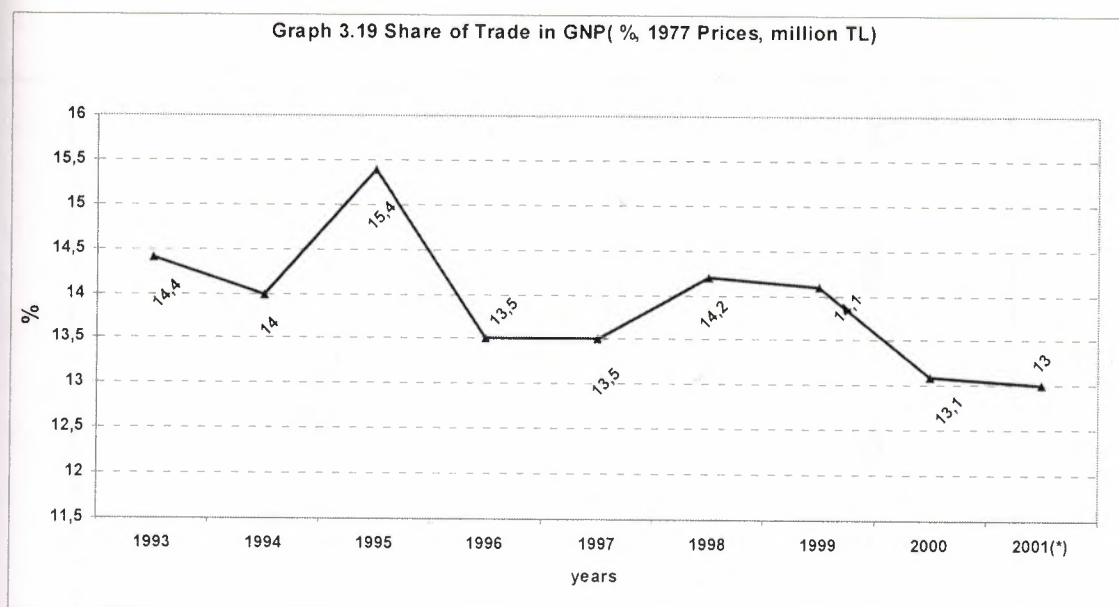
As it can be seen from the Graph 3.17 trade sector firming 6,9 % of total employees in 1993, this percentage changes year to year. In 1997 it fell to 6,8 %. Total number of employees in trade sector was 6000 in 1999 which firming 6,9 % of total number of employees. Graph 3.17 shown that the number of employment in trade sector increases between the period 1993-2001.

Graph 3.18 Trade sector in GNP (1977 Prices, Million TL)



(\*) estimated

Source: SPO PM of TRNC Economic and Social Indicators, 2000



(\*) estimated

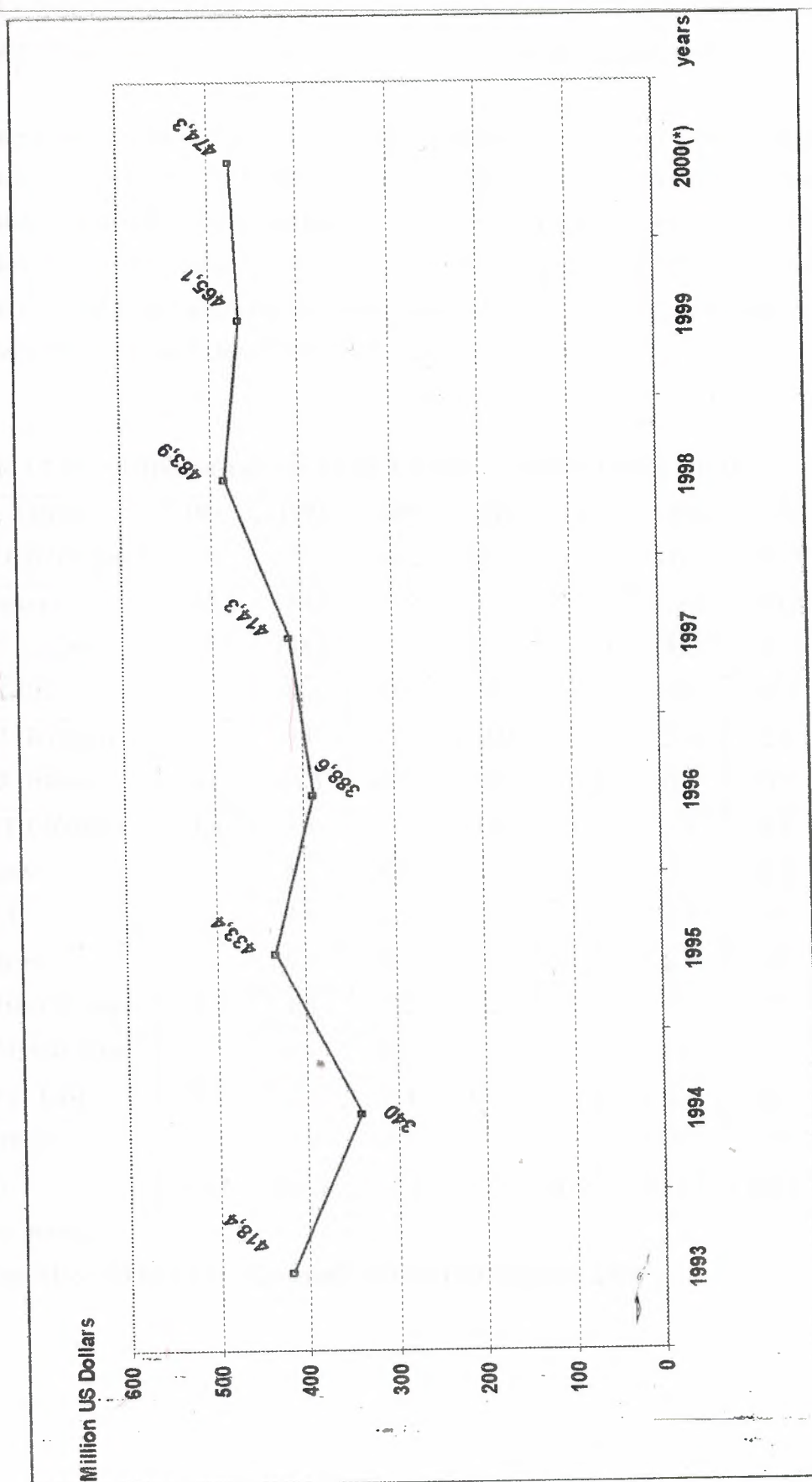
Source: SPO PM of TRNC, Economic and Social Indicators 2000

As it can be seen from Graph 3.19, after 1994 trade follows increasing trend in GNP. This positive trend achieved with solved trade problems.

According to the data in Graph 3.18, it can be seen that trade (i.e. whole sale and retail trade) has an important portion of GNP. Trade always has taken a role that accelerates economic development. TRNC has been aware of this importance of trade and signed the Trade and Economic Cooperation Agreement with Turkey.

After the validity of this Agreement, the volume of foreign trade of TRNC started to improve. Negative effects of embargos tried to eliminate with Trade and Economic Cooperation Agreement with Turkey.

Graph 3.20 Foreign Trade Volume of TRNC (Million US\$)



(\*) estimated

Source: SPO PM of TRNC Economic and Social Indicators, 2000

As it can be seen from Table 3.7, trade volume of TRNC decrease of the almost all nations trade volumes. Only Middle East trade volume increase in 1994 from 5, 4 Million US \$ to 9, 6 Million US\$. The EU embargo and crises in Turkey effect 1994 trade volume.

After 1994 trade and Economic Cooperation Agreement with Turkey, compensated this loss on trade, Trade volume with Turkey was 139.7 Million US\$ in 1994 but increase to 215,0 Million US\$ in 1995. EU trade in 1996 was fell again into 105,7 US\$ which was 138,5 Million US in 1995. Also UK and Germany trade volumes were decreased foreign trade volume of TRNC also decrease into 388,9 Million US \$ in 1996. Trade volume of TRNC to get well after 1996, with the increase of volume of trade of Turkey.

**Table 3.7 Distribution of Foreign Trade Volume of TRNC (Million US \$)**

Nations	1993	1994	1995	1996	1997	1998	1999	2000*
<b>I OECD Nations</b>	339	292,3	364,2	328,4	355,4	441,8	431,7	431,9
<b>1 Turkey</b>	163,4	139,7	215	210,1	229,1	278,5	284,3	282,8
<b>2 EU Nations</b>	158,1	138,6	138,5	105,7	111,4	135,5	120,2	119,8
<b>2.1 UK</b>	92,1	98,1	73,2	59	60,1	70,9	63,3	65,4
<b>2.2 Germany</b>	20	14	24,6	14,9	19,7	21,9	23	18,5
<b>2.3 Others</b>	46	26,5	40,7	31,8	31,6	42,7	33,9	35,9
<b>3 EFTA Nations</b>	4,4	3,8	1	1,9	1,8	0,9	0,9	1,3
<b>4 Japan</b>	9,3	5,5	6,7	5,5	9,7	19,2	19,8	20,8
<b>5 USA</b>	3,2	4,5	2,9	5	3,2	7,2	6,3	6,9
<b>6 Others</b>	0,6	0,2	0,1	0,2	0,2	0,5	0,2	0,3
<b>II- Other Europe</b>	11,6	4,8	17,2	12,3	6,3	9	5,3	11,6
<b>III- Middle East</b>	5,4	9,6	9,7	10,4	7,3	6,8	7,1	8,5
<b>IV- Far East</b>	38,1	19,5	26,8	15,4	11,0	8,2	8,1	8,5
<b>V- Others</b>	24,3	13,8	15,5	22,4	34,3	18,1	12,9	13,8
<b>Total</b>	418,4	340,0	433,4	388,9	414,3	483,9	465,1	474,3

(\*) estimated

Source: SPO PM of TRNC Economic and Social Indicators 2000

TRNC have trade deficit. Because of its structure, small island economy, low natural resources and low technological level, most of the needs of country coming from abroad. Main import products of TRNC are investment commodities, raw materials, intermediate goods and final (consumption) goods. Main export products of TRNC are agricultural products, feed materials (food) and manufacturing goods such as textile.

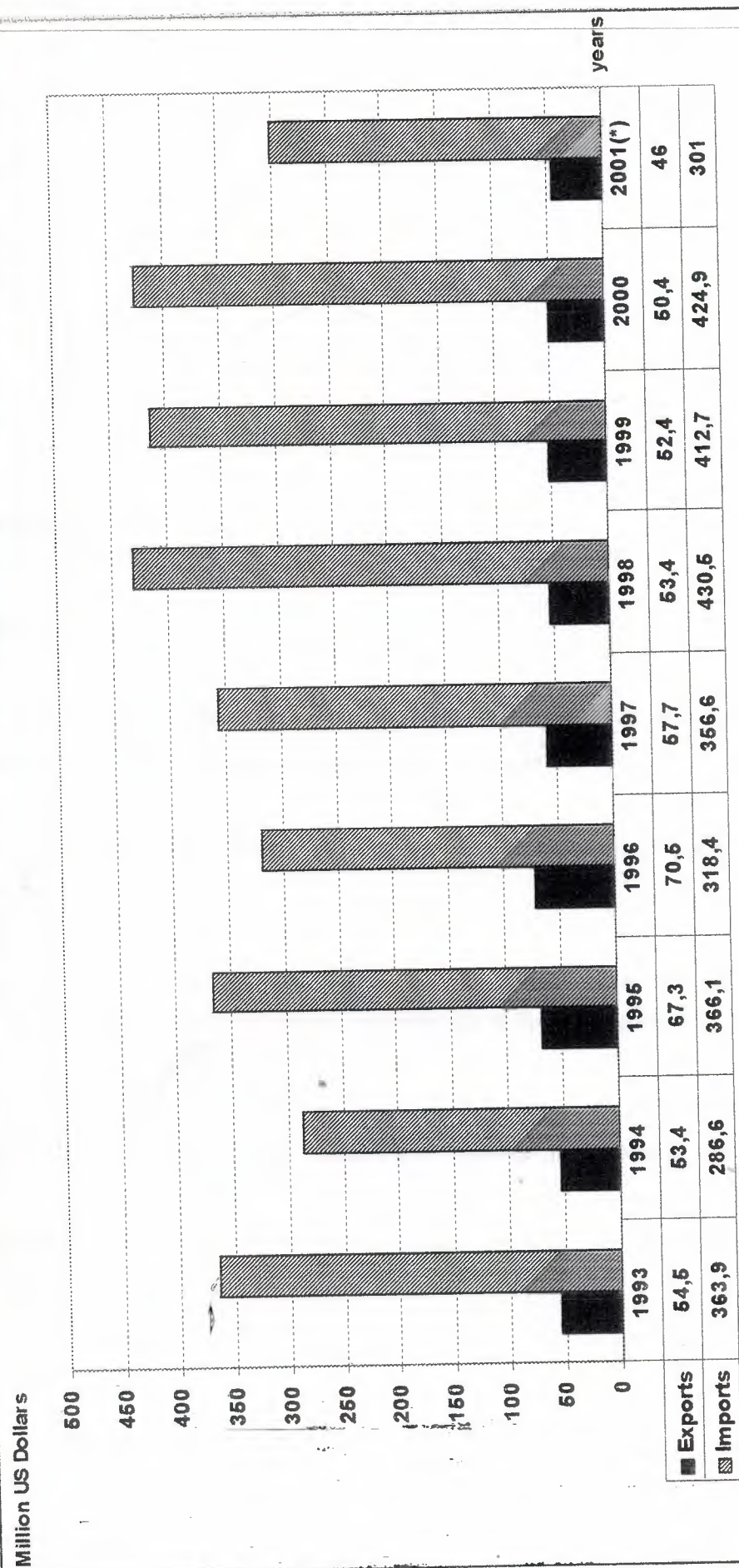
Small scale business is a main characteristic of trade sector. Many businesses are doing same thing, producing same product and those business are small scale, this makes businesses' delivery cost to increase.

As it can be seen from Graph 3.21 foreign trade always has deficit during the period from 1993 to 2001.

According to the data in Graph 3.21, imports of TRNC have been too much greater than exports. This tired deficit occurs with dependence on foreign products as it was said before.

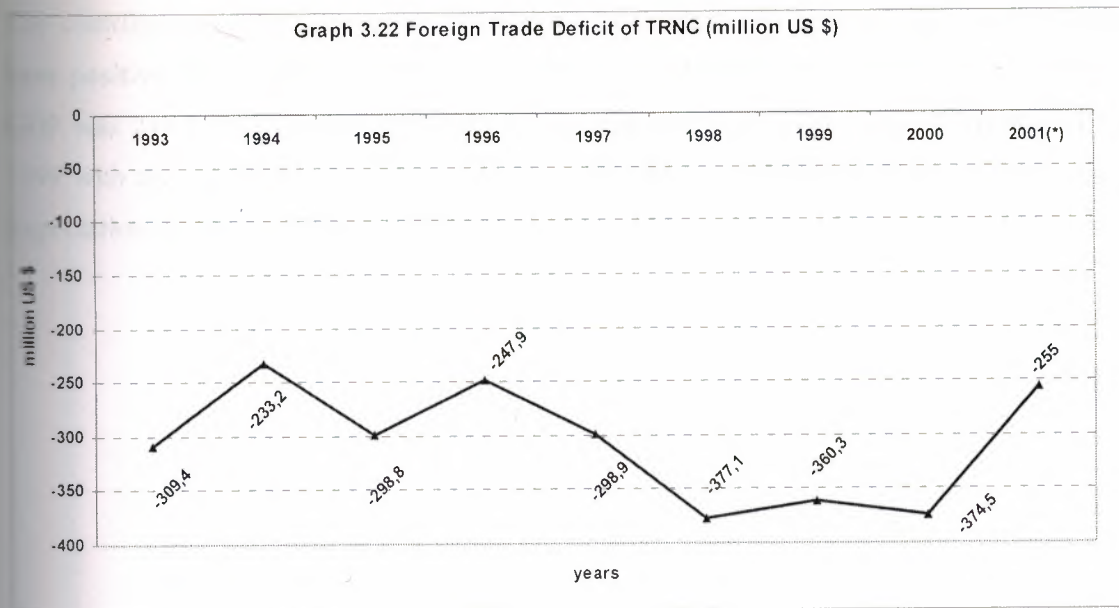
According to the expected figures foreign trade deficit tried to shrink. Expected export will fall 301,0 Million US \$ and trade deficit expected to be 255,0 Million US \$ in 2000. Government trying to shrink foreign trade deficit with reduce the imports.

Graph 3.21 Foreign Trade Balance of TRNC (million US \$)



(\*) estimated

Source: SPO PM of TRNC Economic and Social Indicators, 2000



(\*) estimated

Source: SPO PM of TRNC, Economic and Social Indicators 2000

### 3.5 Tourism

Effects of globalization creates an environmental improvement with social and economic development. TRNC has all features that create tourism economy.

This sector is a labor intensive sector and this makes it very important for young and dynamic employees.

Environmental and climate condition of TRNC is its potential advantage. TRNC has long summer season, has anthropologic values and materials of Tourism sector.

Economic development changed after globalization of world. Development is not just social and economic development, if is also includes environmental and cultural development.

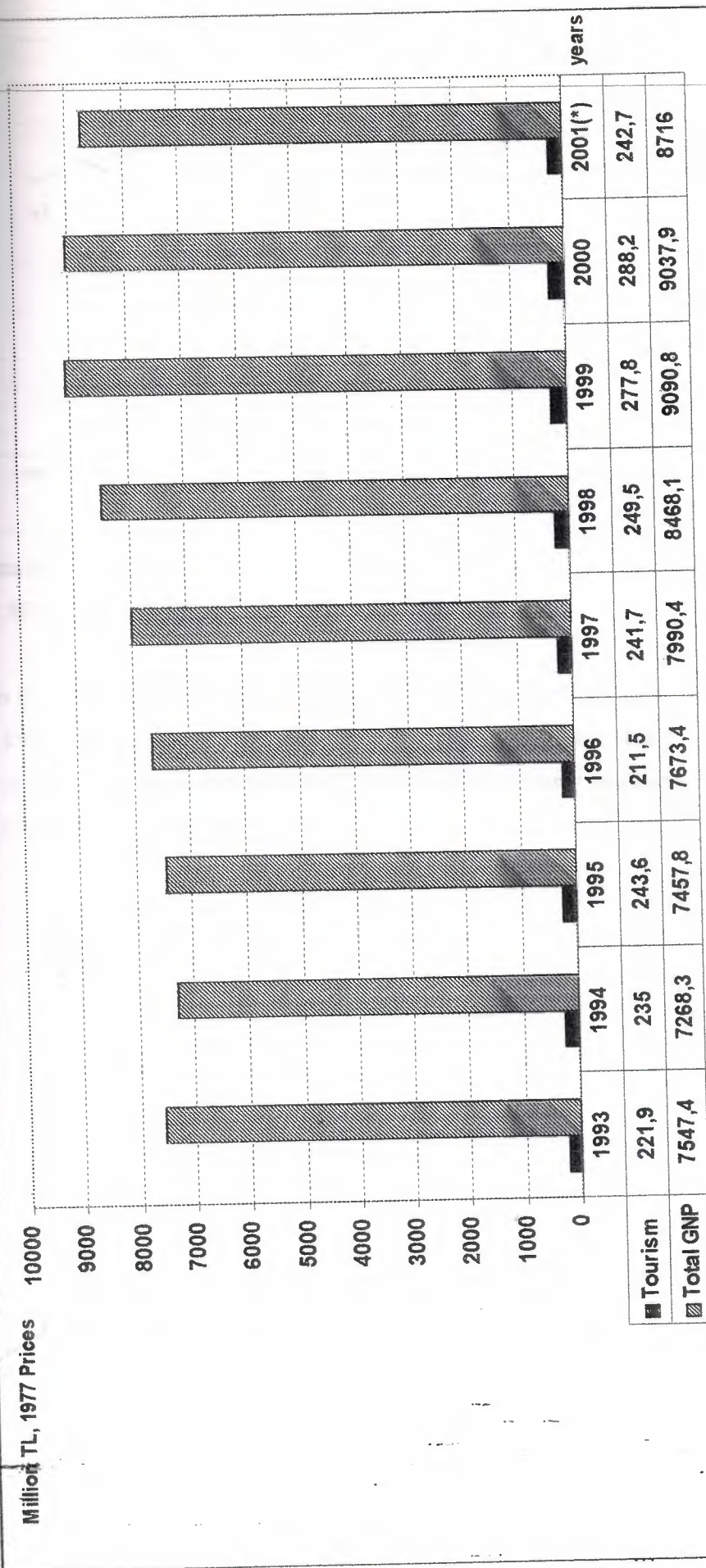
Mediterranean region has 35% of world tourism activities, TRNC has potential advantage by its position.

The contribution of tourism sector in GDP has been shown in Graph 3.23. Tourism sector have positive trend during the years between 1993 and 2001. Value addition of tourism in GDP was 249,5 (1977 Prices, Million TL) in 1998 and 277,8 (1977 Prices, Million TL) in 1999 with the right tourism policy it increased to 288,2 (1977 Prices, Million TL) in 2000. Expectation of 2001 is 242,7 (1977 Prices, Million TL).

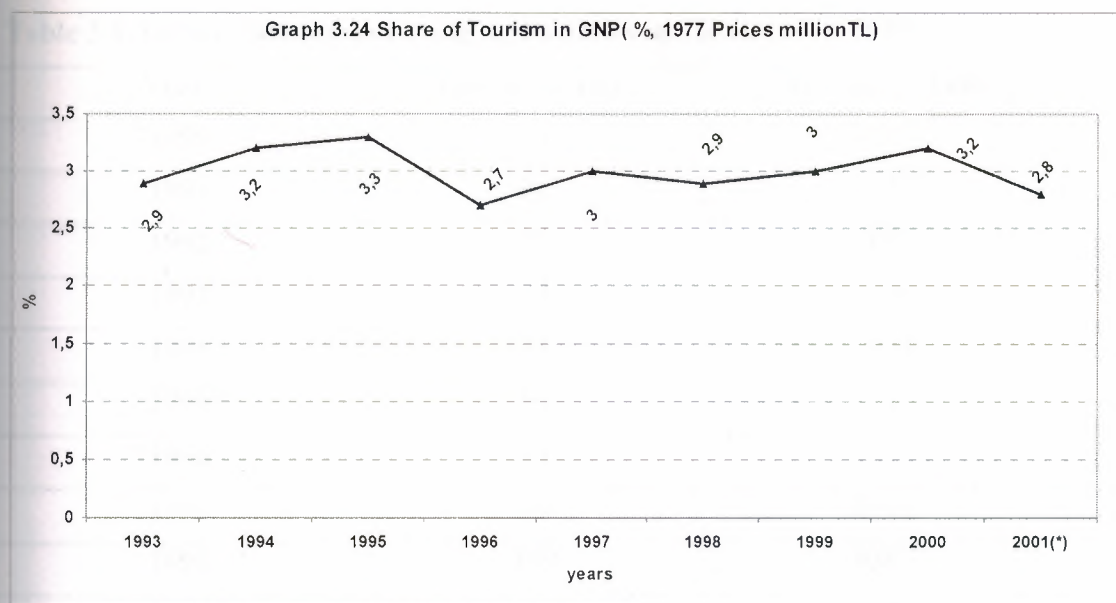
Graph 3.23 Tourism in GDP (1977 Prices, Million TL)



Graph 3.23 Tourism in GNP (1977 Prices, Million TL)



(\*) estimated  
Source: SPO PM of TRNC, Economic and Social Indicators, 2000



(\*) estimated

Source: SPO PM of TRNC Economic and Social Indicators

As it can be seen from Table 3.8, accommodation and lodging facilities has been increasing. In 1990 total number of accommodation was 89 and number of beds was 6125, in 1995 total number of accommodation increased to 93 and number of bends increased to 115 and also number of beds increased to 9932.

**Table 3.8 Accommodation and Lodging Facilities in TRNC (1990-1999)**

<b>Years</b>	<b>Number of Units</b>	<b>Number of Beds</b>
<b>1990</b>	89	6125
<b>1991</b>	80	6633
<b>1992</b>	86	7087
<b>1993</b>	93	7462
<b>1994</b>	93	7814
<b>1995</b>	93	7774
<b>1996</b>	99	8267
<b>1997</b>	104	8940
<b>1998</b>	109	9365
<b>1999</b>	115	9932
<b>Hotel</b>	51	5380
<b>Hotel-Apt</b>	51	4177
<b>Pensions</b>	13	375

**Source : SPO PM of TRNC Statistical Yearbook 1999, Nicosia 2001**

Total number of hotel was 51 and number of beds 5380 in 1999. Total number of hotel-apt as 51 and total number of pensions was 13 in 1999.

