

A GLANCE AT THE EUROPEAN ECONOMIC AND MONETARY INTEGRATION PROCESS WITHIN HISTORICAL PERSPECTIVE IN THE LIGHT OF ECONOMIC INDICATORS

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ABSTRACT

Once dreamt of by few European Leaders, European union with its economic and monetary Structure is in the forefront of the World's economic scene today. European Union is marching conscious steps towards becoming a super power. In the final stage of integration European economic and monetary integration has already proved to be successful among member countries Strong monetary policy, economic structure and policies towards a better Europe under European Union umbrella is promising for European Countries. In the world of globalization, to understand European Union's today and future, it is a necessity to see the phases passed in historical process. Therefore a historical perspective has been put forward in the study. The study consists of a brief description on the European Union's integration process starting from the ideals of authors, diplomats and philosophers of the middle ages. Then European economic and monetary integration as well as its phases are also given shortly. Following the historical perspective, economic performance of the European Union and Euro area after monetary integration has been evaluated by using several economic indicators. Data have been evaluated according to the number of member countries' entrance date to European Economic Community and the European Union.

Keywords: *European Union Economic History, European Union, European Economic and Monetary Integration, European Union Economic Indicators.*

GİRİŞ

Old Continent Europe, have faced several disasters and movements in the past century. Many people died and countries collapsed economically. Ist and IInd World Wars, economic crises and development of industrial revolution shaped the regional economic integration efforts for some years. Starting from 1950s, integration movement in Europe led by few leaders gained pace. Certainly it is not difficult to see why leaders of the time sought and why still today have sought for integration accross the region. Peace and economic welfare for everyone could be reached through a stabile unity.

Today's European Union have passed several stages of integration process and been developed by collective conceptual and structural factors. Different characteristics of these factors constitute fundamental milestones for today's integrated structure. Certainly ideas of the periods also formed a different view on the structure of the unity.

There are several economically integrated regions in the world. Economic integration basically depends on liberalization methods for trade between countries and it is some of the ultimate goals of integration efforts in Europe. Collaborate act in economic policies and decision making are other issues in the integration by and among member countries. Economic and monetary integration of Europe might be the final stage of unity formation among countries in Europe and it certainly have some effects on the structure of current Union in many aspects.

In this study, firstly European Union's evolution from past to today has been given from historical perspective. Economic and monetary union has been stressed. Finally economic performance of the European Union since its establishment has been commented on.

1. European Union Ideal

The idea to unite countries in Europe under one administration or acting together against possible outer treats date back to middle ages. Not to mention during the ruling of Roman Empire, sporting events, the Olympics can also be accepted as a form of unity. Following the collapse of Roman Empire, Church continued the aim of unity as it considered European Unity under a ruler with a religious administration.¹

The idea to unite countries was represented by Augustinus in the Middle Ages and by Kant in New Age.² It was Matthias Corvinus, King of Hungary who attempted to form a union to strenghten West Europe in 1485.³ 200 years later in his famous essay "Present and Future Peace of Europe" William Penn initiates one of the first moves to provide continous peace in Europe.

He starts with the lines;⁴

¹ Memduh Yaşa, *Cumhuriyet Dönemi Türkiye Ekonomisi 1923-1978*, Akbank Kültür Yayını, (İstanbul: Apa Ofset Basımevi, 1980), p. 440.

² Beril Dedeoğlu, *Adım Adım Avrupa Birliği*, (İstanbul: Çınar Güncel Yayınları, Nisan 1996), p. 61.

³ www.catholic.org/encyclopedia/view.php?id=7740

⁴ An Essay Towards the Present And Future Peace of Europe, www.fredsakademiat.dk/library/penn.pdf

“He must not be a man, but a statue of Brass or Stone, whose bowels do not melt when he beholds the bloody tragedies of this war in Hungary, Germany, Flanders, Ireland, and at Sea...”

The essay summarizes the situation of that time in Europe, explains the significance of peace and its benefits extensively.