**Table 3.9 Number of Tourist in TRNC (person / year)**

<b>Country</b>	<b>1993</b>	<b>1994</b>	<b>1995</b>	<b>1996</b>	<b>1997</b>	<b>1998</b>	<b>1999</b>	<b>2000*</b>
<b>Turkey</b>	281370	256549	298026	289131	326364	315797	334400	356346
<b>Others</b>	77943	95079	87733	75985	73000	77230	79615	93360
<b>Totals</b>	359313	351628	385759	365116	399364	393027	414015	449706

(\*) expected

**Source: SPO PM of TRNC, 2001 Annual Program. Nicosia 2001**

As shown in Table 3.9, number of tourist have positive trend during years. Very big portion of yearly number of tourist is coming from Turkey. In 1993, number of tourist that coming from Turkey was 281,370. At the same year number of tourist that coming from other countries was only 77,943. There are very limited direct flights to TRNC; this causes the tourist numbers, which are coming from other nations. Transportation preferences are shown Table

3.9. Datas from this table, tourists that were came from other countries were low. Transportation problem affects our tourist number. Also shown in Table 3.10 tourists which were coming from Turkey, generally transported by sea but this has been changed in recent years. In 1990 34.1 % of Turkish tourist was came TRNC with airway and 46,8 % of Turkish tourist used maritime line. In 1999 48.0 % of Turkish tourist used airway and 32,8 % of them came to TRNC by sea.

**Table 3.10 Transportation Preferences in Tourism (%)**

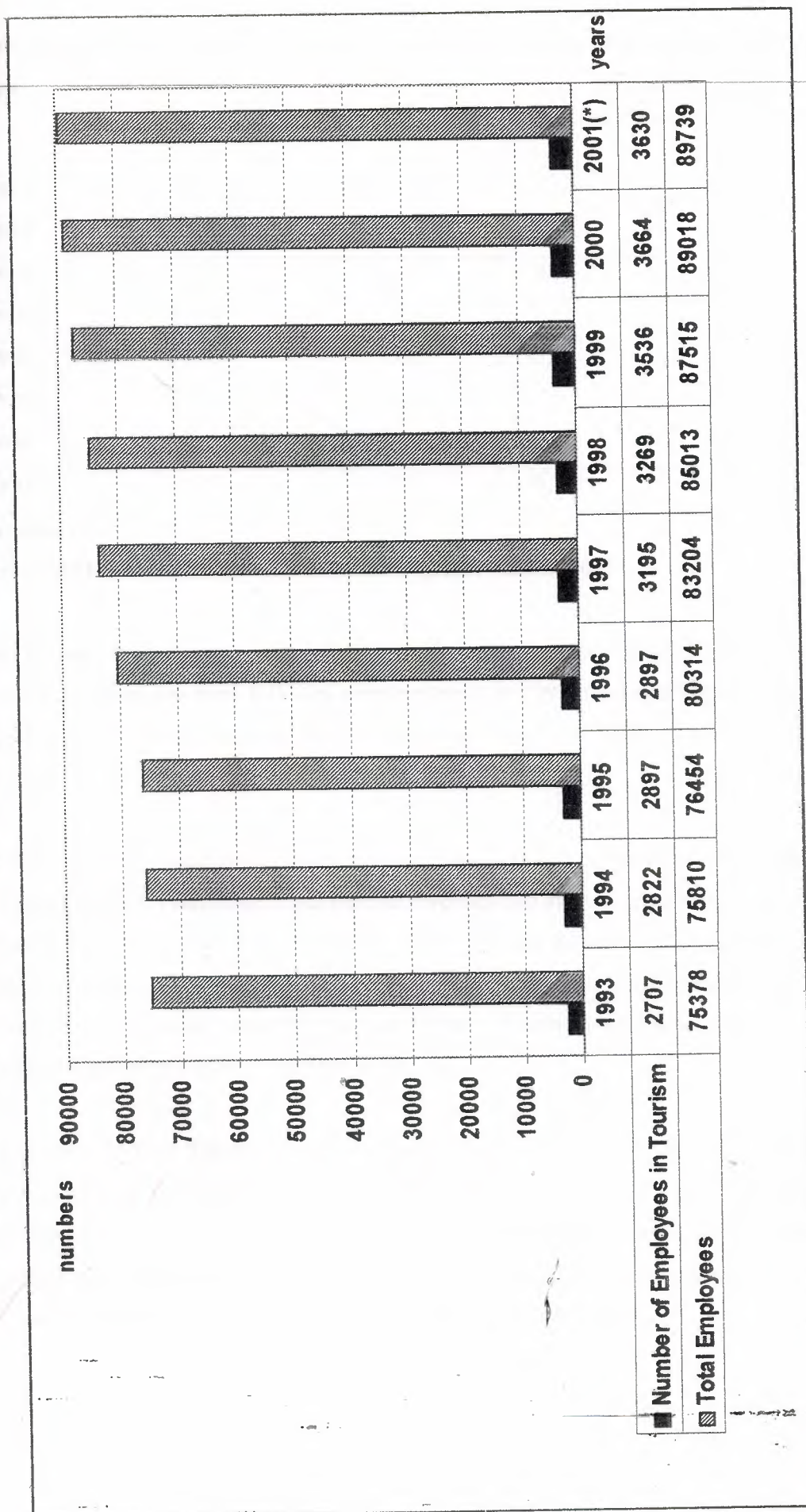
	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
<b>Airway</b>	51,1	53,8	64,5	65,2	62,4	57,4	56,5	56,4	61,8	66,1
- <b>Turkish</b>	34,1	37,4	45,0	45,2	39,0	36,8	37,3	39,4	43,7	48,0
- <b>Other</b>	17,0	16,4	19,5	20,0	23,4	20,6	19,2	17,0	18,1	18,1
<b>By sea</b>	48,9	46,2	35,5	34,8	37,6	42,6	43,5	43,6	48,2	33,9
- <b>Turkish</b>	46,8	44,1	33,5	33,1	32,5	40,5	41,9	42,4	36,6	32,8
- <b>Other</b>	2,1	2,1	2,0	1,7	5,1	2,1	1,6	1,2	1,6	1,2

**Source: SPO PM of TRNC, 2001 Annual Program. Nicosia 2001**

Tourism is a labor-intensive sector. As shown in Graph 3.25, the number of employment in tourism sector increasing. In 1990 number of employers in tourism were 1,770 in, 1995 this number increased to 2897 and in 1999 expected number of employers which working in tourism sector were 3,664. This increasing numbers of employees in tourism sector is directly relationship with the number of accommodation needs more employees.

As it can be seen in Graph 3.25, in 1997 with a parallel of increased in number of accommodation number of employees had increased.

Graph 3.25 Numbers of Employees in Tourism Sector and % of Tourism in total Employment



(\*) estimated  
Source: SPO PM of TRNC, 2001 Annual Program, Nicosia 2001

**Table 3.11 The Portion of Tourism Revenues within the Foreign Exchange (Million \$ )**

Years	Total Exchange Revenues	Export Revenues	Net Tourism revenues	
			Value	% of Total Exchange Revenues
1993	362,9	54,5	224,6	61,9
1994	282,4	53,4	172,9	61,2
1995	353,8	67,3	218,9	61,9
1996	316,4	70,5	175,6	55,5
1997	315,6	57,7	183,2	58,0
1998	327,4	53,4	186,0	56,8
1999	322,4	52,4	192,8	59,8
2000*	343,9	55,8	208,1	60,5

(\*) estimated

Source: SPO PM of TRNC, 2001 Annual Program. Nicosia 2001

It can be seen from the data of Table 3.11, percentage of tourism revenues within the total exchange revenues has been followed negative trend. In 1993, total exchange revenues was 362,9 Million \$, export revenues was 54.5 (millions \$) and net tourism revenues was 224,6 Million \$.

The portion of net tourism revenues into the total foreign exchange revenues was 61,9 (Million \$) in 1993. Percentage of net tourism revenues into the total export revenues was 412 Million \$ in 1993. In 1999 total foreign exchange revenues became 322,4 Million \$, export revenues became 52,4 Million \$, but net tourism revenues fell into 192,8 Million \$, in order to decrease in net tourism revenues, the percentage of tourism revenues within the total exchange revenues had been fall in 59,8 Million \$.

As it can be seen from Table 3.12, tourism had covered the 72,6 % of trade deficit in 1993. In 1996 foreign trade deficit was 247,9 Million \$, tourism balance was 173,6 and tourism had covered the 70,0 % of trade deficit. Datas shows that conversance became less year after year because of the increases in expenditure of tourism. Tourism balance decreases and at the same time foreign trade deficit increases within the period of 1993 to 2000.

Table 3.12 Balance of Foreign Trade – Tourism (Million \$)

Foreign Trade				Tourism			Tourism/ Trade Deficit Ratio
Years	Import	Export	Deficit	Revenue	Expenditure	Balance	%
1993	363,9	54,5	309,4	318,4	93,8	224,6	72,6
1994	286,6	53,4	233,2	277,5	104,6	172,9	74,1
1995	366,1	67,3	298,8	338,3	119,4	218,9	73,3
1996	318,4	70,5	247,9	300,9	125,3	173,6	70,0
1997	356,6	57,7	298,9	313	129,8	183,2	61,3
1998	390,1	53,4	336,5	314	128	186,0	55,2
1999	412,7	52,4	360,3	323,3	130,5	192,8	53,5
2000(*)	418,5	55,8	362,7	342	133,9	208,1	57,4

(\*) estimated

Source: SPO PM of TRNC, 2001 Annual Program. Nicosia 2001

### 3.6 Transport – Communication

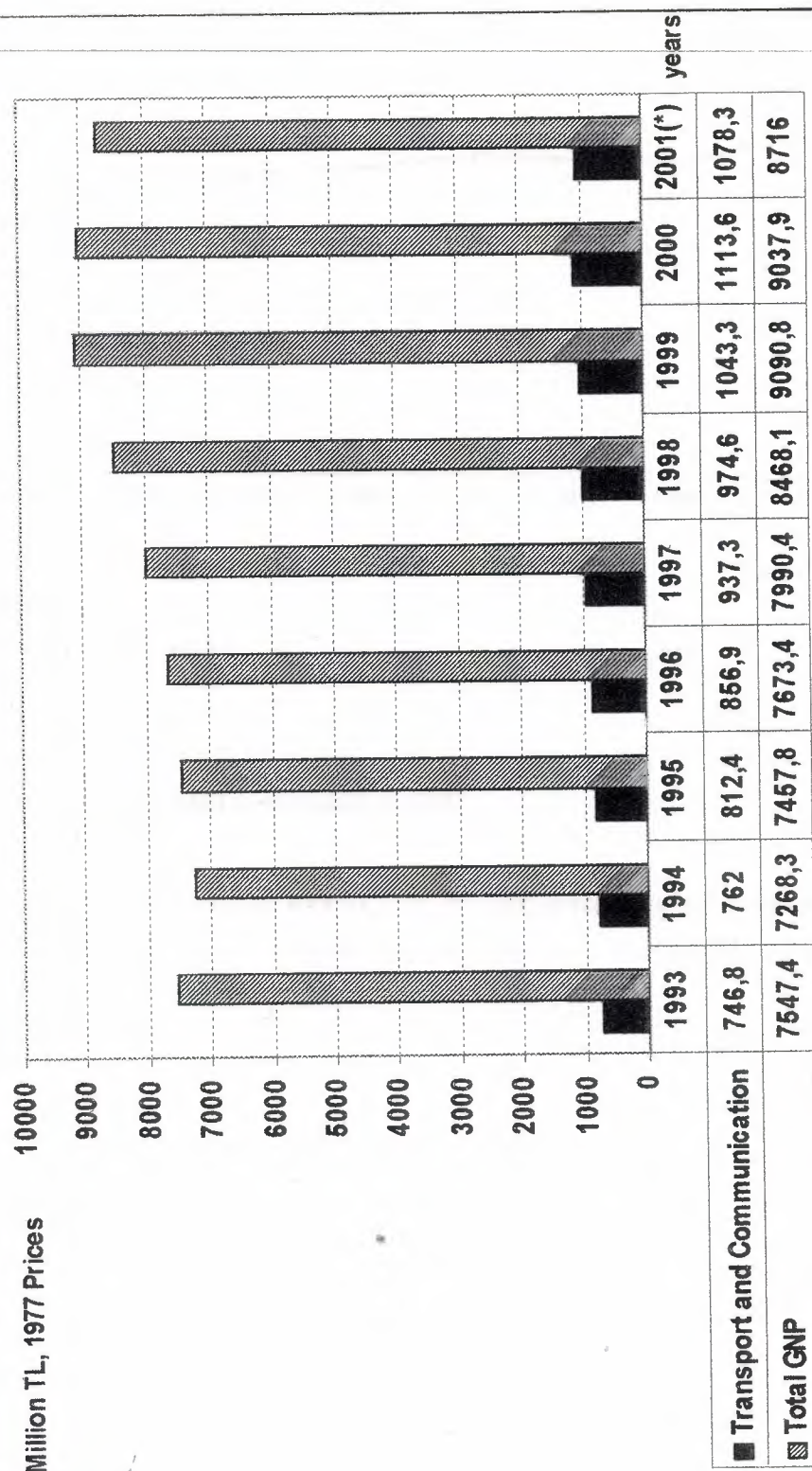
The main infrastructures of social and economic development are transport and communication. This sector also important for the working harmonizingly between the all sectors. Specially tourism, trade, manufacture and agriculture sectors which can creates exterior economy, transport and communication sector gives them some aid to achieve their social and economic goals.

This sector divides into 6 categories which are airline, shipment, road, telecommunication, post, radio-television.

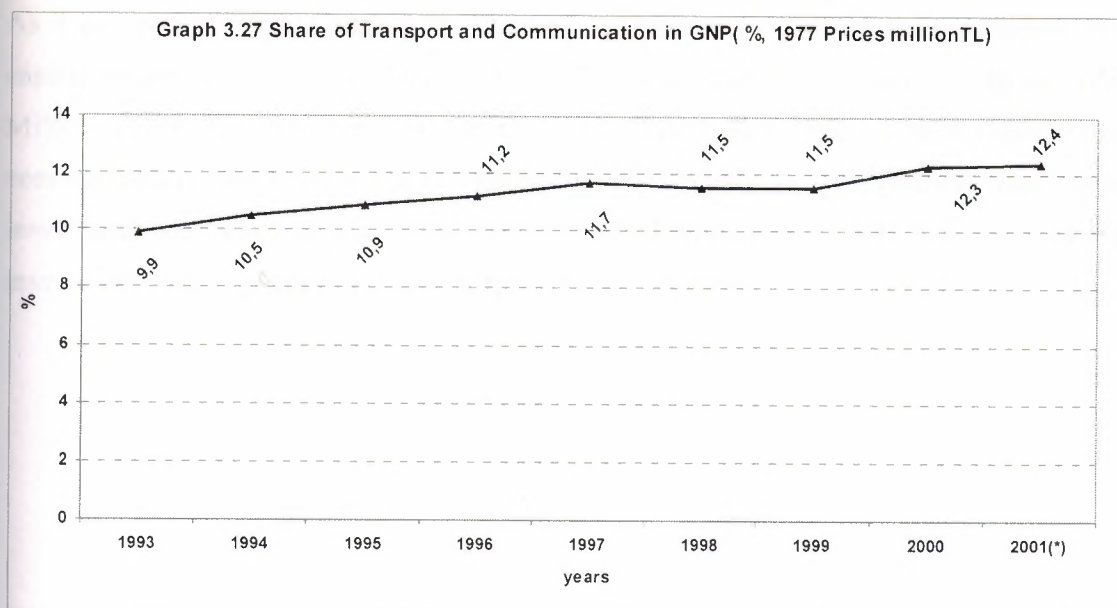
Graph 3.26 demonstrated the value added of Transport – Communication sector into GNP. Graphic follows positive trend from 1993 to 2001. Today's globalizing world needs communication and transport much more than before. Demand for this sector increases year by year. This increases cause positive trend of Transport and Communication sector.

In 1993 value added of transport and communication sector in GNP was 746,8 Million TL (1977 prices). In 1997 this amount had been increased to 973 – 3 Million TL ( 1977 prices) and in 2000 addition of transport and communication sector in GNP was 1,113,6 Million TL (1977 price)

Graph 3.26 Transport-Communication Sector in GNP (1977 Prices, Million TL)



(\*) estimated  
Source: SPO/PM of TRNC, Economic and Social Indicators, 2000



(\*) estimated

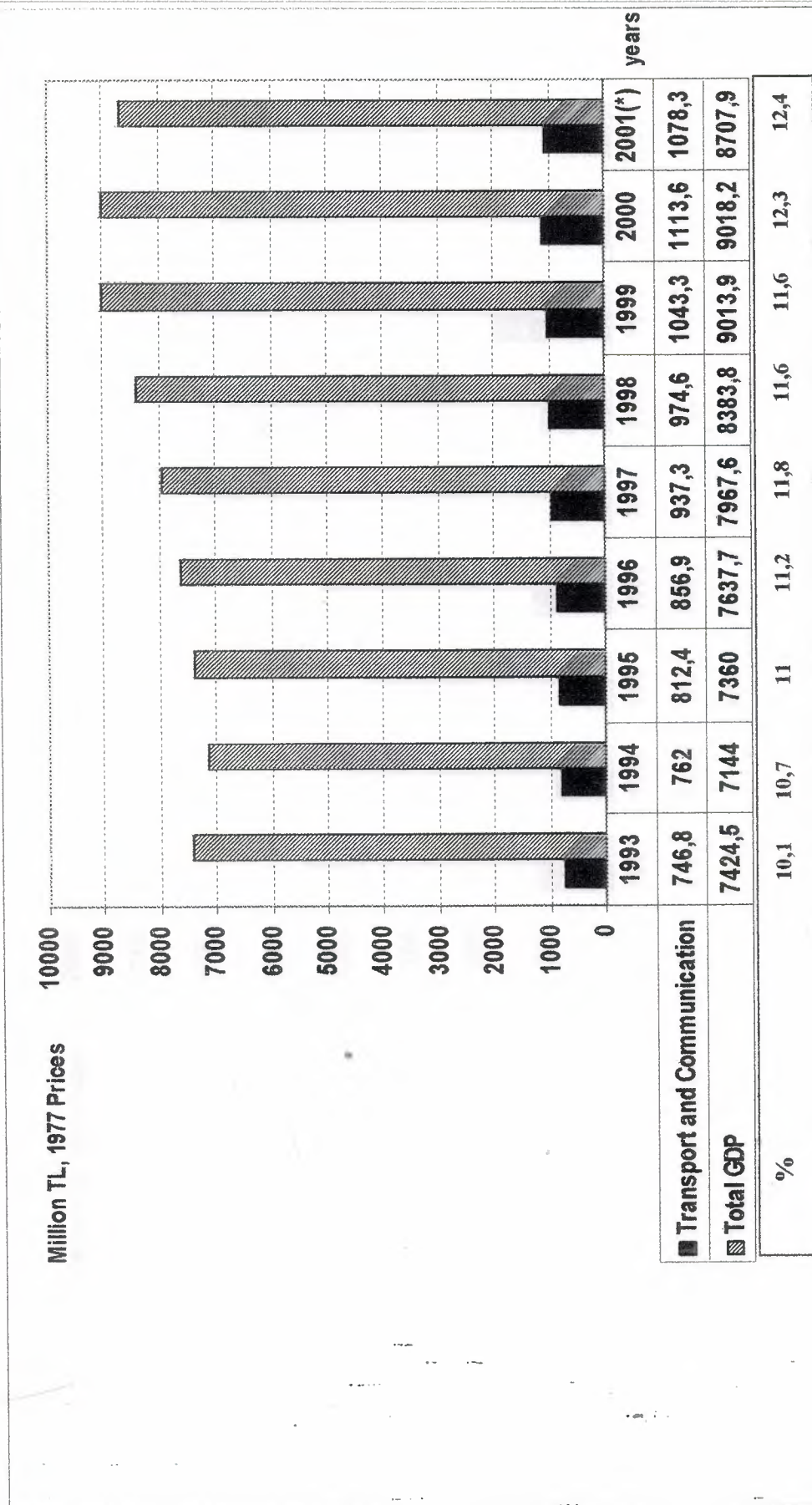
Source: SPO PM of TRNC Economic and Social Indicators 2000

As it can be seen from Graph 3.28, share of Transport and Communication sector has been also increases with parallel to increases in GDP.

In 1993, share of sector in GDP was 10,7, in 1997 this percentage had been increased to 11,8. This increased shares goes with parallel of value added of Transport – and Communication sector in GNP.

As it can be seen from Graph 3.29, share of transport and communication sector in fixed capital investment was 270,9 Million TL (1977 prices) but this amount was fell to 178,7 Million TL (1997 Prices) in 1995. In the 1996 fixed capital investment in transport and communication sector increased to 288,7 Million TL (1977 Prices). Highest fixed capital investment was made in year 1999 that was 434,7 Million TL (1997 Prices). This high investment made for renew of Ercan Airport.(See Graph 3.30)

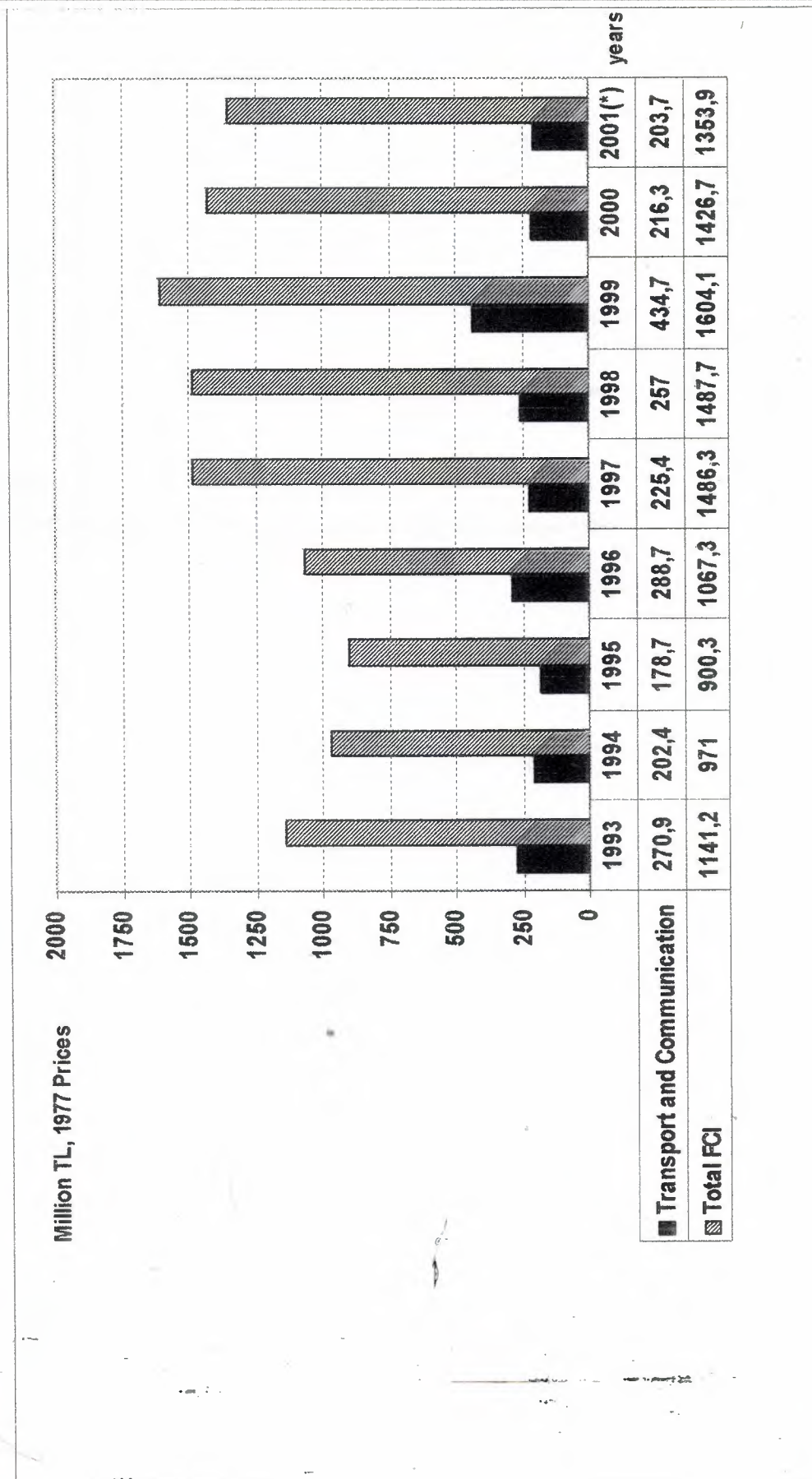
Graph 3.28 Transport-Communication in GDP



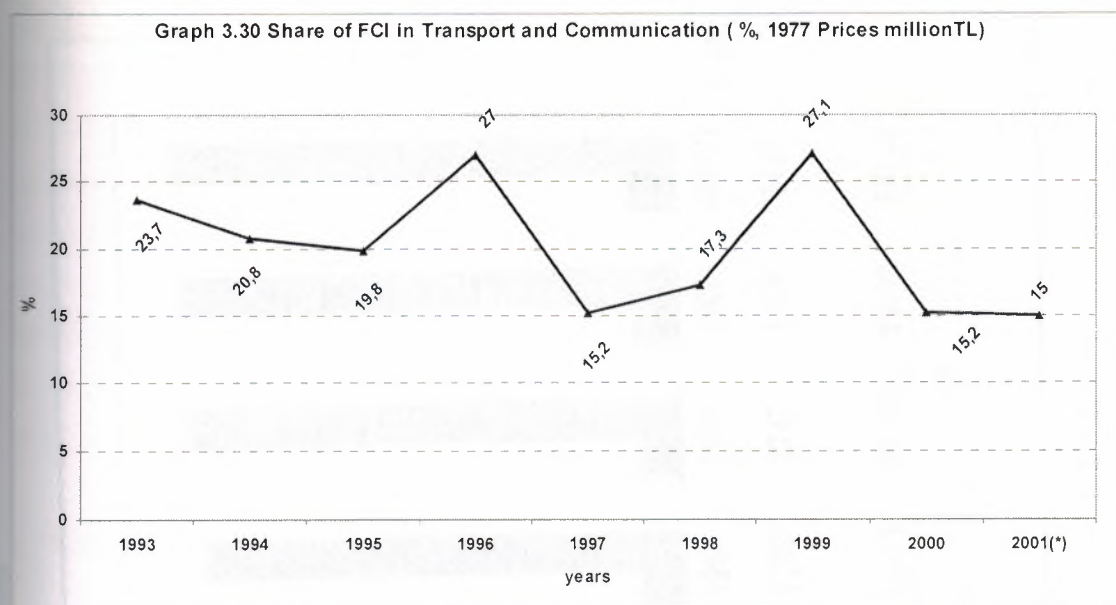
(\*) estimated

Source: SPO PM of TRNC, Economic and Social Indicators, 2000

Graph 3.29 Fixed Capital Investment in Transport and Communication Sector (1977 Prices, Million TL)



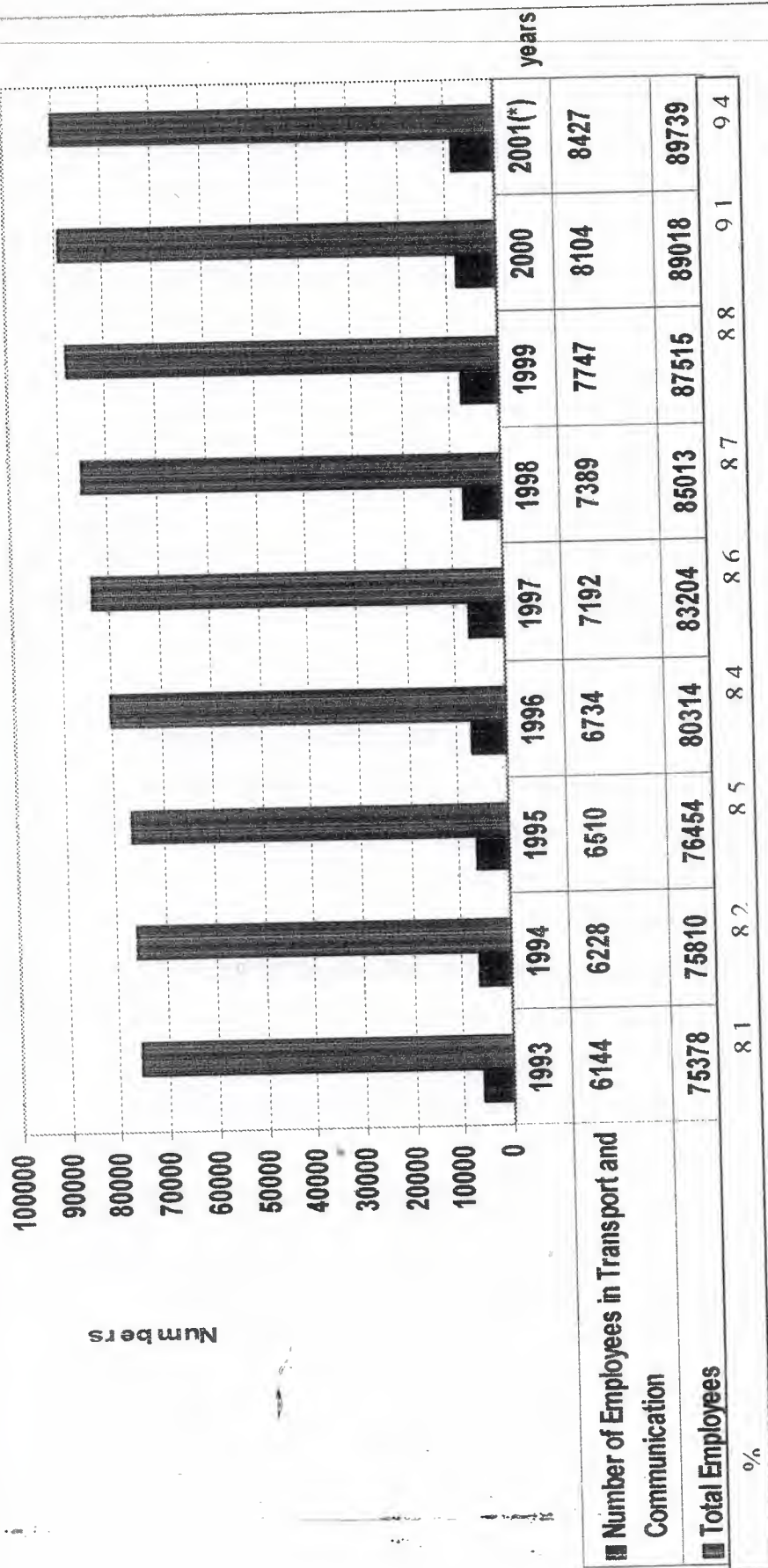
(\*) estimated  
Source: SPO PM of TRNC, Economic and Social Indicators, 2000



(\*) estimated

Source: SPO PM of TRNC, Economic and Social Indicators 2000

Graph 3.31 Employment in Transport and Communication



(\*) estimated  
Source: SPO PM of TRNC, Economic and Social Indicators, 2000

Employment in Transport and Communication sector has been growing. Increase the demand for transportation and communication causes new employee needs in this sector. (See Graph 3.31) Transport and communication sector strongly interrelated with tourism trade sectors. According to the increase the number of tourist coming in TRNC and increases in trade relations with foreign countries, transportation and communication sector have to increase its employees for produce enough supply for its demands. In 1993 total number of employees in this sector was 6144, in 1997 employee number had been increased to 7193 and in 2000 this number was 8104. According to demands, expected number of employees for 2001 should be 8427. (see Graph 3.31)

### 3.7 Education

The educational system in TRNC can be broadly defined in four parts; (i) *Pre-School Education*, (ii) *Primary Education*, (iii) *Secondary Education*, (iv) *Higher Education*

- (i) Pre-School Education : is provided by kinder gardens for children between the ages of 5 and 6
- (ii) Primary Education : is provided at as elementary school and designed for the 7-11 age-group, it lasts for 5 years and is free and compulsory
- (iii) Secondary Education : is provided at two stages. First stage (Secondary-Junior) is lasting for 3 years is intended for children in the 12-14 age-group and has a 3 year programme of instruction. It is provided by high schools known as Lycee's and vocational schools. The technical and vocational school are comprised of commercial Lycee's technical training schools, the school of nursing and mid-wifely.
- (iv) Higher Education : In the TRNC, University education is provided by Teacher's Training College, The Eastern Mediterranean University, Anadolu University Open Faculty of Economics and Business Administration, Girne American University, Near East University, Lefke European University and International Cyprus University.

University education can also be pursued abroad. Most of the students receive their higher education in Turkey. United Kingdom occupy the first position among the other countries.

Informal Education : Aims at providing education and training for those unable to benefit adequately from formal education.

**Table 3.13 Kindergartens By Years (1994-1995 / 1999-2000)**

Academic Year	Total Teachers	Total Students
1994-1995	36	746
1995-1996	42	764
1996-1997	41	798
1997-1998	47	761
1998-1999	47	770
1999-2000	54	1001

Source : SPO PM of TRNC, 2001 Annual Program, Nicosia, 2001

According to the data in Table 3.13, in 1994-1995 period total number of teachers in kindergartens was 36 and total number of students was 746. In 1999-2000 period total number of teachers had been increased to 54 and total number of students had been increased to 1001. this increasing student numbers means that public be concerned with education in small ages.

**Table 3.14 Primary Education (1994-1995 / 1999-2000)**

Academic Year	Total Teachers	Total Students
1994-1995	1097	14123
1995-1996	1095	15526
1996-1997	1088	18659
1997-1998	1293	18659
1998-1999	1268	18349
1999-2000	1269	15635

Source : SPO PM of TRNC, 2001 Annual Program, Nicosia, 2001

Table 3.14 demonstrated that, total number of teachers and total number of students during period of 1994-1995 / 1999-2000 increased steadily in primary education. Data's of secondary education shown similar increases in total number of students and teachers.

**Table 3.15 Secondary Education (1994-1995 / 1999-2000)**

Academic Year	Total Teachers	Total Students
1994-1995	997	14616
1995-1996	1157	14480
1996-1997	1065	13999
1997-1998	1204	13919
1998-1999	1254	13662
1999-2000	1690	15842

**Source : SPO PM of TRNC, 2001 Annual Program, Nicosia, 2001**

We can see this positive trend on number of teachers and number of students. (see Table 3.14-3.15 )

Most of the students in higher education is studying in Eastern Mediterranean University (EMU). Near East University (NEU) is coming next to EMU with the 5146 students in 1999-2000 academic year. (See Table 3.16) in 1994-1995 academic year, total number of students in higher education in TRNC was 14262. This number had increased to 24040 students in 1999-2000 academic year.

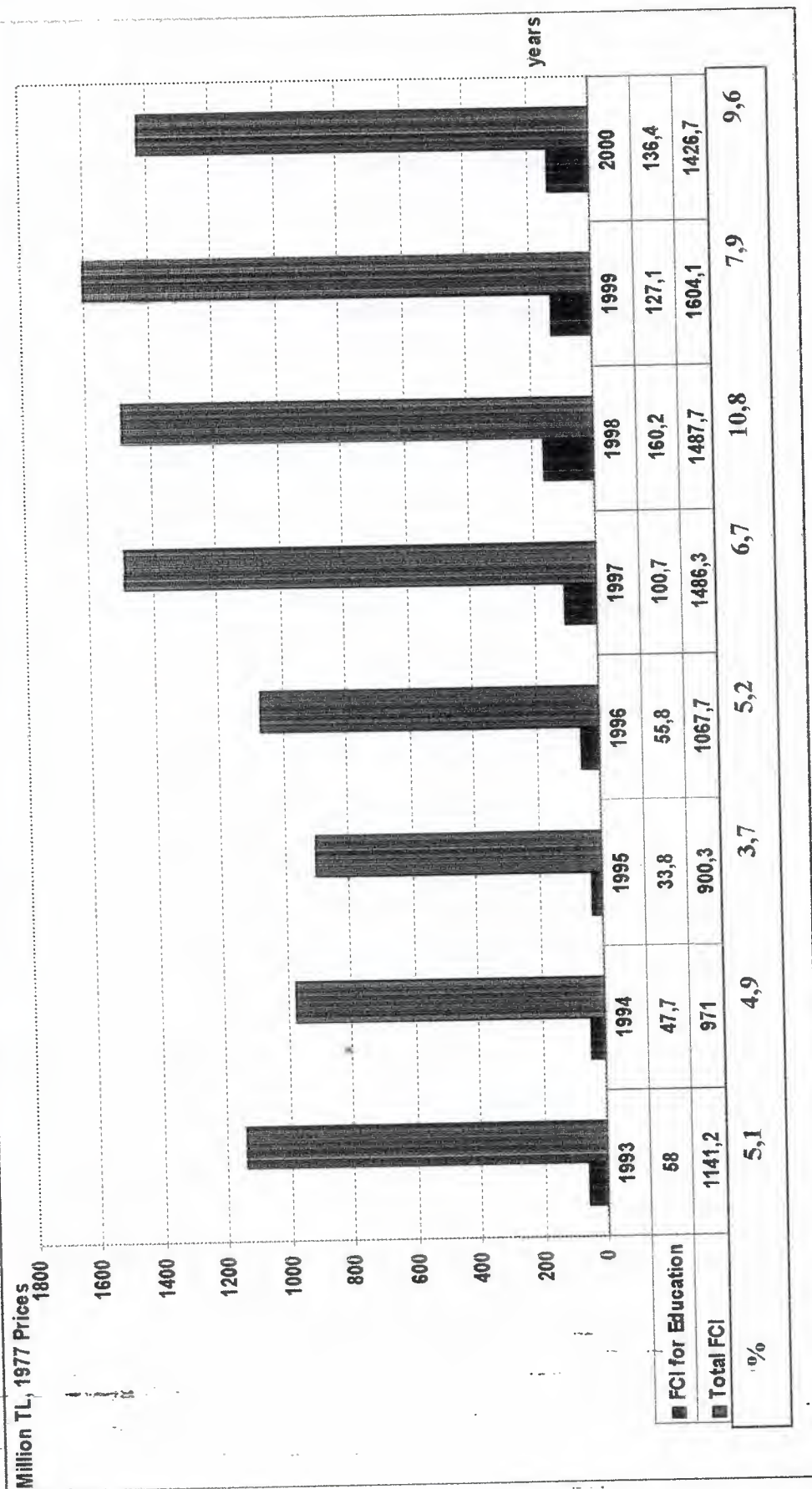
3.7 Table-16 Number of Students in Higher Education in TRNC (1994-1995 / 1999-2000)

Universities	1994-1995	1995-1996	1996-1997	1997-1998	1998-1999	1999-2000
<b>Eastern Mediterranean University (EMU)</b>	6629	7431	8715	9905	10901	12471
<b>Anadolu University</b>	2451	2496	2572	2561	2495	3073
<b>Teachers Training College</b>	159	118	142	205	185	91
<b>Girne American University (GAU)</b>	501	576	861	1154	1015	1624
<b>Near East University (NEU)</b>	3476	4153	4500	4425	3958	5146
<b>Lefke European University (LEU)</b>	852	650	835	918	958	1178
<b>International American University (IAU)</b>	194	619	1018	1040	1123	-
<b>Internatioanl Cyprus University (ICU)</b>	-	-	-	96	252	457
<b>Total</b>	<b>14262</b>	<b>16043</b>	<b>18643</b>	<b>20304</b>	<b>20887</b>	<b>24040</b>

Source: SPO PM of TRNC, 2001 Annual Program, Nicosia, 2001

Share of fixed capital investment for education severe increased in 1997. As we consider Table 3.13, 3.14, 3.15, 3.16 together, it can be found can find that number of teachers and also number of students increased during this period. Needs were also increased so increase in fixed capital investment of education was caused by needs of higher number of students and teachers.

Graph 3.32 Share of Education in Fixed Capital Investment (1977 Prices, Million TL)



Source: SPO PM of TRNC, Economic and Social Indicators, 2000

Table 3.17 Value Added of Universities in Balance of Payments (Current Prices, US \$)

		1995-1996	1996-1997	1997-1998	1998-1999	1999-2000
University Fees	EMU	15632750	18632716	20570682	24330082	29080302
	GAU	1881080	2800160	3386980	2752060	4447400
	NEU	10095900	11238900	11599500	8965400	11576400
	LEU	1314500	1838720	1909940	1893260	2332920
	ICU	-	-	165700	568800	1148000
Total Fees		<b>28924230</b>	<b>34510494</b>	<b>37632802</b>	<b>38527602</b>	<b>48585022</b>
Summer School Incomes	EMU	729873	258799	70261	944786	1178719
	GAU	90000	75000	130000	78000	120000
	NEU	313540	458657	463720	506959	391390
	LEU	87000	70000	122000	72000	114500
	ICU	-	-	1200	5040	15650
Total		<b>1220413</b>	<b>862456</b>	<b>787181</b>	<b>1606785</b>	<b>1820259</b>
Other Expenditures Of Students	EMU	24520000	28330000	30360000	34485000	40545000
	GAU	2590000	3865000	4820000	4160000	6325000
	NEU	17805000	19825000	18125000	14565000	18720000
	LEU	1990000	2785000	2965000	3010000	3675000
	ICU	-	-	255000	915000	1895000
Total		<b>46905000</b>	<b>54805000</b>	<b>56525000</b>	<b>57545000</b>	<b>71160000</b>
Scholarships Of Students	EMU	841819	956744	1438511	1604837	2138691
	GAU	400000	450000	483000	285000	318800
	NEU	5168070	5426474	5697798	5982688	6281822
	LEU	361200	400926	498553	752541	1032232
	ICU	-	-	241500	142500	159400
Total		<b>6771089</b>	<b>7234144</b>	<b>8359362</b>	<b>8767566</b>	<b>9930945</b>
Total Value Added		<b>70278554</b>	<b>82943808</b>	<b>86585621</b>	<b>88909921</b>	<b>111634336</b>

Source: İrfan K. Ülger-Ertan Efeğil, Kıbrıs Meselesi, Ankara, 2001, pp:273-283

Table 3.18 Balance of Paymnetns after the addition of High Education (Current Prices, Million Dollar)

	1996	1997	1998	1999	2000
<b>I-CURRENT ACCOUNTS</b>					
1- Foreign Trade					
a) Import	70,5	57,7	53,4	52,4	55,8
b) Export	-318,4	-356,6	-430,5	-412,7	-418,5
Balance of Foreign Trade	-247,9	-298,9	-377,1	-360,3	-362,7
2- Invisble Accounts					
a) Tourism	176,6	183,2	186	192,8	208,1
b) High Education	70,2	82,9*	86,5*	88,9*	111,6*
c) Other Invisibles	70,3 (40,0)*	74,7 (52,0)*	88 (62,8)*	77,2 (72,8)*	80 (98,8)*
Invisble Account Balances	276,1 (245,9)	288,8 (257,9)	297,7 (274)	286,1 (270)	300,9 (288,1)
Current Account Balance	28,2 (-2)	-10,1 (-41)	-79,4 (-103,1)	-74,2 (-90,3)	-61,8 (-74,6)
<b>II-CAPITAL MOVEMENTS</b>					
1- Foreign Aid and Loans by Turkey	82,8	88,4	168,7	95,4	126
2- Other Foreign Aid	2,8	1,7	1,2	1,1	1,5
3- Other Capital Movements	-125,2	-35,2	24,5	35,6	10,9
Capital Movement Balance	99,4	54,9	194,4	132,1	138,4
General Balance	127,6 (97,4)	44,8 (13,9)	115 (91,3)	57,9 (41,8)	76,6 (52,6)
<b>III-CHANGE IN RESERVES</b>					
	(-95,9)	(0,9)	(-112,3)	(-32,1)	(-64,3)
<b>IV-NET ERRORS AND OMISSIONS</b>					
	(-1,5)	(-14,8)	(21)	(-9,7)	(0,5)

(\*) Incomes of High Education, which created by anlysis of High Education Sector

(0) The amounts that calculated by state Planning Office for High Education

Source: İrfan K. Ülger-Ertan Efeğil, Kıbrıs Meselesi, Ankara, 2001, pp:275-287

Calculations of Table 3.17, created by the Total number of students in each university X universities Fees. To find a total value added of universities, summer school incomes, other expenditure of students and scholarship of students has also be calculated. As it can be seen from Table 3.17 total value added of universities has been increased from 1996 to 2000. In 1999-2000 academic year, total value added of universities was 111634336 US\$.

In Table 3.18, State Planning Organization calculated the high education value added within the other invisibles. Difference between the State Planning Organization findings and Mrs. Sule L. Aker's calculations were very big in 1996. But these two different findings become closer in 2000.

As it can be seen from Table 3.18, total value added of universities are very high and to reduce current account deficit.

The Irish economy has experienced a period of rapid growth since the early 1990s. This growth has been driven by a combination of factors, including a high level of investment in research and development, a highly skilled workforce, and a strong emphasis on innovation. The Irish government has played a key role in this process, providing a supportive environment for business and industry. The result has been a significant increase in Ireland's GDP and a rise in its international standing.

Historically, Ireland has been a small, open economy. It has a long tradition of trade and commerce, and its economy has been closely linked to the rest of the world. In the past, Ireland's economy was largely based on agriculture, but over the years it has diversified into a range of other sectors, including manufacturing, services, and technology. This diversification has helped Ireland to become a more resilient and competitive economy.

## *Chapter 4*

# *Economic Analysis of Ireland, Malta and South Cyprus*

The following analysis examines the economic performance of Ireland, Malta, and South Cyprus. It looks at their respective economic structures, growth rates, and international trade patterns. The analysis also considers the challenges these countries face and the policies they have implemented to address them. The results of the analysis suggest that Ireland, Malta, and South Cyprus have all achieved significant economic success in recent years, but they also face a number of challenges that will need to be addressed in the future.

Ireland's economy has been a success story in recent years. It has achieved a high level of growth, and its GDP has increased significantly. This growth has been driven by a combination of factors, including a high level of investment in research and development, a highly skilled workforce, and a strong emphasis on innovation. The Irish government has played a key role in this process, providing a supportive environment for business and industry. The result has been a significant increase in Ireland's GDP and a rise in its international standing.

#### 4.1 Economic analysis of Ireland:

The Irish economy while quite small by EU standards, nonetheless outperformed all Organization of Economic Cooperation and Development (OECD) countries in real GDP growth over the last five years. Fueled by favorable demographics, capital formation growth and positive external factors, Ireland's economy has expanded by nearly 9% annually over that period. A competitive tax regime, low cost and well educated labor and access to EU markets have succeeded in attracting substantial new, high-technology.

Historically Ireland suffered from high unemployment, high dependency and the emigration of its youth. The reversal of these conditions was the foundation of the robust Irish expansion of the 1990s. The median age in Ireland suffered from high unemployment, high dependency and the emigration of its youth. The reversal of these conditions were the foundation of the robust Irish expansion of the 1990s. The median age in Ireland is now approximately 30 years, easily the EU's lowest. The percentage of the population classified as dependent also is well below the EU average. Irish foresight in investment in its educational systems in previous years is now producing major dividends as an abundant skilled immigration, half of whom are Irish nationals, and increased female participation in the work force have also contributed to the three percent increase in labor growth during the last five years.

Due to heavy reliance on trade the Irish economy is particularly vulnerable to external shock from the United Kingdom (UK), United States (US) and remainder of the euro-zone. The rebound of the European Union (EU) during the second half of 1999 and the projected "soft landing" of the US economy made well for Ireland.

Ireland projects a moderation of economic growth during the coming decade of approximately 5% annum. Labor growth is anticipated to decline to under 2% and wage growth will bring Irish labor costs to closer convergence with European competition. Continued high levels of investment are anticipated, particularly in needed public infrastructure, as the economy matures in the direction of the service sector. Arresting inflation, which persist at nearly 5% well into 2000, back within European Union standards is the immediate concern.

**Table 4.1 Macroeconomic Indicators of Ireland**

	1996	1997	1998	1999	2000
<b>GDP (millions of 1995 \$ US)</b>	51835	57402	63567	69008	76385
<b>Total Population (millions)</b>	3633	3669	3711	3754	3797
<b>GDP per capita (1995 \$ US)</b>	14269	15644	17130	18385	20116

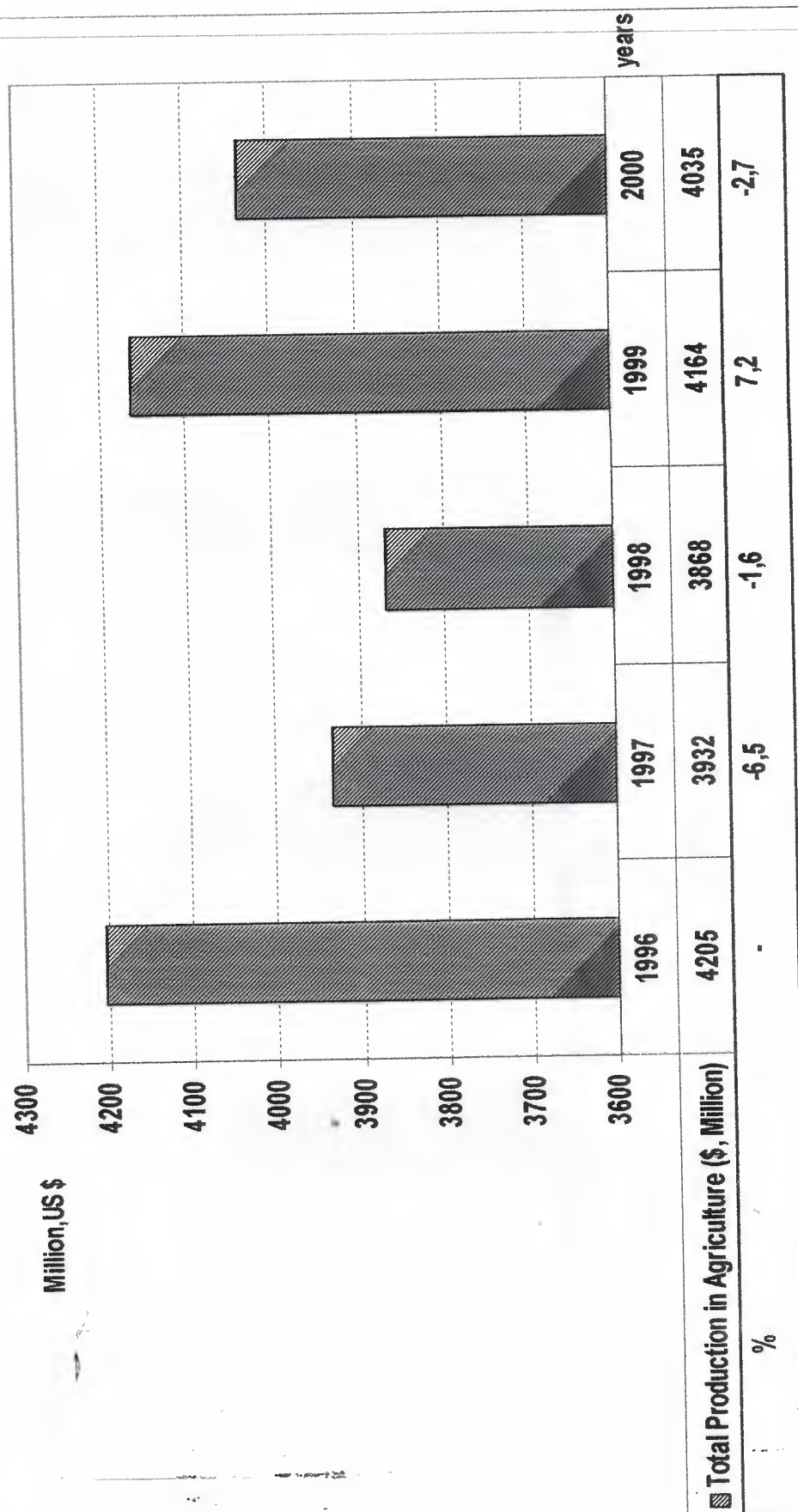
Source: <http://www.nso.gov.mt/>

As it can be seen from Table 4.1 Ireland has rapid growth of GDP. In 1996 GDP was 51,835 Millions\$ US and in 2000 this amount jump to 76,385. GDP per capita in Ireland also very high and have been increasing. Per capita GDP was 14,269 \$US in 1996 but in 2000 it increased to 20.116 \$US to the parallel with GDP. Total population in Ireland defends it's steadily growth.

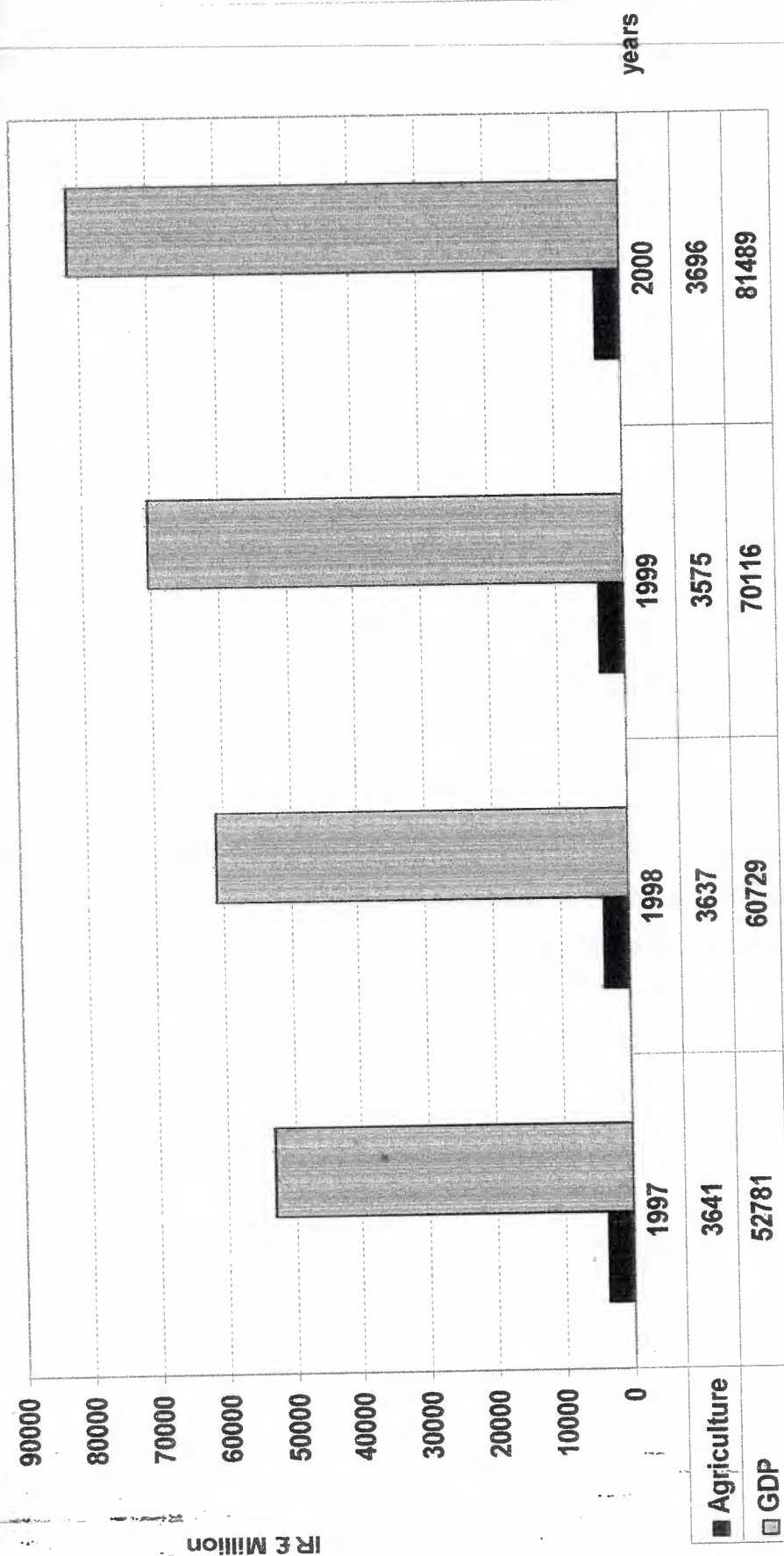
The agriculture sector in Ireland contributes average 5% of the GDP and employs an estimated 9.2% of labor, as stated in the GDP/Employment by sector of Origin table.

The primary food crops produced are barley, potatoes, sugar beets and wheat. The primary meat products are beef and veal, chicken, duck, horse, lamb, pork and turkey. Total value of agricultural exports in 1998 was \$ 6.625,1 Million, while the total value of agricultural imports in 1998 was \$3,285.7 Million

Graph 4.1 Total Production in Agriculture in Ireland

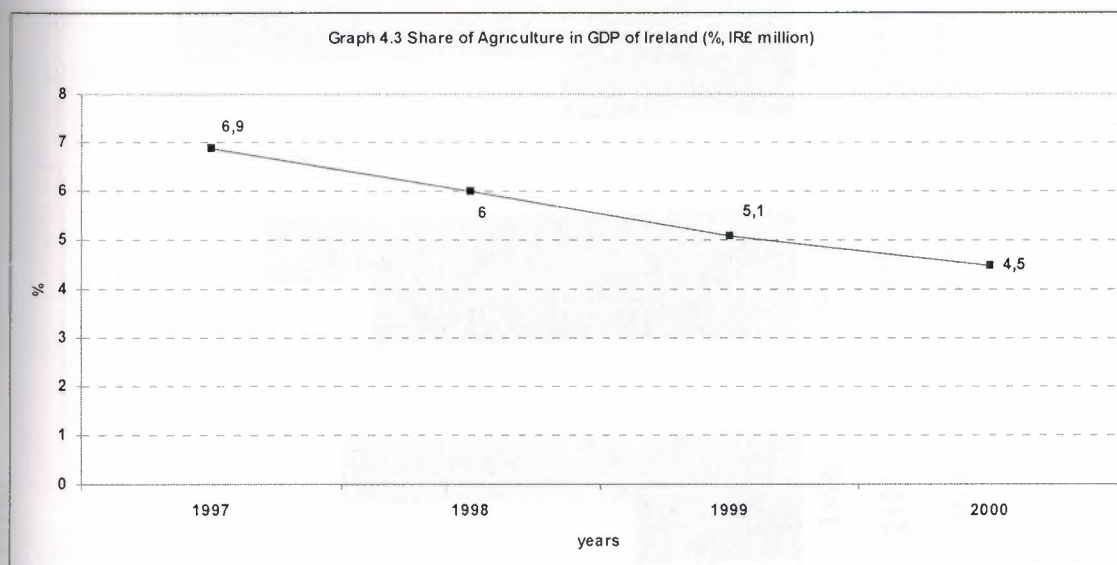
Source: <http://www.countrywatch.com>

Graph 4.2 Agriculture in GDP of Ireland



Source: <http://www.nso.gov.mt/>

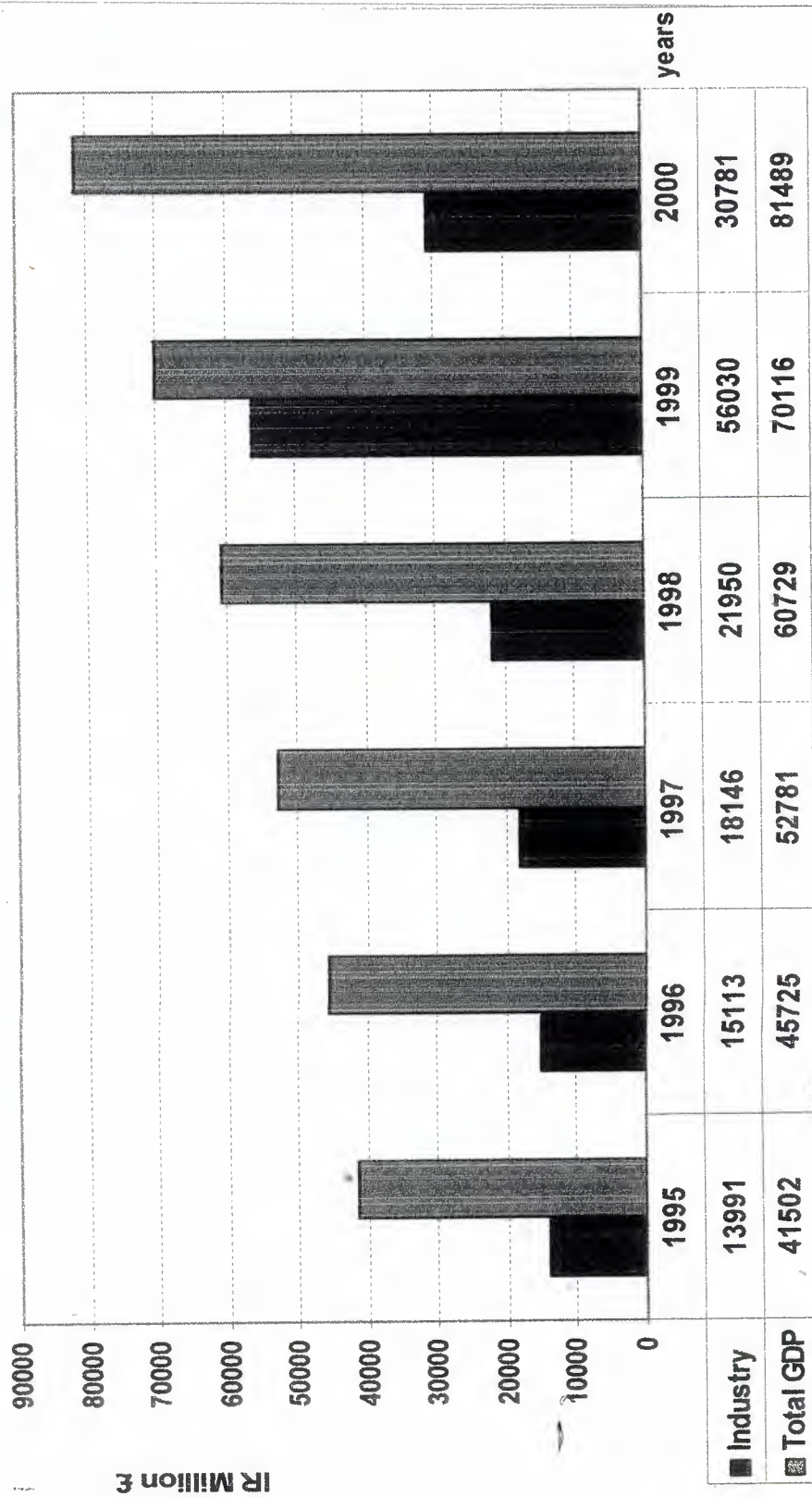
As it can be seen from Graph 4.1, agricultural growth rate has some descents and ascents from 1996 to 2000. In 1997 total production in agriculture was 4.205 \$Million, it decreased to 3.932 \$ Million in 1997 and this amount was 4.035 \$ Million in 2000.



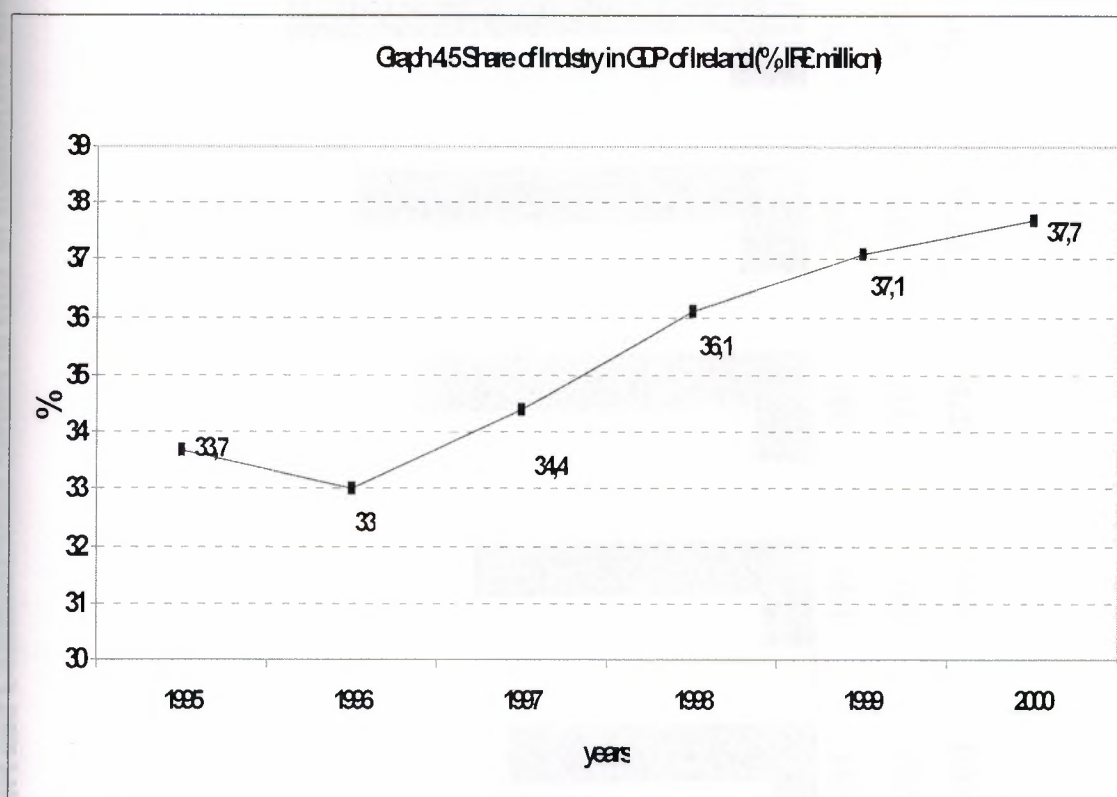
Source: <http://www.nso.gov.mt/>

As it can be seen from the Graph 4.2, agricultural value added seems to be stable during years. In 1997 total agricultural value added was 3641 IR £ million and in 2000 this amount was 3696 IR £ million. The percentage of agriculture in GDP was 6.9% in 1997. Share of agriculture in GDP has 6% of GDP, in 2000 share of agriculture in GDP was only 4.5%.

Graph 4.4 Industry in GDP of Irealnd

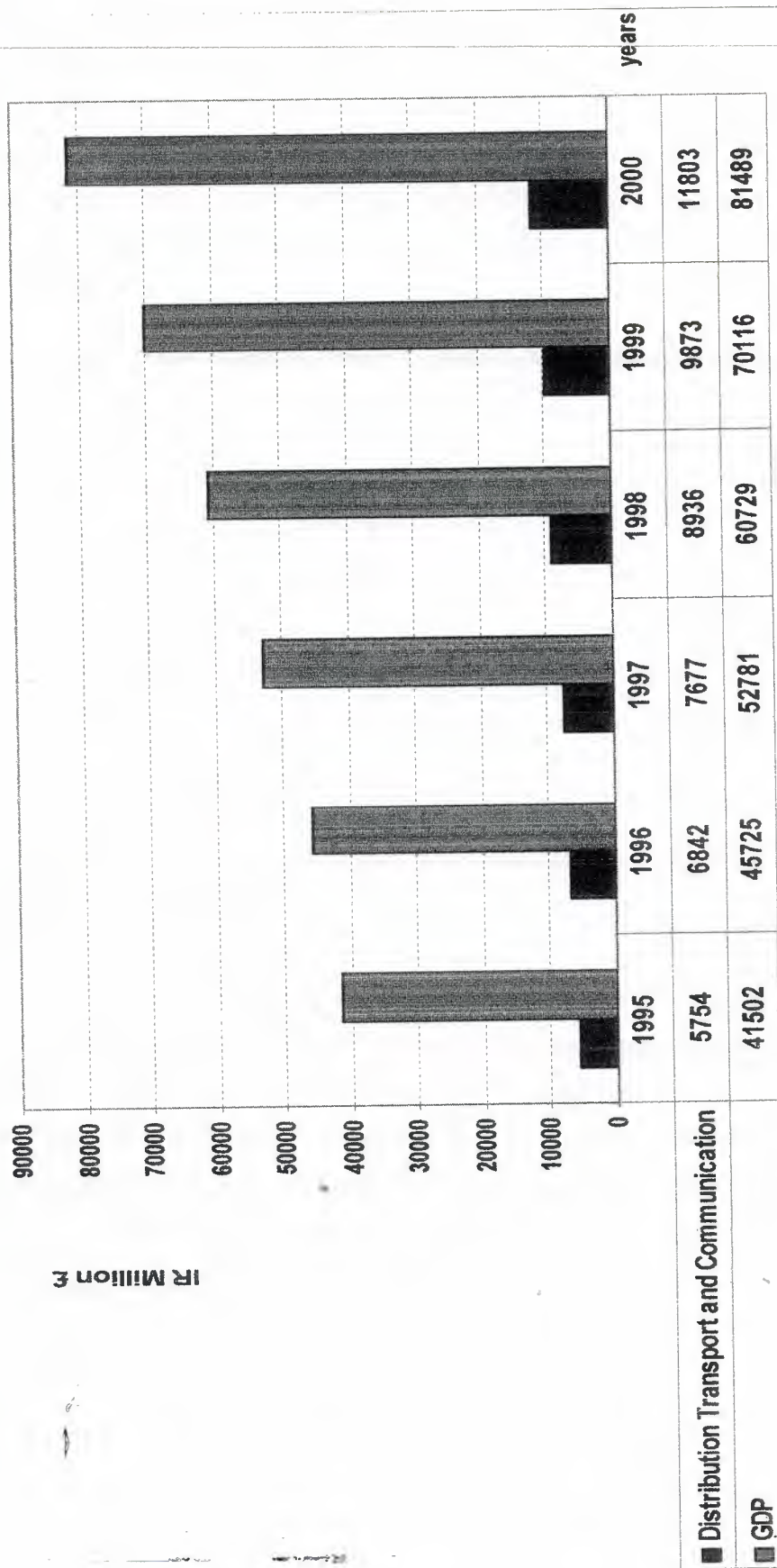
Source: <http://www.nso.gov.mt/>

As it can be seen from Graph 4.4 industry takes a very big portion of total GDP. In 1995 total value added of industry sector was 13.991 IR £ million, this amount increased to 18.146 IR £ million in 1997 and in 2000 jumped to 30.781 IR £ million. Industrial value added has rapid growth during the period 1995-2000. Also the share of industry in GDP has been increasing, in 1995 the percentage of industry in GDP was 33.7%, in 1998 36.1% and in 2000 this percentage increased to 37.7% of total GDP of Ireland. (See Graph 4.5 )



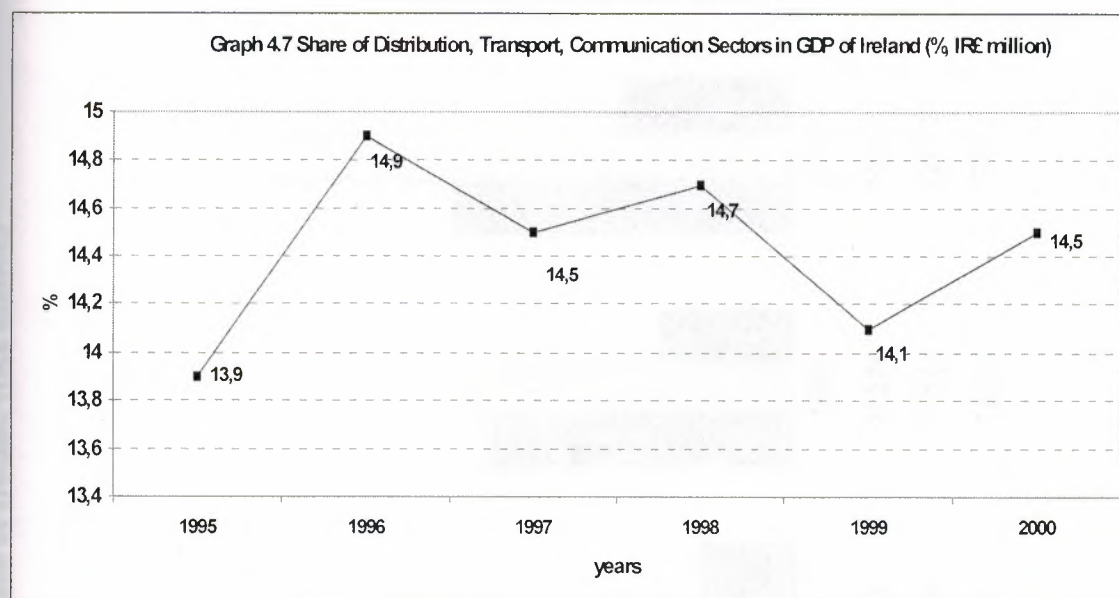
Source: <http://www.nso.gov.mt/>

Graph 4.6 Distribution, Transport and Communication Sectors in GDP of Irealnd(IR£ million)



Source: <http://www.nso.gov.mt/>

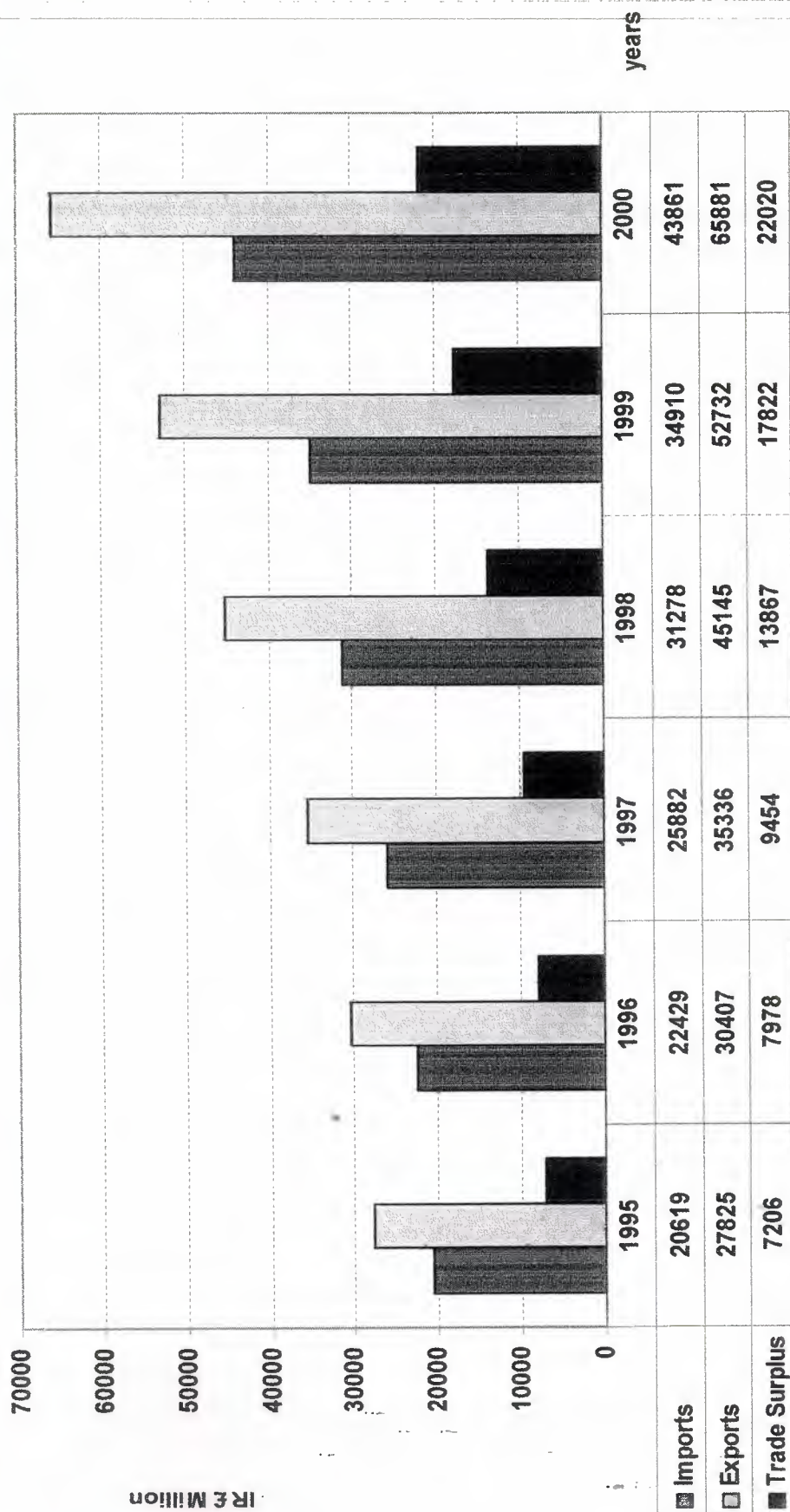
Distribution, Transport and Communication Sectors are the one of the main sectors of Ireland (see Graph 4.6 ). Total value added of these sectors has been increases. In 1995 the total value added of distribution, transport and communication was 5754 IR £ million, it increased to 8936 IR £ million in 1998 and jumped to 11.803 IR £ million in 2000. The share of distribution, transport and communication sectors in GDP increases. In 1998 the sector took 14.7% of GDP and in 2000 this portion was 14.5% of GDP.(see Graph 4.7 )



Source:<http://www.nso.gov.mt/>

Balance of trade of Ireland gave trade surplus between 1995 and 2000. During this period exports of country are greater than imports of country. This trade surplus has been increasing. In 1995, total imports of Ireland was 20.619 IR £ million, total exports was IR £ million and trade surplus was 7.206 IR £ million (see Graph 4.8). As it can be seen from Graph 4.4, in 1998 total increased to 31.278 IR £ million, total exports was 45.145 IR £ million and trade surplus 13.867 IR £ million. In 2000, they estimated that total imports will become 43.861 IR £ million, total exports will become 65.881 IR £ million. And trade surplus will increase to 22.020 IR £ million.

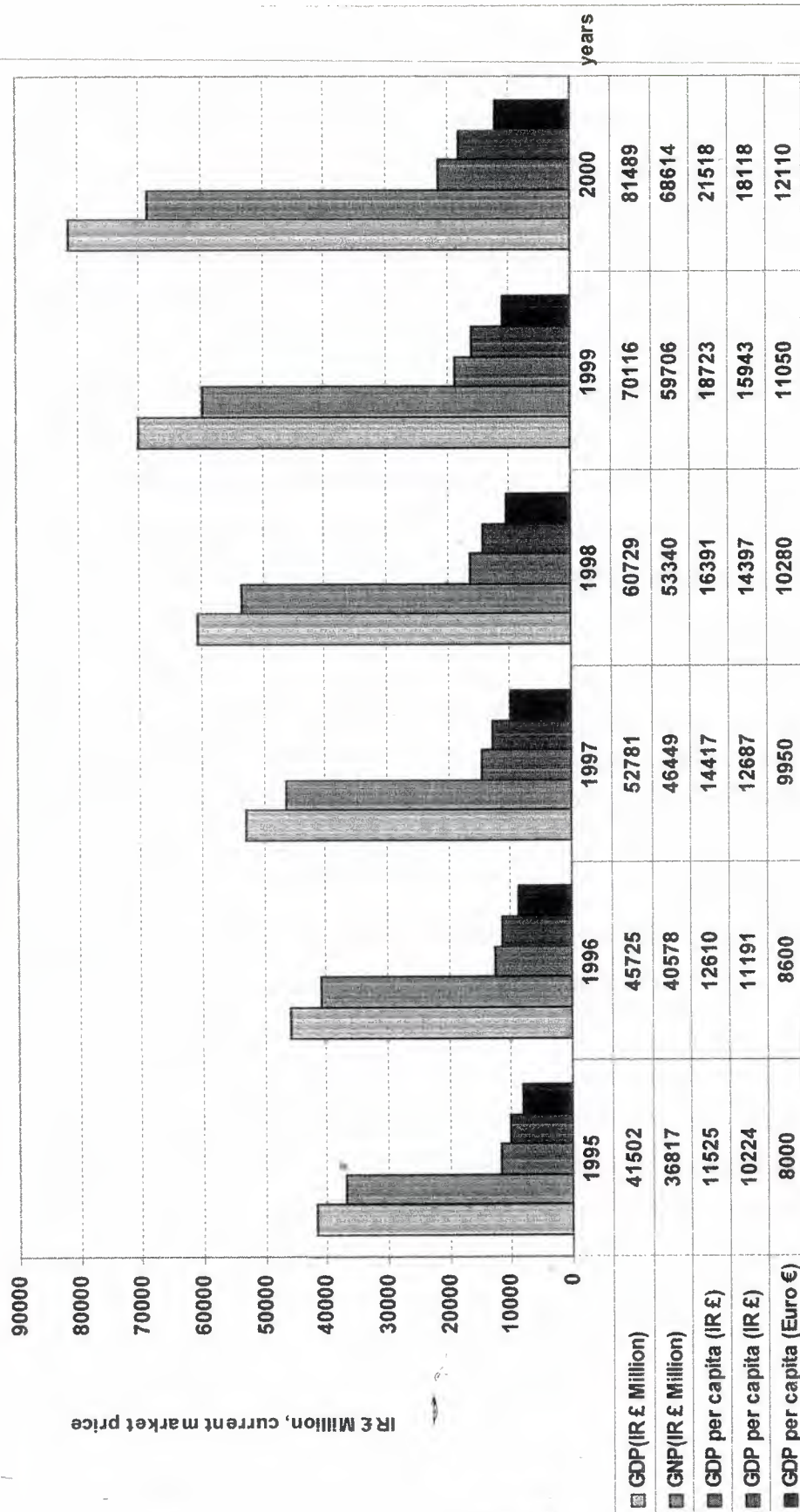
Graph 4.8 Balance of Trade in Ireland (IR£ million)

Source: <http://www.nso.gov.mt/>

Ireland is net energy importer. Oil is the largest single import with oil imports in 1998 estimated at nearly 148.000 barrels per day.

In terms of domestic resources Ireland's main potential is in offshore natural gas. Ireland is a major EU producer of zinc and important producer of alumina, lead and peat. Although the range of minerals explored in the country has been limited, exploration activity for new mineral resources continued to increase, mainly emphasizing gold, lead and zinc. The country's mineral processing industry was relatively small, as was the demand and consumption of mineral resources.

Graph 4.9 GNP and GDP of Ireland

Source: <http://www.nso.gov.mt/>

#### **4.2 Economic Analysis of Malta:**

Tourism and marine support services are the two key growth sectors of the tiny Maltese economy. As a first wave European Union accession candidate Malta's large budget deficit and high public that to GDP ratio are major concerns. The government is implementing privatization, pension reform and tax collection programs designed to alleviate macroeconomic balances in these two areas. Fiscal consolidation and structural reform are also recommended if Malta is to boost currently modest GDP growth rates.

Benefit of virtually all agricultural, mineral and energy resources, Malta relies upon as picturesque charm and historic appeal. Limestone is Malta's only mineral resources of any quantity while all energy inputs in the form of coal and petroleum, must be important. Agricultural potential is extremely limited due to population density and the poor quality of the soil. Potatoes are Malta's leading crop. External agricultural dependency and inadequate fresh water supplies are chronic problems.

The Malta had achieved high real GDP growth rates through 1996 supported by robust capital formation, which averaged approximately 30% of GDP per annum. Receding capital formation growth and soft domestic demand led to significant reductions in GDP growth in subsequent years.

The agriculture sector in Malta contributes 3% of the GDP and employs an estimated 1.9% of labor, as stated in the GDP/Employment by sector of origin table.

The industrial sector (including manufacturing as well as the constructions, energy and mining sectors) in Malta contributes 61.0% of the GDP and is estimated to employ 70.2% of the labor force. The key sectors in Malta are tourism, electronics, shipbuilding and repair, construction, food and beverages, textiles, footwear, clothing and tobacco.

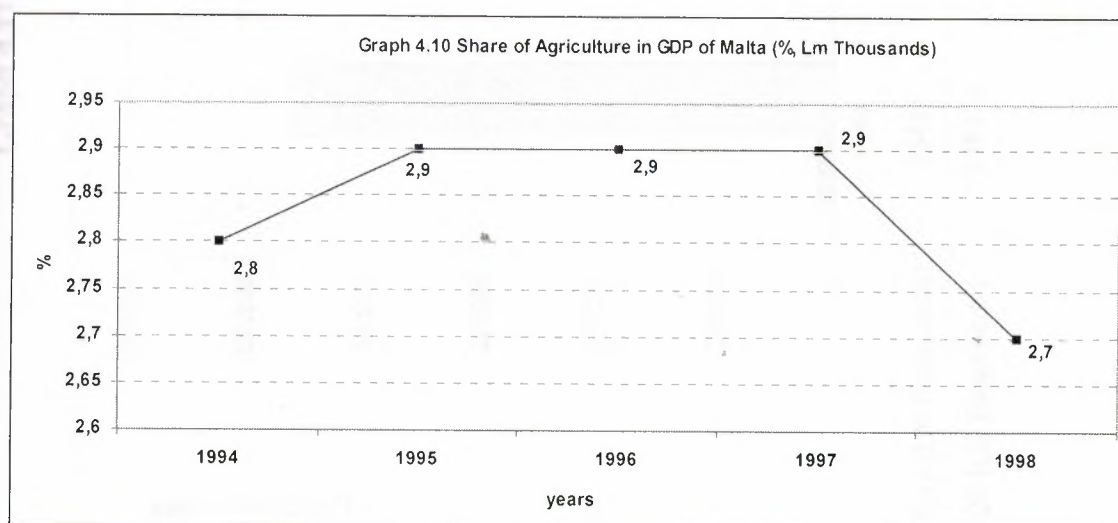
**Table 4.2 GDP and GDP per capita of Malta**

	1996	1997	1998	1999	2000
GDP(IR £ Million)	4612	4784	4963	5135	5297
GDP per capita (IR £)	12138	12494	12862	13208	13528

Source: <http://www.countrywatch.com/malta>

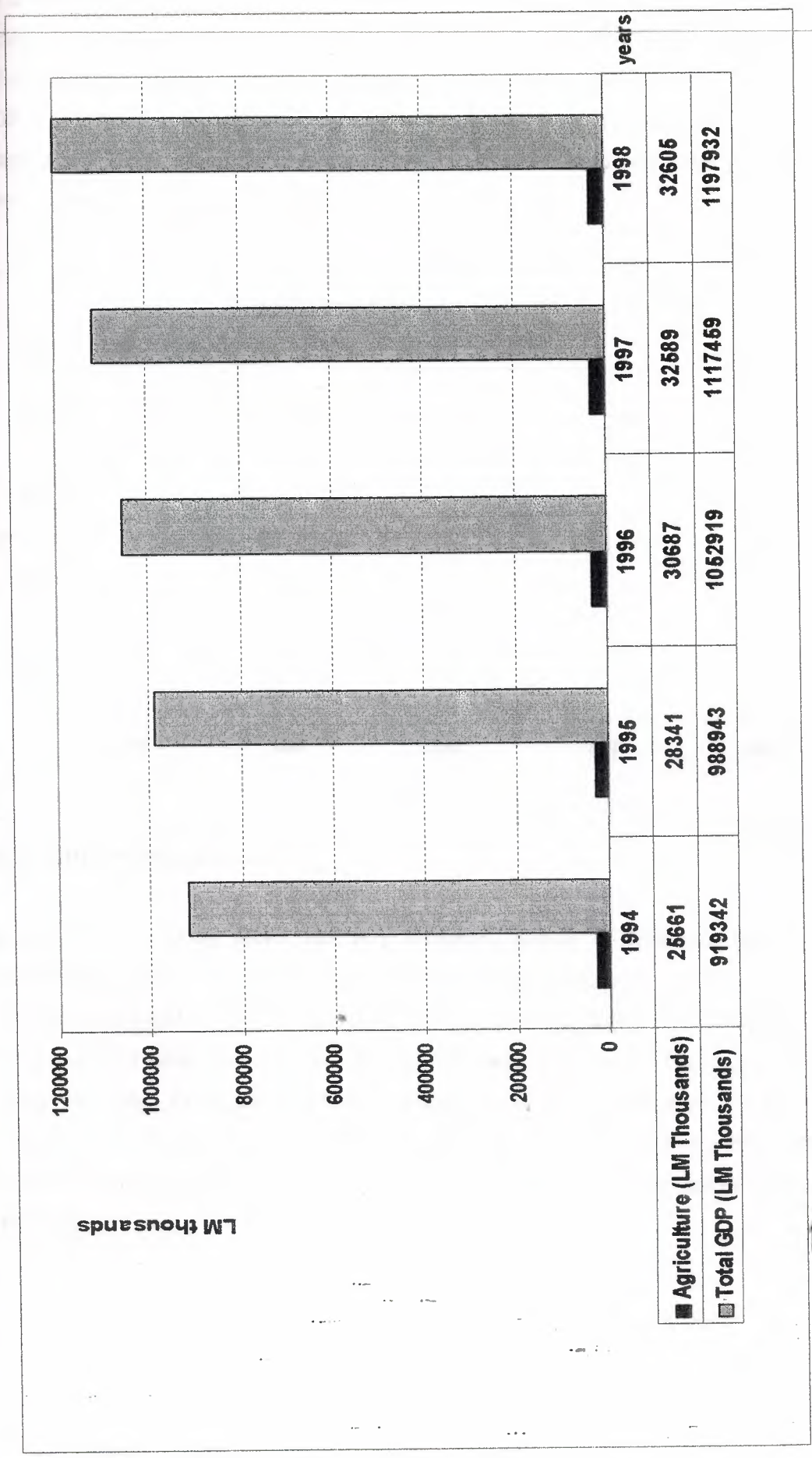
As it can be seen from Table 4.2 GDP of Malta has been increasing steadily. In 1996 GDP of Malta was 4.612 Million \$ (1995 prices) but in 1999 it increased to 5.135 Million \$ (1995 prices) and in 2000 it increased to 5.297 Million \$ (1995 prices). According to Table-20, GDP per capita also has been increases in Malta. In 1996 GDP per capita was 12.138 Million \$ (1995 prices) and in 2000 it increases to 13.528 Million \$ (1995 prices).

Agriculture sector takes only little amount of Gross Domestic Products of Malta (see Graph 4.11). In 1994 total agricultural value added in GDP was 25.661 Lm (thousands), it increases to 30.687 Lm (thousands) in 1996, and it becomes 35.605 Lm (thousands) in 1998. Share of agriculture in GDP was followed approximately same percentages. In 1994 the percentage of agriculture in GDP was 2.8%, in 1995 it increased to 2.9% and in 1997 it decreased to 2.7%.(see Graph 4.10)



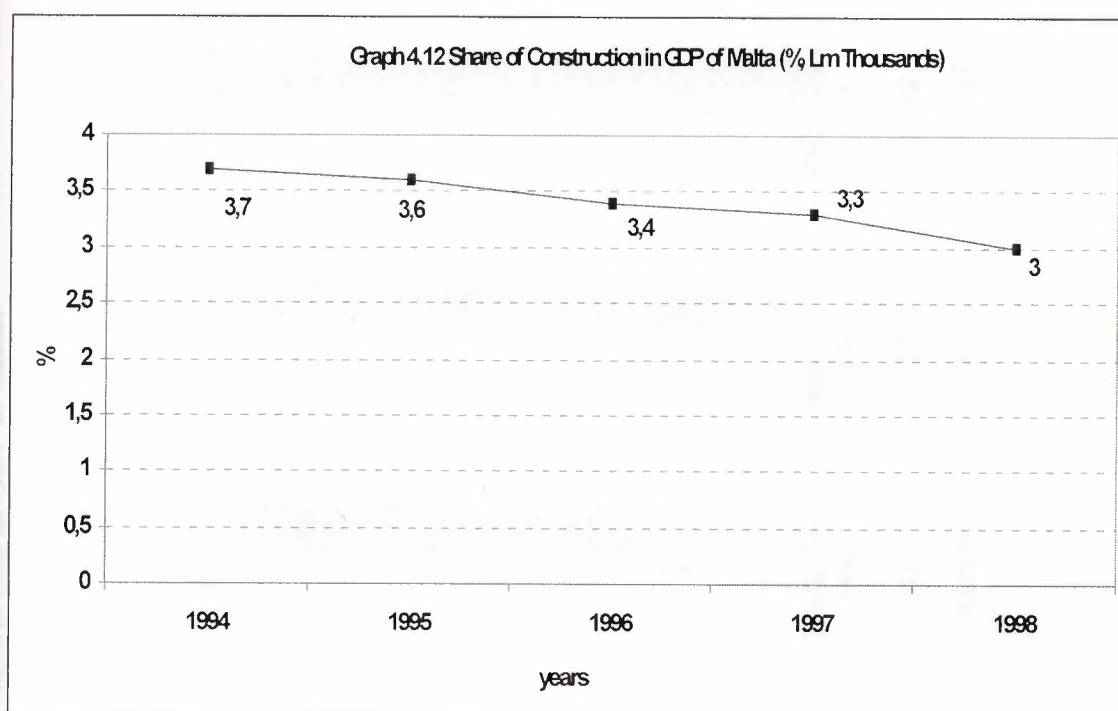
Source: <http://www.nso.gov.mt/>

Graph 4.11 Agriculture in GDP of Malta



Source: <http://www.nso.gov.mt/>

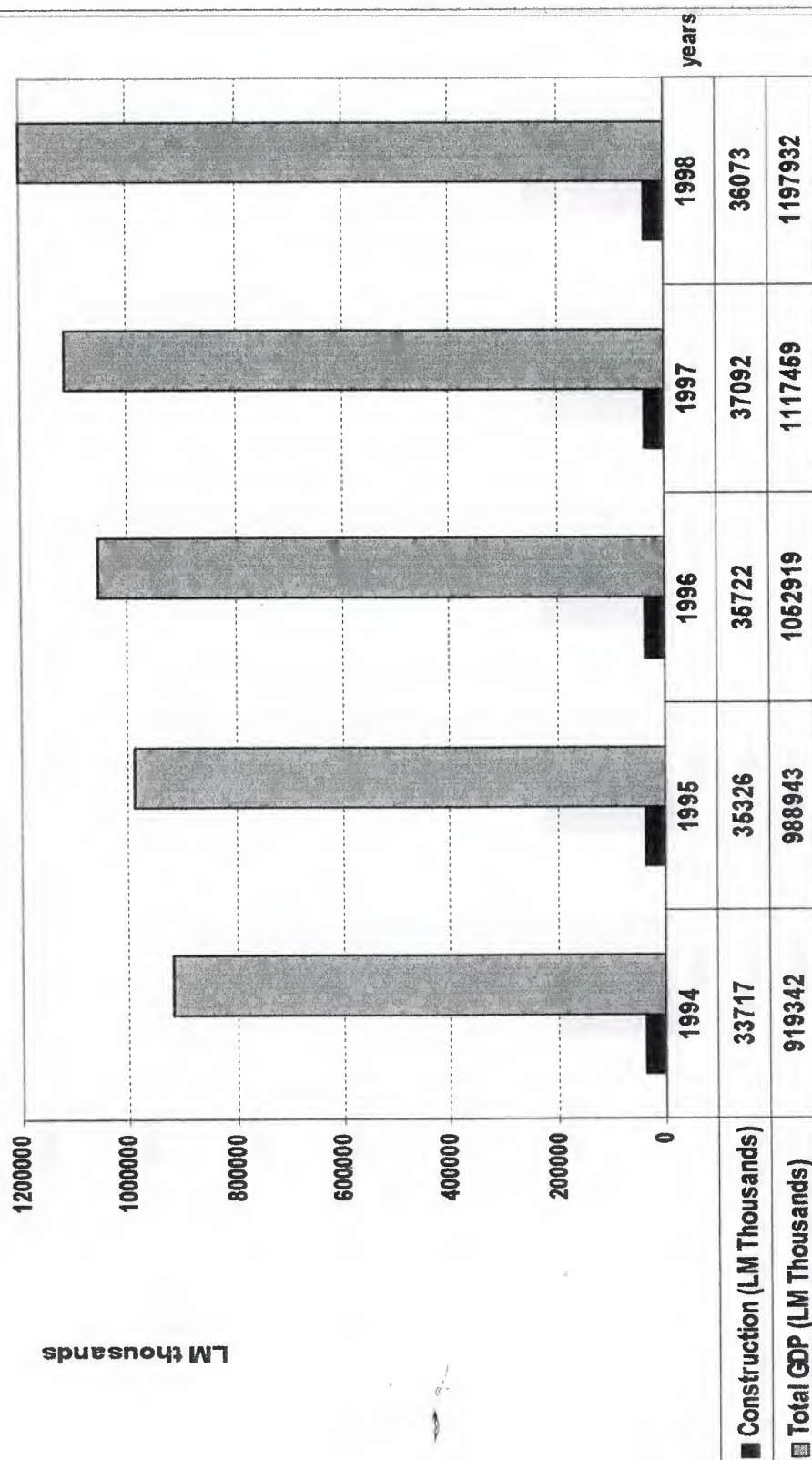
As it can be seen from Graph 4.13, construction sector created 33.717 Lm (thousands) value added in 1994. Construction sector increased within period of 1994-1998. In 1998 the total value added in GDP was 36.073 Lm (thousands). The percentage of construction sector in GDP was 3.7% in 1994, 3.6% in 1995, 3.4% in 1996, 3.3% in 1997 and 3.0% in 1998.(see Graph 4.12) Total value added of construction sector increased while the percentage of construction sector decreased in GDP.



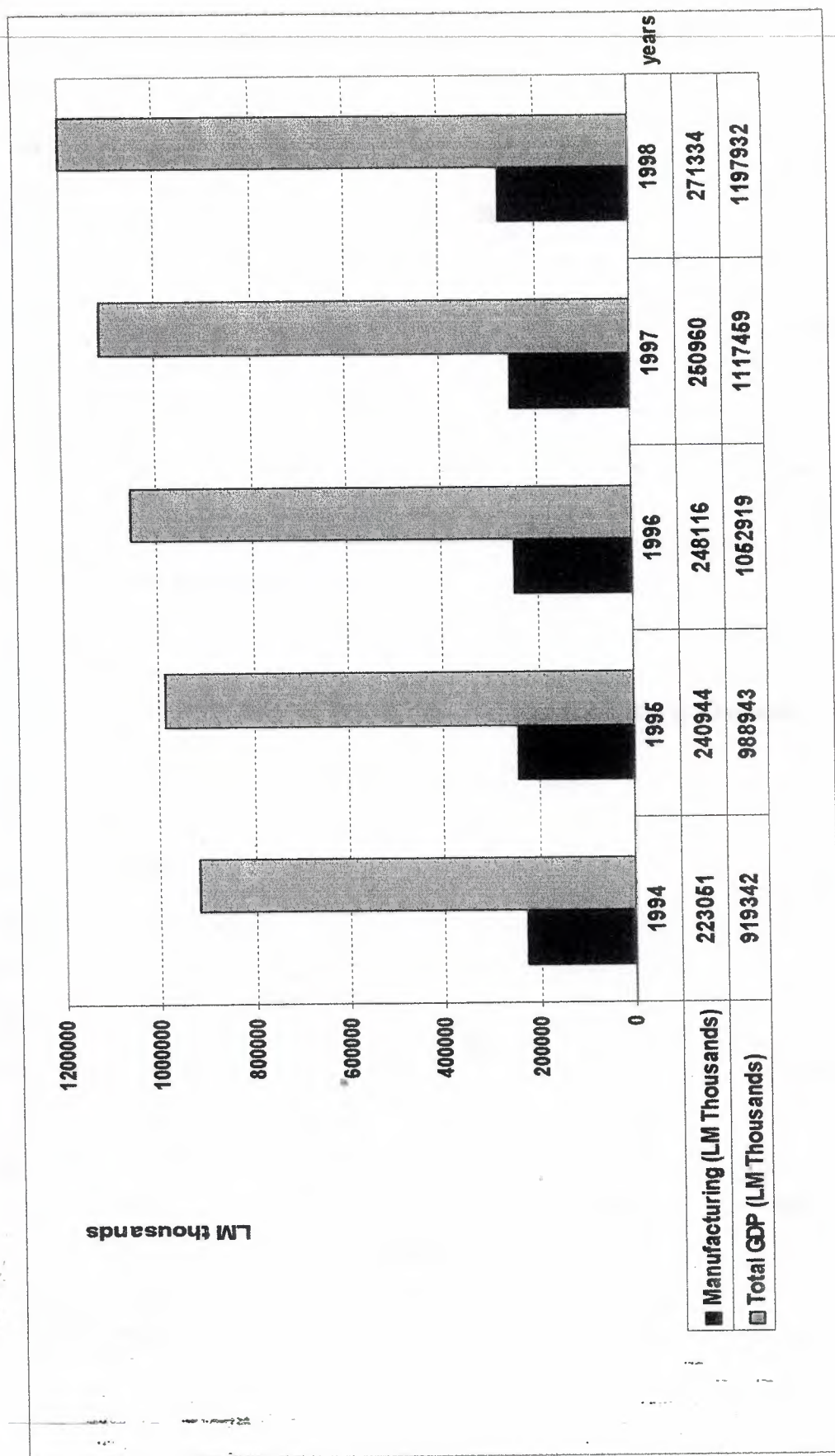
Source: <http://www.nso.gov.mt/>

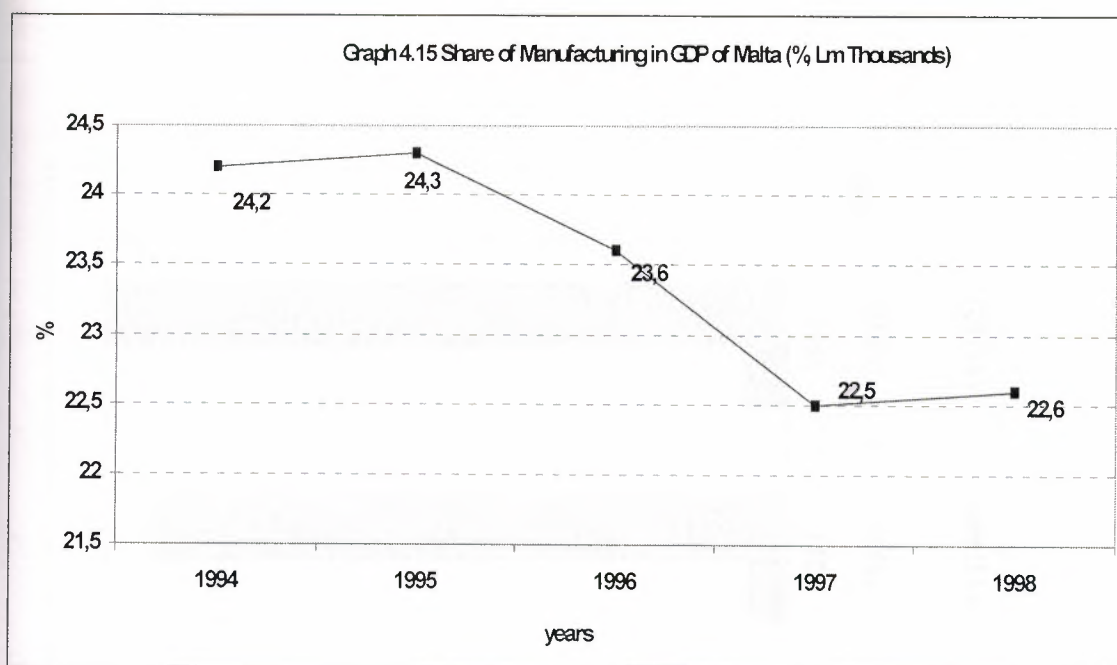
And also, manufacturing sector has very important portion of GDP.(see Graph 4.14) Manufacturing sector, which includes ship building and repairing, is the key sector of Malta. In 1994 this sector had 223.051 Lm (thousands). Each year from 1994 to 1998, manufacturing sector increased its value added to GDP. In 1996 this sector had 248.116 Lm (thousands) and in 1998 the total value added of manufacturing sector to GDP was 271.334. The manufacturing sector had 24.2% of GDP in 1994, there were little decreases until 1998. In 1996 manufacturing sector had 23.6% of GDP and in 1998 this ratio decreased to 22.6%.(See Graph 4.15)

Graph 4.13 Construction in GDP of Malta

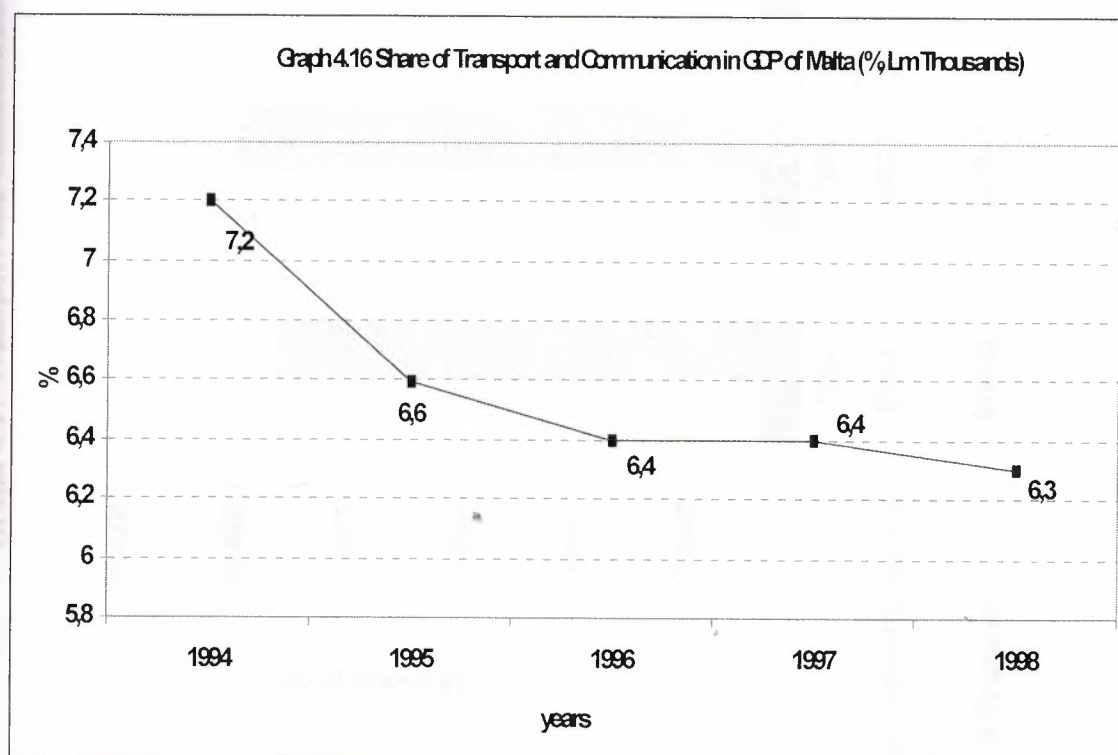
Source: <http://www.nso.gov.mt/>

Graph 4.14 Manufacturing in GDP of Malta

Source: <http://www.nso.gov.mt/>

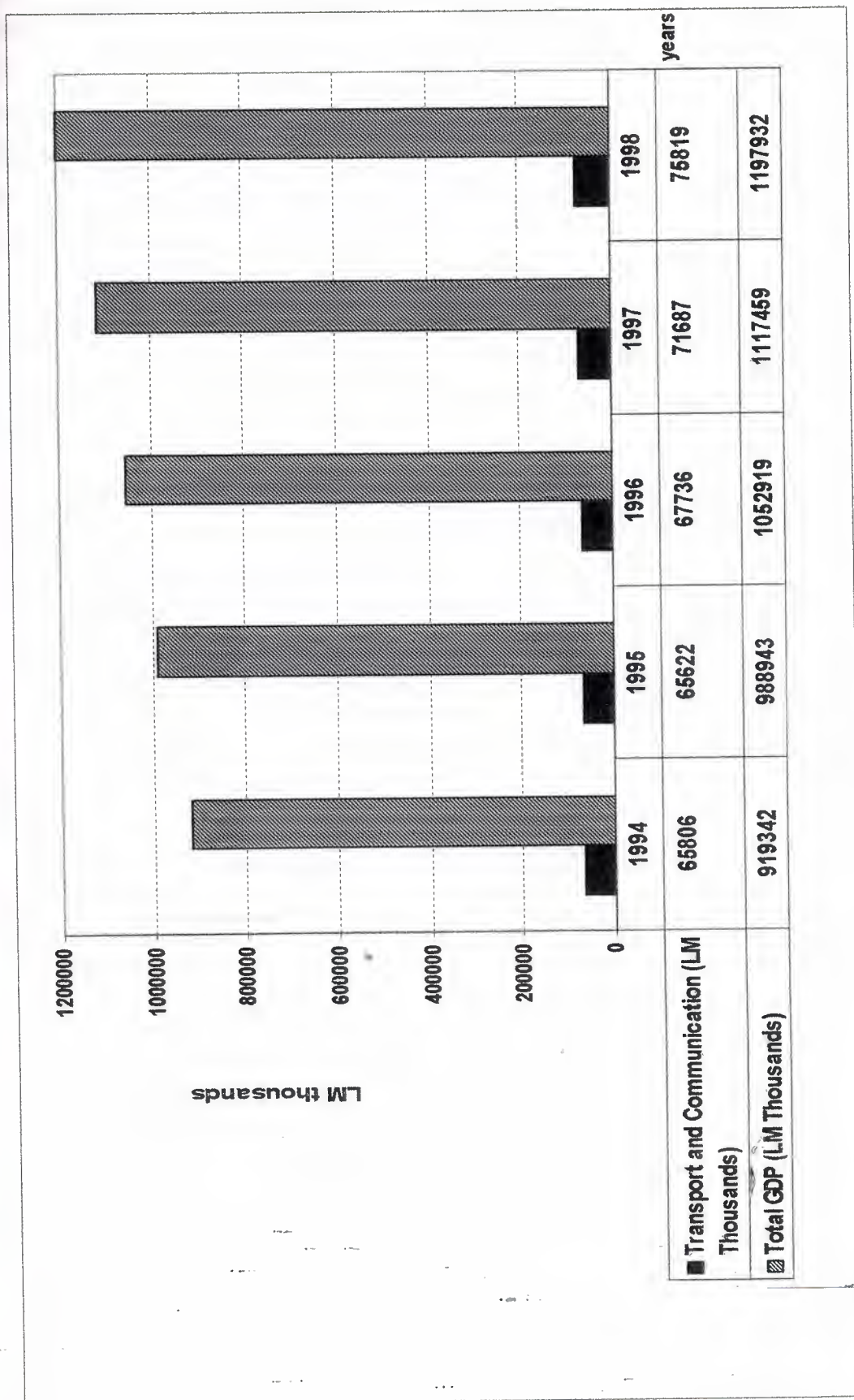


Source: <http://www.nso.gov.mt/>



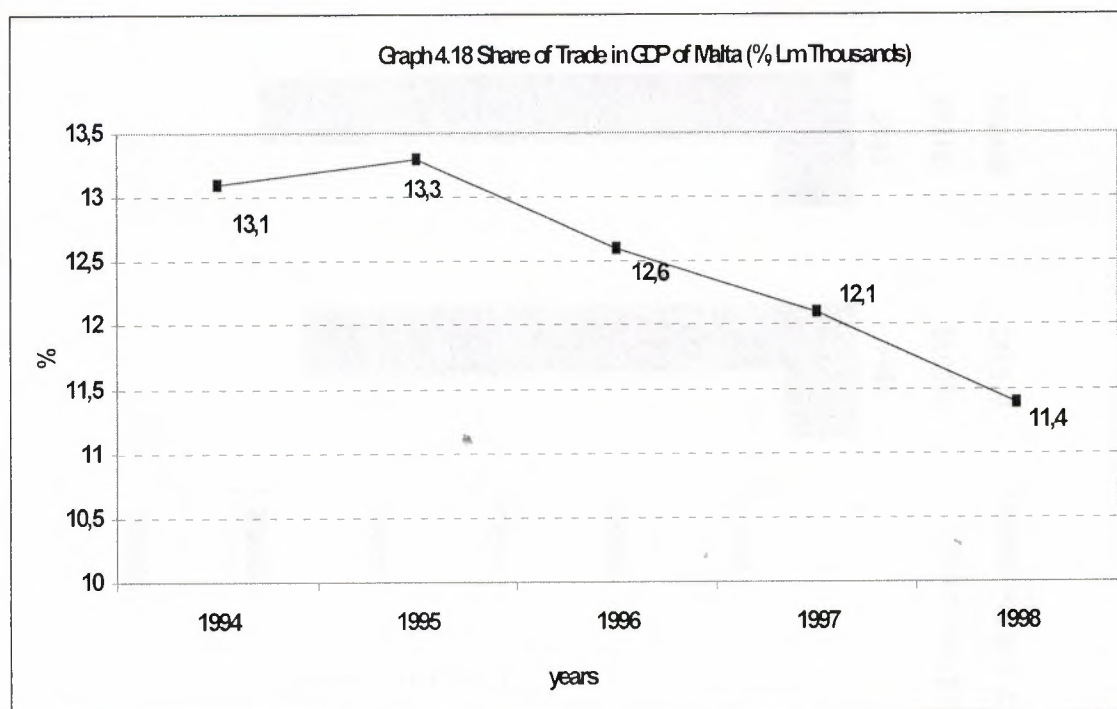
Source: <http://www.nso.gov.mt/>

Graph 4.17 Transport and Communication in GDP of Malta

Source: <http://www.nso.gov.mt/>

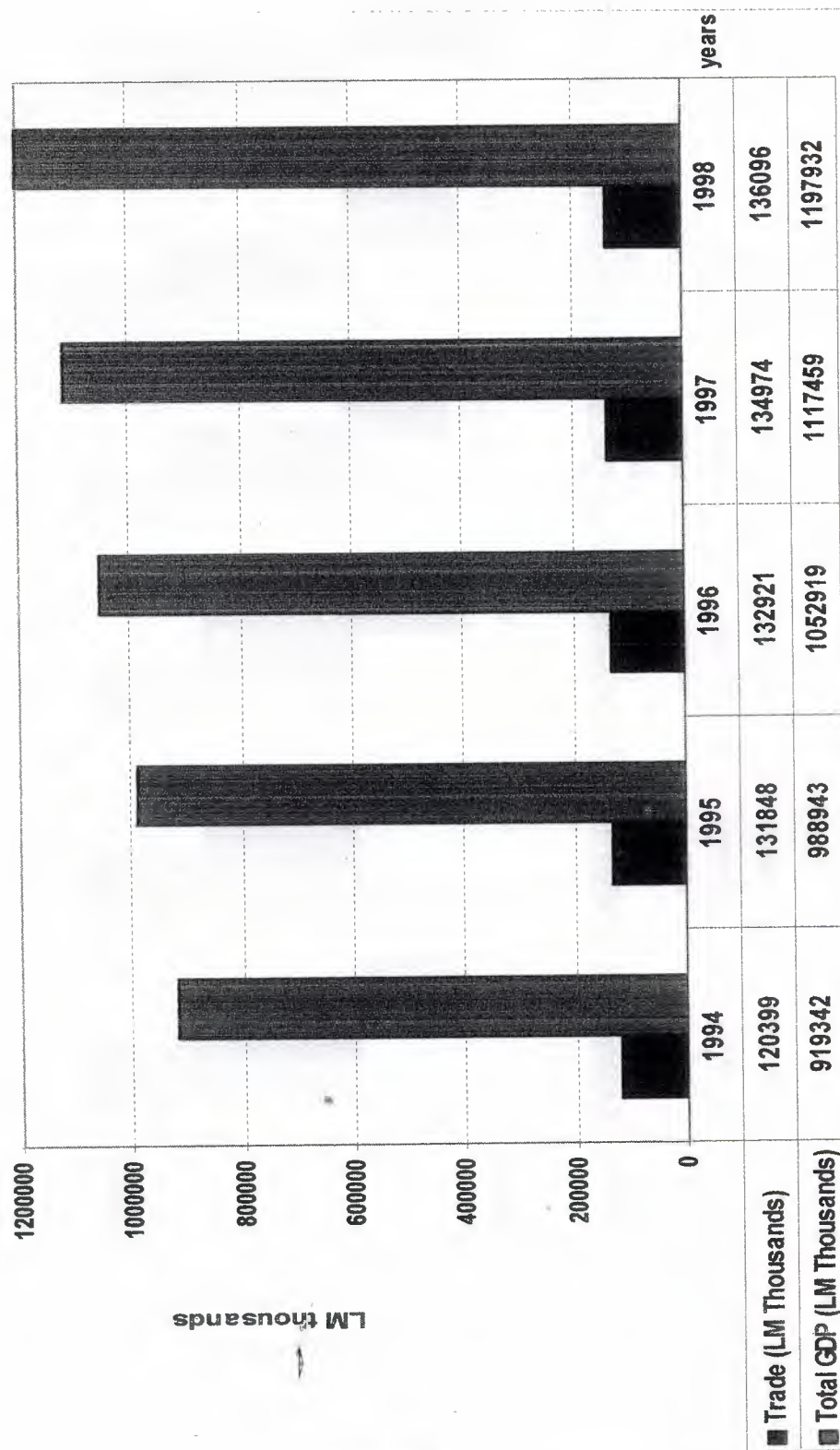
As it can be seen from Graph 4.17 Transport & Communication Sector had 65.806 Lm (thousands) value added to GDP in 1994. Total value added of transport and communication sector had been increased between the periods of 1994-1998. In 1996, total value added of transport and communication was 67.736 Lm (thousands) and it increased to 75.819 Lm (thousands) in 1998. Opposite of the total value added of transport and communication sector to GDP, the percentage of this sector in GDP had been decreased between the years 1994 to 1998. In 1994, transport and communication sector had 7.2% of GDP, but in 1996 this share had been decreased to 6.4% and in 1998 it had again little decreased that 6.3% of GDP. (See Graph 4.16)

Trade sector is the one of the main sectors of Malta. As we can see from Graph 4.19, the total value added of trade sector to GDP was 120.399 Lm (thousands) in 1994. This sector saved its increased value added to GDP while the percentage falls. In 1996, total value added of trade sector to GDP increased to 132.921 Lm (thousands) but the percentage of trade in GDP was decreased from 13.1% to 12.6%. In 1998 total amount of trade sector was 136.096 Lm (thousands) and the percentage of trade sector in GDP was 11.4%. (see Graph 4.18)

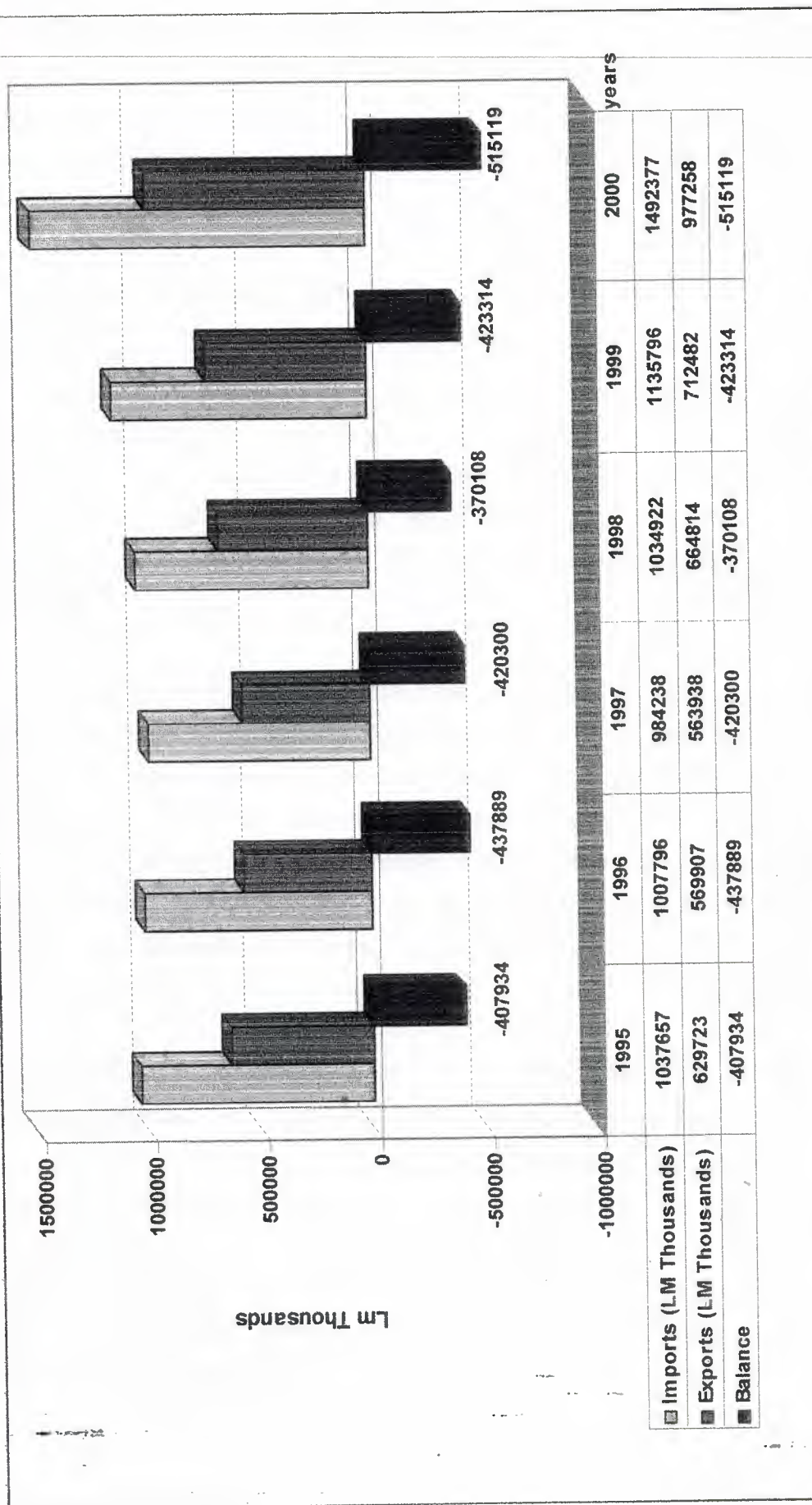


Source: <http://www.nso.gov.mt/>

Graph 4.19 Trade in GDP of Malta

Source: <http://www.nso.gov.mt/>

Graph 4.20 Foreign Trade Balance of Malta

Source: <http://www.nso.gov.mt/>

As it can be seen from Graph 4.20 total imports of Malta was 1.037.657 Lm (thousands) in 1995 and 1.492.377 Lm (thousands) in 2000. Total exports of Malta were 629.723 Lm (thousands) in 1995 and it had increased to 977.258 Lm (thousands) in 2000. Trade balance deficit of Malta was 407.934 in 1995; it had decreased to 370.108 in 1998 and again increased to 515.119 Lm (thousands) in 2000.

### **4.3 Economic Analysis of South Cyprus**

Vulnerability of external shocks is, however inherent in an economy which derives more than 20% of its value added from a potentially volatile tourism sector. Tourism will remain the primary engine of the economy. This will be challenged to maintain four to five percent real GDP growth in the absence, falling below 18% in 1998. Unemployment in South Cyprus has been very stable at under four percent for recent years and falling further to 3.3% at the close to 2000.

Wealth effects from the South Cyprus Stock Exchange (SCSE)'s outstanding 1999 performance, disappointing fiscal discipline and the impact of value added tax (VAT) harmonization with the European Union have combined to apply considerable pressure to what had been a very low inflationary environment. Government expenditure growth continues to keep pace with revenue increases, despite International Monetary Fund (IMF) admonitions, resulting in a continuing erosion of the government debt to GDP ratio, rising to almost 62% last year, above the Maastricht standard of 60% likewise last year fiscal deficit of almost 4% does not meet EU standards.

The primary food crops produced are bananas, barley, potatoes and wheat. The primary meat produced are beef and veal, chicken, duck, game, lamb, pork, rabbit and turkey. The largest agricultural exports in 1998 was \$535.5 million, while the total value of agricultural imports in 1998 was 752.5 million\$.

S.Cyprus is a net energy importer. The main import is oil. In 1998 Cyprus imported an estimated 45.000 bpd of oil, installed electric capacity was 699 mw. The principal source of electric power is thermal-plants.

Copper is one major mineral resource in South Cyprus and in 1996 production resumed and totaled about 1.700 metric tons. In 1997 that figure increased to an estimated 6.000 metric tons.

As the case for many of the countries of the Mediterranean region, South Cyprus suffers from coastal degradation, a problem exacerbated by intensive industrial and agricultural activities, as well as by urbanization and tourism. Other environmental challenges facing South Cyprus include urban and industrial waste and pollution.

There are no natural reservoir areas; there is seasonal disparity in rainfall and also sea water intrusion of the island's larger aquifer, so South Cyprus has water resource problems.

**Table 4.3 GDP, GNP, GNP per capita in South Cyprus**

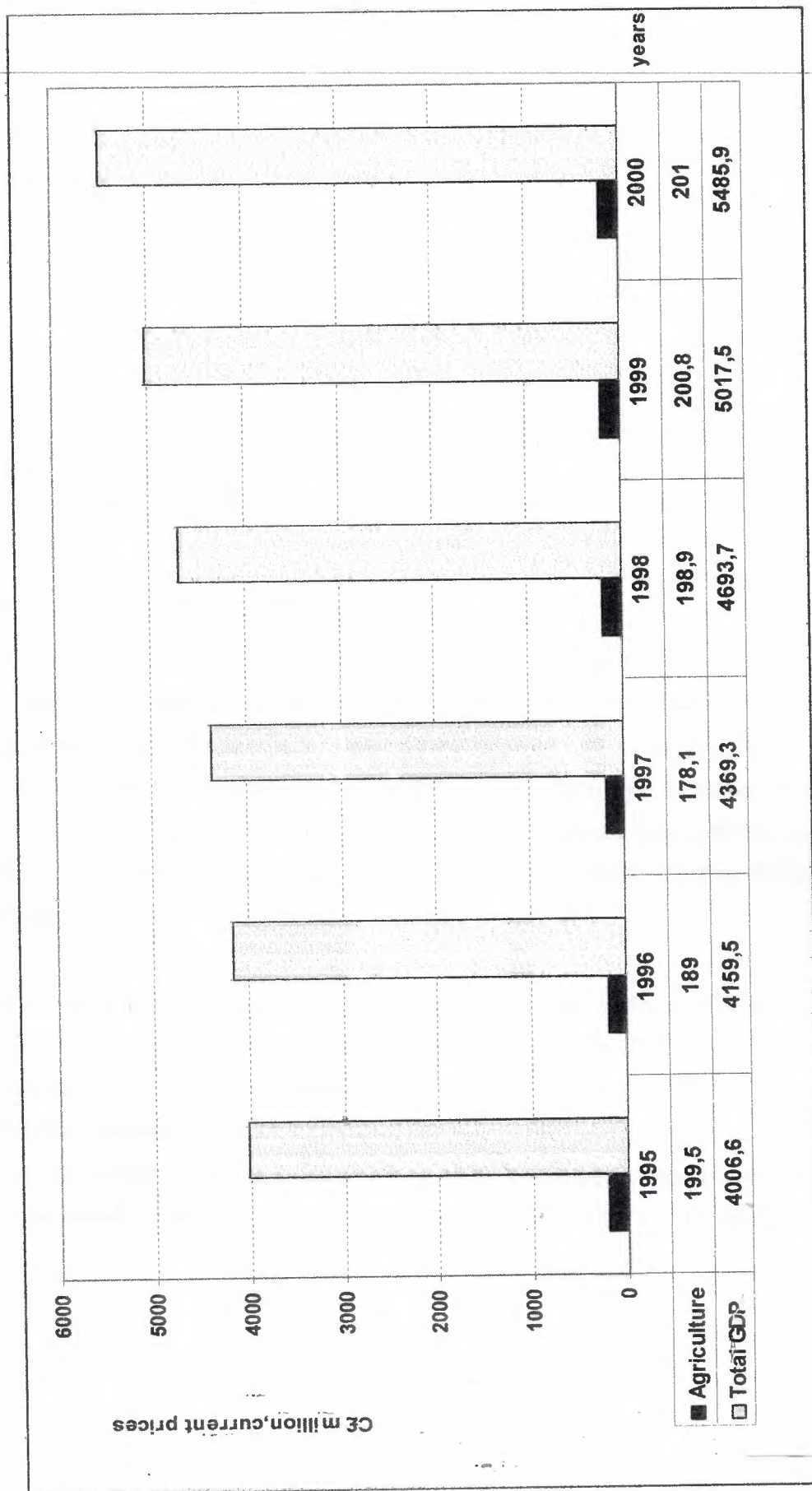
	1995	1996	1997	1998	1999	2000*
GDP (C £ Million, Current Market Prices)	4006.6	4159.5	4369.3	4693.7	1057.5	5485.9
GNP(C £ Million, Current Market Prices)	4050.4	4185.4	4407.5	4716	5035.1	5514.9
GNP per Capita(C £)	6312	6458	6734	7141	7574	8242

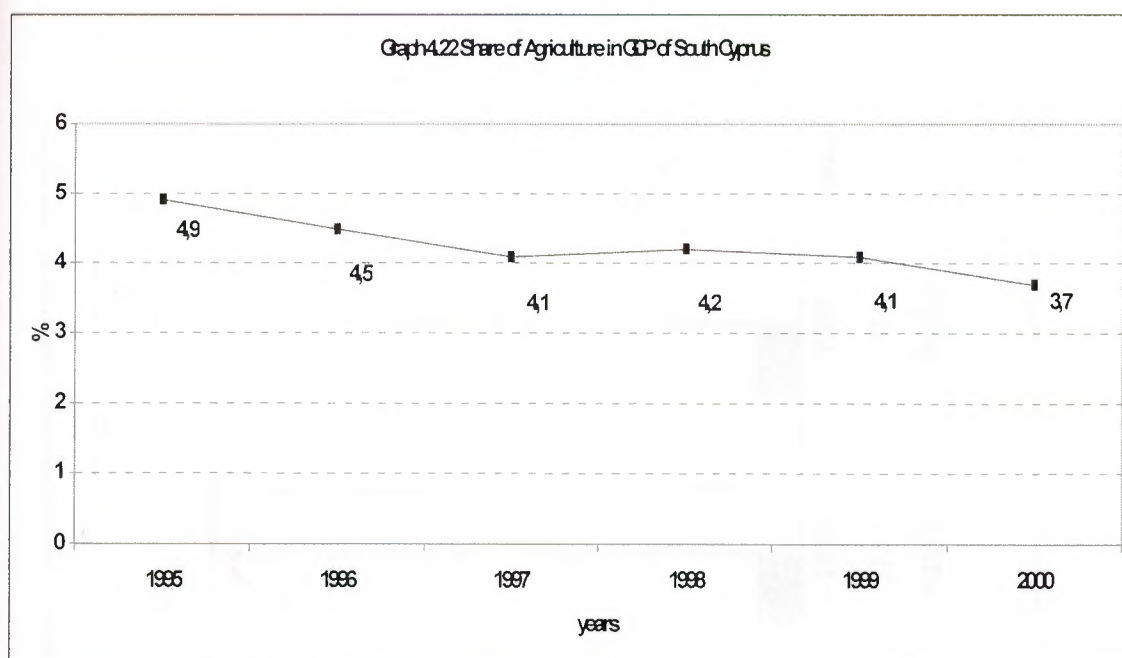
Source: <http://www.nso.gov.mt/>

As it can be seen from Table 4.3 gross domestic product of South Cyprus has been increases. In 1995 GDP was 4.006,6 C£ million and it expected increase to 5.485,9 C£ million in 2000. GNP per capita in 1995 was 6312 C£, in 1997 was 6734 C£ and in 2000 it expected 8242 C£. It protects its increase amount of per capita GNP.

As it can be seen from Graph 4.21 agriculture sector loses its value added to GDP. In 1995 total value added of agriculture sector was 199.5 C£ million, it decreased to 178.1 C£ million in 1997 and increased to 203.8 C£ million in 1999. Total value added of agriculture sector was expected to be 201.0 C£ million in 2000. Share of agriculture sector in GDP was 4.9% in 1995; it decreased to 4.1% in 1997 and decreased to 4.1% in 1999. Estimated value added of agriculture sector in 2000 was lower than in 1999, so; percentage of agriculture had been expected 3.7% of GDP.(see Graph 4.22)

Graph 4.21 Agriculture in GDP of South Cyprus

Source: <http://www.nso.gov.mt/>

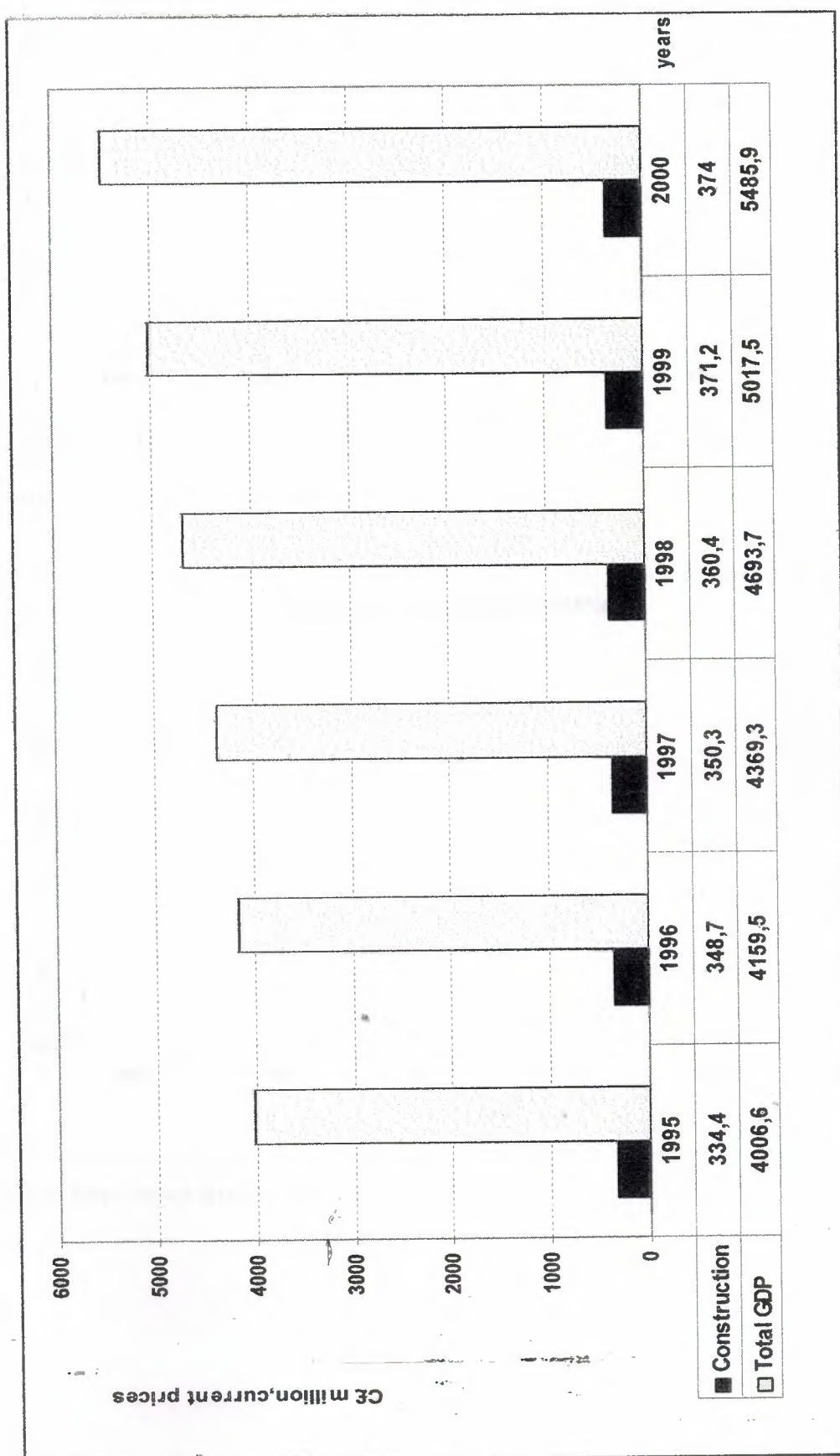


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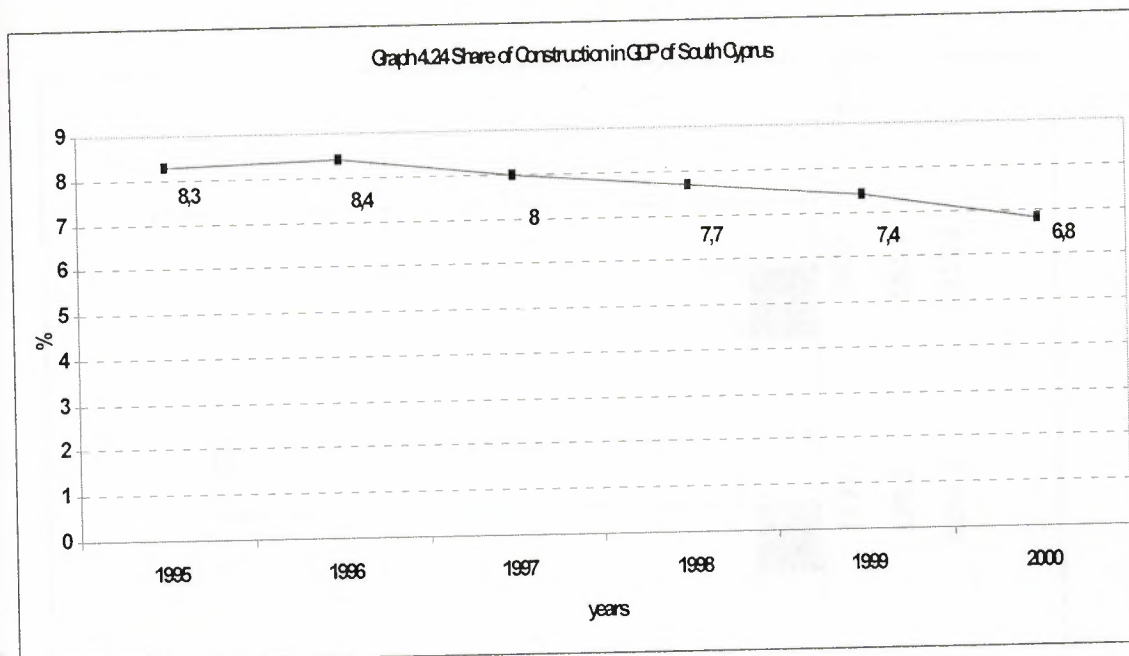
Construction sector lost its share in GDP within the period 1995-2000 (see Graph 4.23). In 1995, total value added of construction sector in GDP was 334.4 C£ million and in 1999 this amount was increased to 371.2 C£ million. Opposite of the total value added of construction sector, the share of construction sector in GDP had been decreased. From the year 1997 to 1998, total value added of construction sector to GDP increased from 350.8 C£ million to 360.4 C£ million but the percentage of construction sector in GDP was from 8.0% to 7.7%. (See Graph 4.24)

Manufacturing sector is the one of the main sectors of South Cyprus (see Graph 4.25). Total value added of manufacturing sector has been increasing. In 1995 total value added of manufacturing sector was 469.2 C£ million, in 1997 it increased to 491.6 C£ million and in 1999 it also increased to 526.8 C£ million. Total value added of manufacturing sector in GDP was 11.7% in 1995, 11.2% in 1997, 10.5% in 1999. Percentage of manufacturing sector in GDP has been decreased steadily between the period of 1995-2000. (see Graph 4.25)

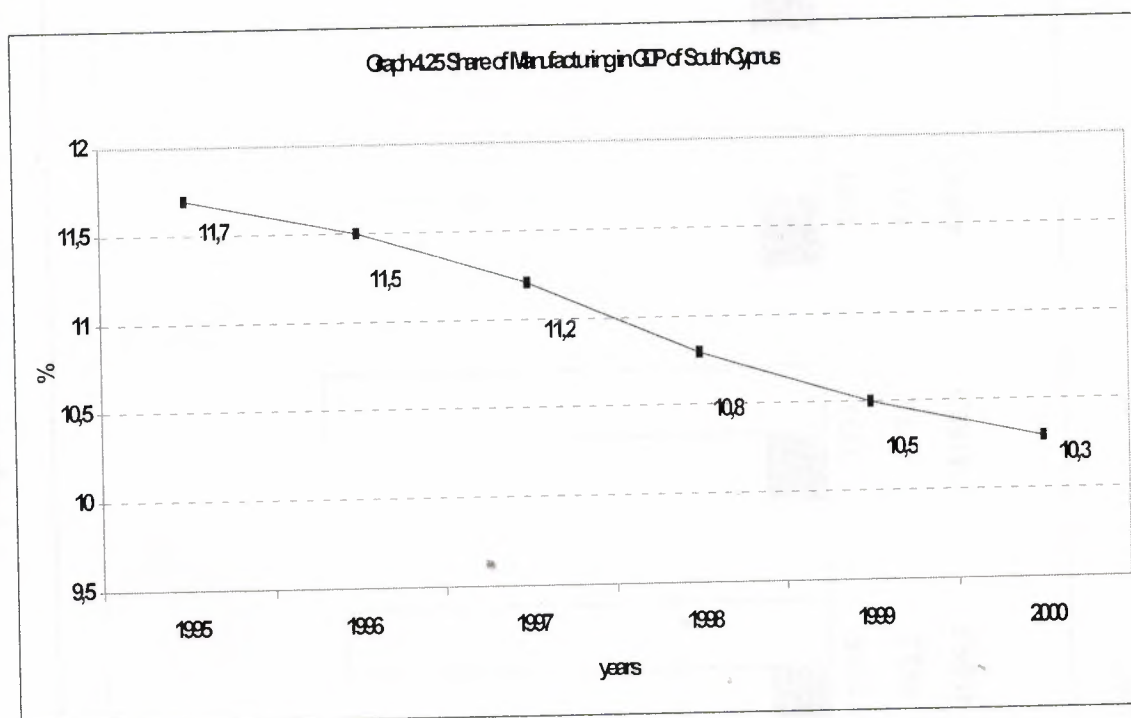
Graph 4.23 Construction in GDP of South Cyprus (C£ Million, current prices)



Source: <http://www.nso.gov.mt/>

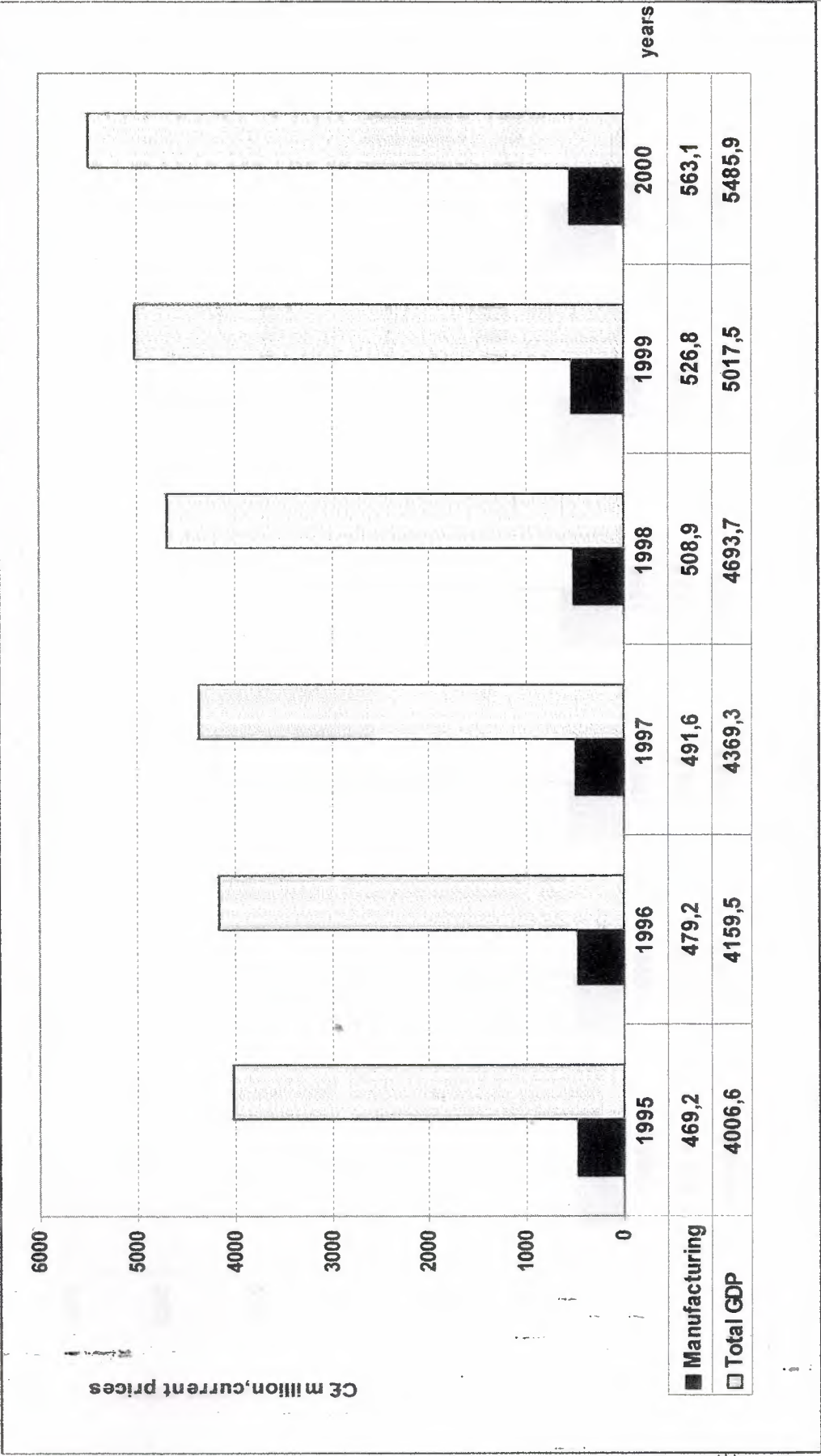


Source: <http://www.nso.gov.mt/>



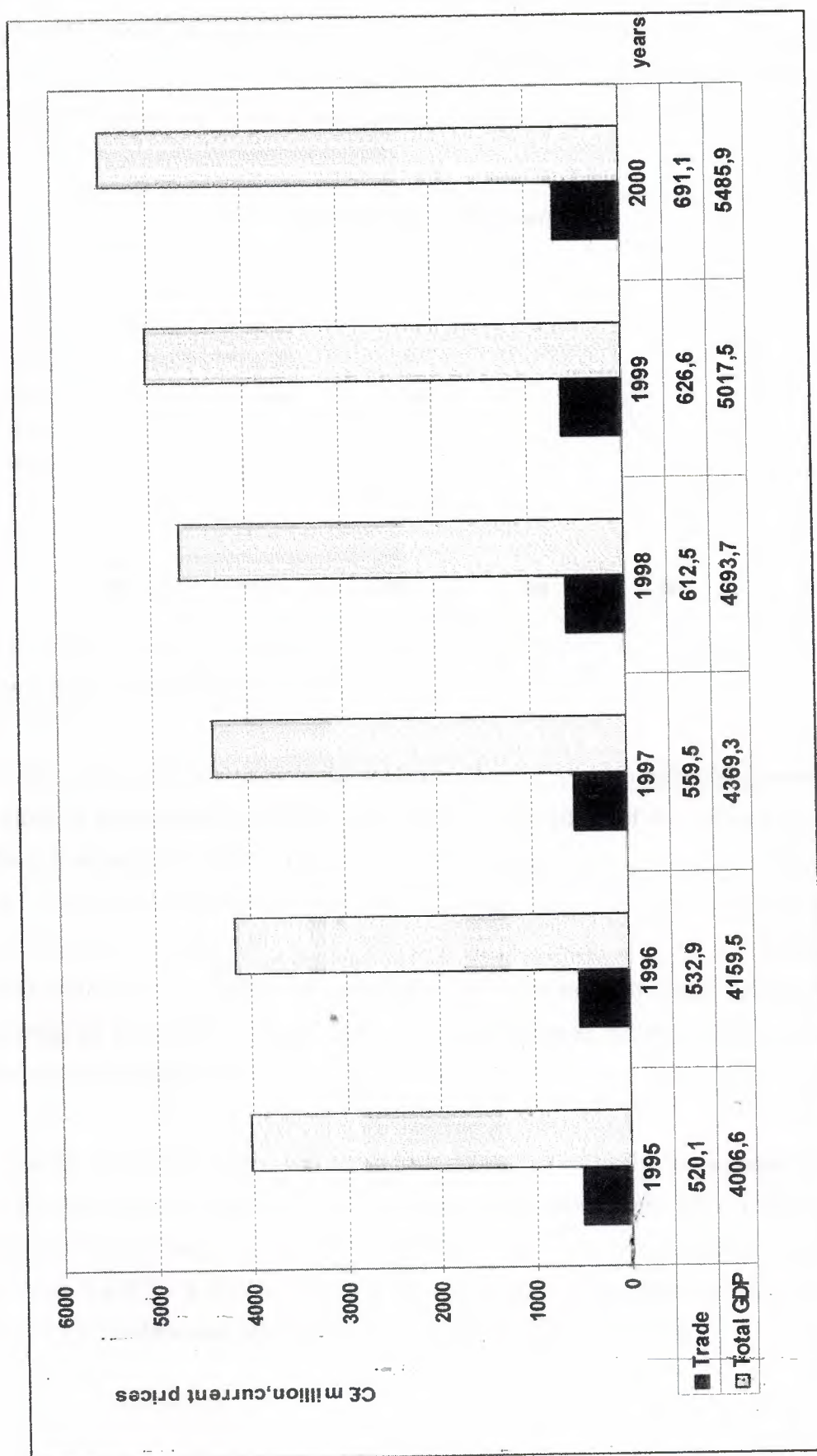
Source: <http://www.nso.gov.mt/>

Graph 4.26 Manufacturing in GDP of South Cyprus



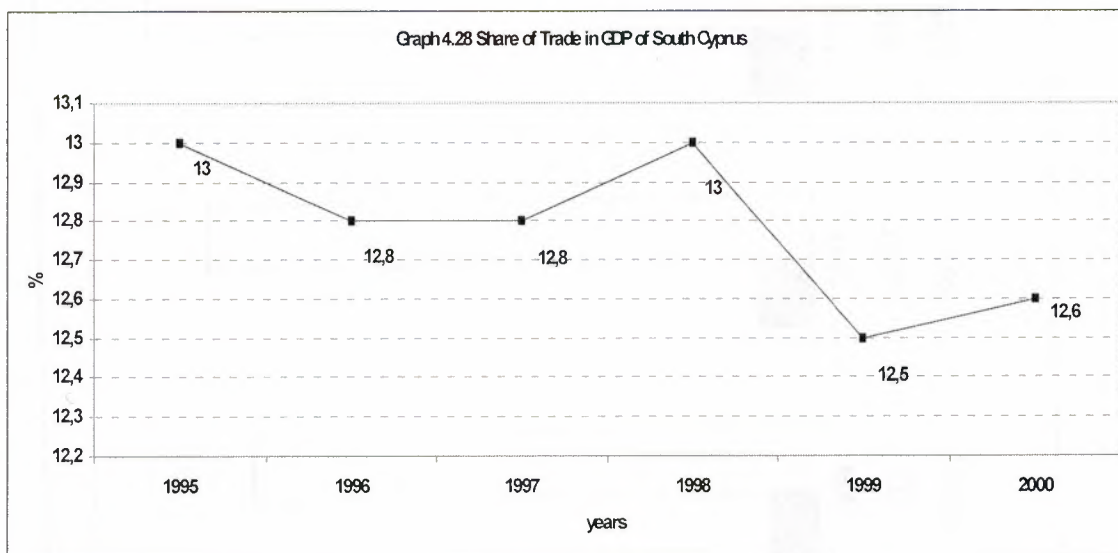
Source: <http://www.nso.gov.mt/>

Graph 4.27 Trade in GDP of South Cyprus (C £ million, current prices)



Source : <http://www.nso.gov.mt/>

As it can be seen from Graph 4.27 trade sector took a big portion of GDP. In 1995 total amount of wholesale and retail trade was 520.1 C £ million, in 1997 it increase to 558,5 C £ million. Percentage of wholesale and retail trade in GDP was 13% in 1995, it decrease to 12,8% in 1997 and after some ascents it felt to 12,5 % in 1999. With the opposite of increase in value of wholesale and retail trade, the percentage of sector is 12,6% in 2000.(see Graph 4.28)

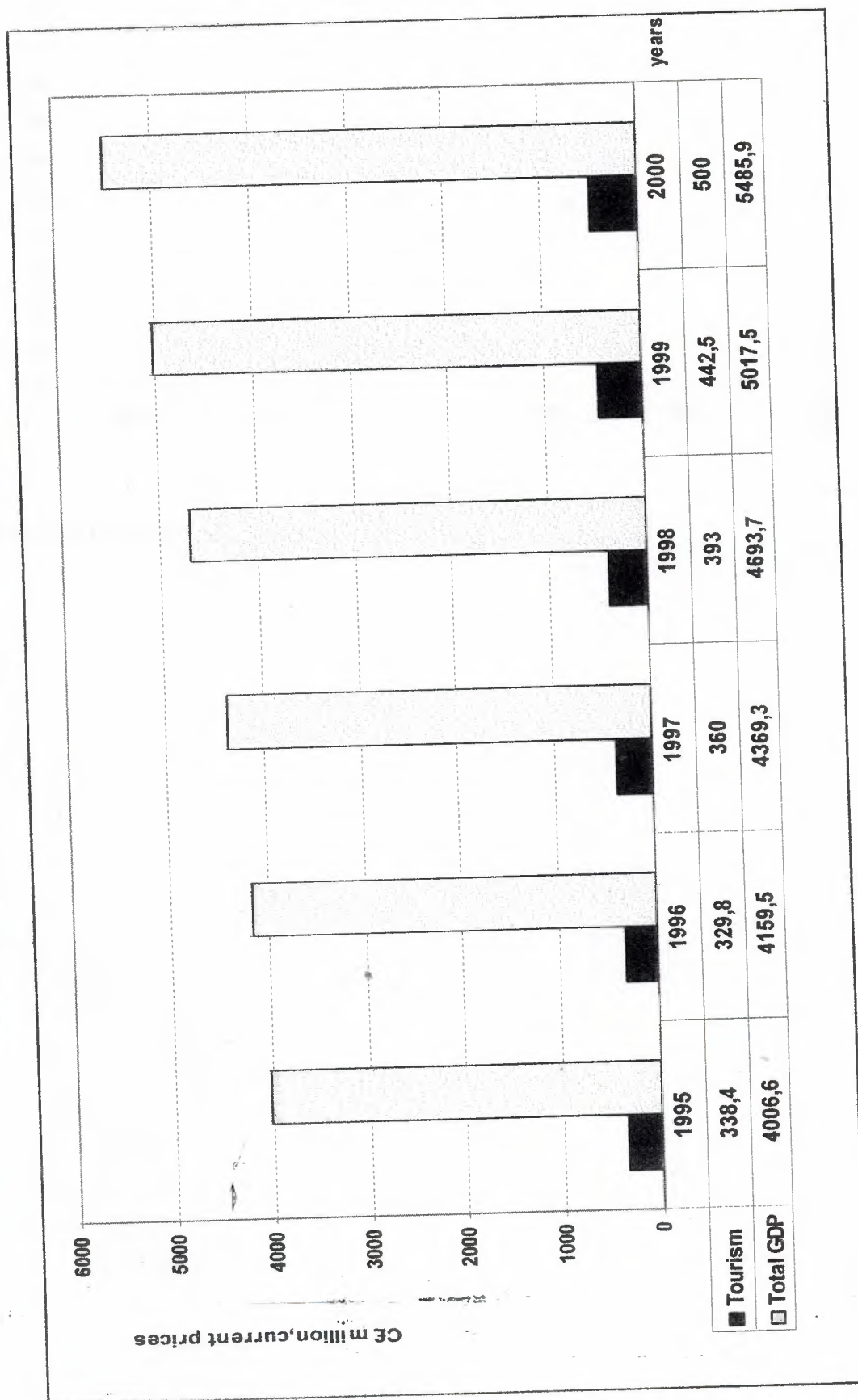


Source: <http://www.nso.gov.mt/>

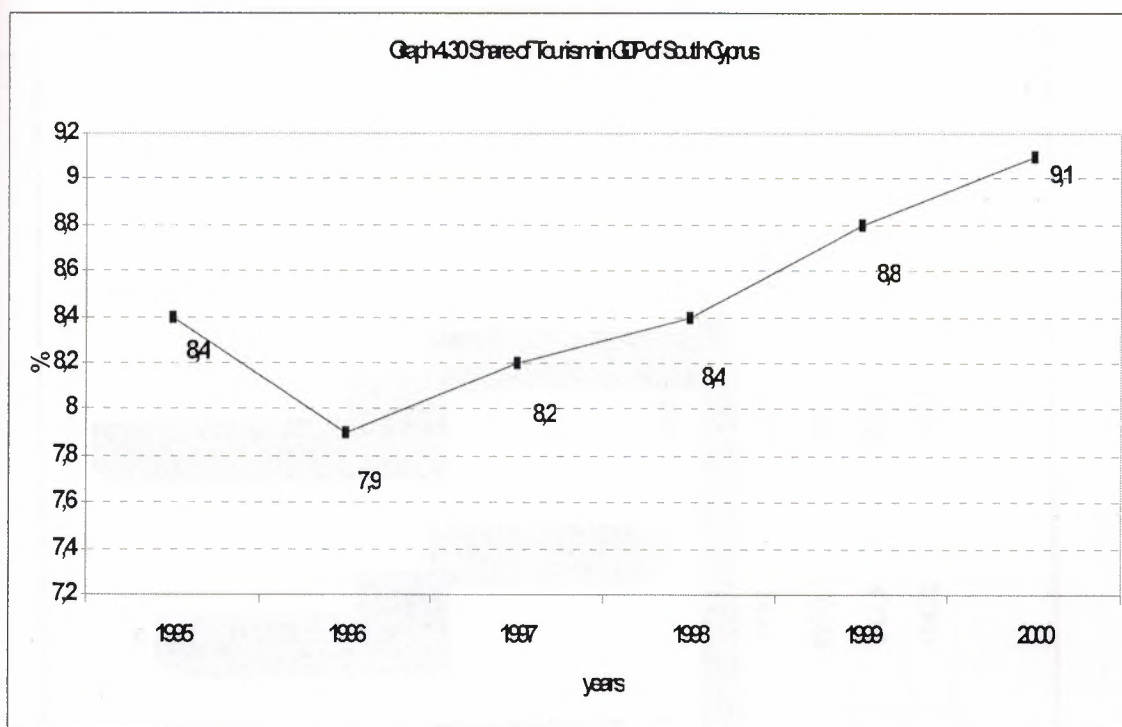
Tourism sector is the one of the main sectors of South Cyprus. Graph 4.29 demonstrates us the share of tourism sector in GDP. In 1995, total value added of this sector was 338.4 C£ million, it increased to 360.0 C£ million in 1997 and again increased to 393.0 C£ million in 1998. The total value added of tourism sector in South Cyprus was 442.5 C£ million in 1999 and it was expected to be 500.0 C£ million in 2000. Percentage of sector was 8.4% in 1995, 8.4% in 1998, 8.8% in 1999 and expected to be 9.1% in 2000. Total value added and percentage of the GDP of tourism sector had been increased steadily within the period of 1995-2000.(see Graph 4.30)

As it can be seen from Graph 4.31, foreign trade balance of South Cyprus has been increasing. In 1995, total imports were 1.670,4 C£ million, total exports were 555.6 C£ million and balance of foreign trade was -1.114,8 C£ million. This trade deficit was increase in 1996 which was -1.208,5 C£ million. Total imports were 1.904,7 C£ million in 1998, total exports were 551.1 C£ million and balance of foreign trade was -1.353,6 in 1998.

Graph 4.29 Tourism in GDP of South Cyprus (C £, million, current prices)

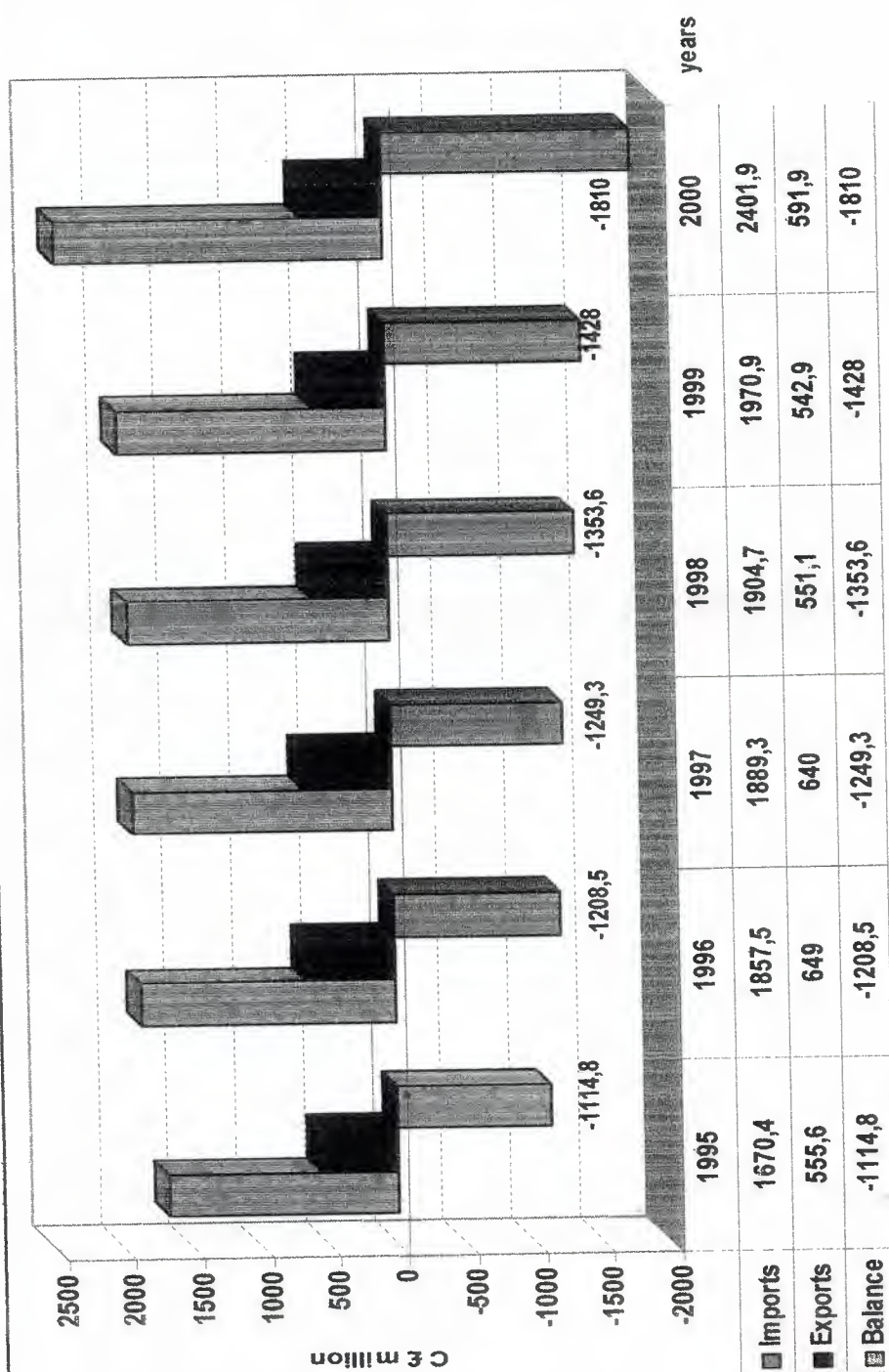


Source: <http://www.nso.gov.mt/>



Source: <http://www.nso.gov.mt/>

Graph 4.31 Balance of Foreign Trade of South Cyprus

Source: <http://www.nso.gov.mt/>

## *Basic Findings & Conclusion*

- Share of agriculture in GNP has decreased between 1993 and 2000 in TRNC. Total agricultural value added to GNP has also been decreased in this 7.8%. The share of agriculture sector within the total fixed capital investment was 10.2% in 1993 and decreased to 6.1% in 2000. Reduction in fixed capital investment in agriculture sector, investment in machinery and to reduction in has been dropped. This low investment has effect the reduction in total value added of agriculture sector. Without technological equipment, sector cannot produce efficiently. Low capital investment creates low productivity. According to Balanced Growth Theory, agricultural investment was neglect in LDCs. Also Lewis Model explains how economic growth get started in a less developed country with in a traditional agricultural sector and industrial capitalist sector.

Employment in agriculture decreased steadily during the period between 1993 and 2001. Low capital investment prevented new establishment in this sector and number of total employees reduced. This low capital investment is one of the features of less developed countries. Efficiency of labor between this period followed some ascents and descents, but in recent years it increasing.

In Ireland, Malta and South Cyprus agriculture sector has lower percent of GDP compared by TRNC. In Ireland agriculture sector lost its share in GDP during he period 1997 and 2000. In 2000 agriculture had 4.5% of total GDP in Ireland. In Malta share of agriculture in GDP was 3% in 2000 and also in South Cyprus agriculture has decreased during years and in 2000 agriculture has a share of 3.7% of total GDP.

- Industry sector protects its share in GNP. Total of industry sector in GNP has been increased and industry was not lost its share in GNP. Manufacturing is the main component of industry sector, it accelerates total industry production.

Industry sector has 11.7% of total GDP in 1999. Industry sector has 11.5% of total GNP in 1999 it increased to 12.1% in 2000. In general appearance of industry in GNP has decreased in the period 1993 and 2001. FCI in industry sector has been increased during recent years. With a parallel of increase in FCI, total number of establishments had been increased. Employment seemed to protect its position during the period 1993 and 2000. Number of total employees had been increased with new establishments in recent years. Efficiency of labor during the period 1993 and 2000, efficiency had been increasing steadily. Most of the economic development theories emphasized the capital investment in industry will creates new job areas for young

population. Such as, Harrod-Domar Growth Model based on investment and said that in a closed economy savings would convert to investment for economic growth.

Ireland is a highly industrialized country. Industry sector has 37.7% of total GDP in 2000. Industrial productivity is high and people who are working in this sector have main share of total employment. In Malta manufacturing and ship building sector has a 22.6% share of total GDP in 1998. This sector also important for Maltese economy as well as Ireland. In South Cyprus like in TRNC this sector has 11.7% of GDP but it lost its share and decreased to 10.3% in 2000.

The share of industry in GDP of TRNC is only half of the share of industry in GDP of Ireland and Malta.

- Construction sector strongly depend on exterior suppliers. Exterior materials are imported from abroad and this makes cost to increase. Share of construction in GDP was 7.8% in 1999. Share of construction in GNP followed some ascents and descents. In 1996 it was 6.8% of GNP, in 1998 8.2% of GNP and in 2000 it increased to 9.3% of GNP. Construction sector has very low FCI during the period 1993 and 2000. Total production in construction sector increased with high demand of students who are studying in universities. Construction sector owns an important portion of total employment. Improvement in construction creates new jobs for workers and total employment in construction sector had been increased. Efficiency labor from 1994 to 1999 sharply decline after 1999 it had increased but it not obviously high.

Construction sector in Malta has lower share of GDP compared with TRNC. In 1998 total share of construction was 3% of GDP. In South Cyprus, construction sector has the share of total GDP between the 8.3% and 6.8% during the period 1995 and 2000.

- Trade sector has also important portion of total GNP. In 1995 the share of trade was 15.4% in GNP, it felt to 14.2% in 1998 and decreased to 13.1% in 2000. TRNC highly dependent on exported materials and could not find market to sell its product in foreign markets. So; the foreign trade balance always gave deficit between the period 1993 and 2001. FCI in trade sector was low and there were no new establishment. Employment in trade protects its portion in total employment. Total number of employees has been increased but this was not obviously high, with a parallel of this, efficiency of labor has not change clearly during this period.

Ireland gave trade surplus in the period 1995 and 2000. Exports of Ireland was greater than imports of Ireland. The important export material of Ireland is zinc and aluminum. Natural resources creates surplus in foreign trade balance of Ireland. Malta and South Cyprus gave trade deficit. Trade sector took approximately 12% of total GDP in those countries.

In the Comparative Advantage Theory, Adam Smith said that beneficial trade is based on the principal absolute advantage. Also in Classical Theory of Economic Development, D. Ricardo said that economic growth is limited by resource scarcity. TRNC does not have any natural resource to again a chance in international trade.

- Tourism sector increased its value added into GNP, but was not protect its share in GNP. Tourism is primary sector. Total number of accommodation and lodging facilities has been increased during the period between 1993 and 2000. Total number of employees in this sector has also increased with new establishments. But share of employees in tourism sector has not been increased in total employees. This is a service sector and with new establishments, employees could increase respect to other sectors. Efficiency of labor from 1993 to 2001 declined sharply. Number of tourist has been increased during this period. The main portion of tourist has been come from Turkey. Tourism sector had covered the main portion of trade deficit, so it is important for exchange revenues. Tourism sector has 3.3% of total GNP in 1995 and 3.2% of total GNP in 2000. But, in South Cyprus this share was 9.1% in 2000. Total share of tourism sector was three times greater than TRNC.
- Transport and Communication sector provide working harmonizing between the all sectors. Total value added of transport and communication sector increased steadily between the period between 1993 and 2001. Percentage of sector in GNP has also increased. Share of transport and communication sector in GNP was 10.9% in 1995 and 12.3% in 2000. FCI for this sector is very high. It has the highest portion of total fixed capital investments. This high portion of FCI's used to building new road and other infrastructures. These investments are necessary for wealth. Investment in social services are important for economic development of country. Efficiency of labor in this period had been increasing.

In Ireland transport and communication sector has 14.5% of total GDP in 2000, it was 13.9% in 1995, during the period 1995 and 2000, it increased. In Malta this sector has 6.3% of total GDP, it was 7.2% in 1994, it lost its share in GDP. In South Cyprus transport and communication sector has increasing trend.

Education has an imported portion of FCI. Education system in TRNC has been improved. Literacy level is very high. Universities are very important, they create high value to GNP under invisible accounts. Also students who are studying in these universities create new demand for construction, and their expenditures are benefit of country because total consumption increases.

## *Recommendations*

## Recommendations

- Agriculture sector should pass from traditional agricultural production to modern technological production. New seeds and new production techniques will increase the productivity in agriculture sector. With low interests and government encouragement this sector can be improve.
- The firms in industry sector are small scale, this is the one of the features of LDC's. Production in industry sector will increase after new international markets or after solving problems of existing international markets. TRNC should produce special product, which cannot find easily in foreign markets. Manufacturing sector can gain its previous performance with low profit policy of firms.
- Construction sector increasing in recent years sector should be careful for crooked constructural form. City planning should be carefully control by government and should be careful for historical art.
- Trade sector should be work for domestic market. In the international market, there is high risk and low trade relations, so, producers should be produce for their own public and should increase their market share. They can compete with foreign firms with price.
- Tourism sector have a transportation problem. There should be direct flight for easy transportation from foreign countries. TRNC have a chance of climate condition should advertise itself perfectly. Holiday in TRNC should be cheaper than other Mediterranean countries.
- Transport and Communication sector should be cheaper. All of the stages of production transport and communication systems uses, so high price of transport and communication will increase cost of production. For the sectoral improvement government should promote other sectors by reduction in transportation and communication services. This will create high production, low cost and also low prices in final goods.
- In education systems, a university creates economic value. For improvement of universities there should be low interest rates for new investments. This will help universities to get better and compete other universities all around the world.

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