In the next century Abbe de Saint Pierre, the French writer proposes an international organization to provide peace in Europe. Following the ideas of Saint Pierre, Jean-Jacques Rousseau and Emmanuel Kant contribute to peace efforts in Europe during the period. In the 19th Century Claude Henri de Saint Simon writes “Re-organization of European Society”. The work calls for parliamentary administrations in Europe and if possible for a single parliament which will lead to the integration of Europe. Then in 1849 “European United States” concept is put forward by Victor Hugo in his speech in Peace Conference in Paris.⁵

In our age, contemporary history of the integration can be started from “Pan-European Union”, a movement by Count Richard N. Coudenhove Kalergi that he started in Vienna in the early 1920s.⁶ He dreamt of forming a currency and customs union stretching from Portugal to Poland with his own parliament consisting of an upper and a lower house. In 1923 Coudenhove Kalergi’s work “Pan-Europe” and “Pan-European Movement” adds a new dimension to European Unity. However, Kalergi’s Pan-European Union idea was not accepted widely.⁷

2. European Economic Integration Process

Efforts made towards forming a European Union as we see today dates back to post war period after the second world war. Devastating effects of second world war requires reconstruction of the economy of the Old Continent and establishing a lasting peace. Therefore IIInd. World War is a milestone in the governance of old Continent. Yet, in a politically divided Continent quite fierce debates were conducted on the form of unity at that time. Winston Churchill made a significant speech on September 19th, 1946 in Zurich, Switzerland. Starting with the

⁵ Asle Toje, Unity in Diversity, Reflections on the Idea of Europe, *paper prepared for NISA Conference*, (Denmark: University of Southern Denmark, 23-25 May, 2007) (this paper can also be found at: <http://www.sam.sdu.dk/politics/nisa/papers/Toje.pdf>).

⁶ Michael Gehler, “From Pan-Europe to the Single Currency: Recent Studies on the History of European Integration”, *Contemporary European History*, 15, 2 p. 274.

⁷ Ridvan Karluk, *Avrupa Birliği ve Türkiye*, (İstanbul: Beta Yayınları, 2003), p.1.

beautiness of the Continent and its ancient history, he proposes a “European Group” and regional organization of Europe.⁸

The Organization for European Economic Cooperation (OEEC, known as OECD today) was founded in 1948 as the European Organization of Marshall Plan. The Council of Europe, a separate supranational organization, was set in 1949. The Organization has 47 members. Its field of activity are all kind of issues related with European Interest, namely all political economic and social matters. However, it does not have any power to make laws and it can suggest non-binding resolutions and draft conventions to member states.⁹ It states its main objectives as protecting human rights, pluralist democracy and the rule of law besides, promoting awareness and encouraging the development of Europe’s cultural diversity.¹⁰

2.1. European Coal And Steel Community To European Union

In the early 1950s efforts of French Foreign Minister Robert Schuman together with French Development Organization’s President Jean Monnet resulted in the first integrational organization, European Coal and Steel Community (ECSC). Robert Schuman made a declaration on 9th May 1950. In his declaration he stated that;¹¹

“Franco German production of coal and steel as a whole be placed under a common High Authority within the framework of an organization open to participation of the other countries of Europe..”

Countries once fought with each other agreed to form a pool for power sharing over their coal and steel production.¹² The Agreement was signed on April 18, 1951 by and among Federal Republic of Germany, France, Italy, Belgium, the Netherlands and Luxemburg.¹³ The agreement was limited to 50 years and ECSC passed away in 2002. Following the achievement, the Sixers (six country that established ECSC) established the European Atomic Energy Community (EURATOM=EAEC) and European Economic Community (EEC) in

⁸ Winston Churchill’s speech, http://www.coe.int/T/E/Com/About_Coe/DiscoursChurchill.asp

⁹ Walter Van Geven, *European Union: A Polity of States And Peoples*, Palo Alto, (CA,USA: Stanford University Press), p. 11.

¹⁰ http://www.coe.int/T/e/Com/about_coe/

¹¹ Robert Schuman’s Declaration, it can be reached at http://europa.eu/abc/symbols/9-may/decl_en.htm.

¹² Pascal Fontaine, *12 Derste Avrupa, Avrupa Birliđi*, Avrupa Dokumentasyon Serisi, (Luksemburg: Avrupa Toplulukları Resmi Yayını, 2005), p. 32.

¹³ <http://www.dtm.gov.tr/sorular/ab/demir.htm> (see also <http://ekutup.dpt.gov.tr/ab/anlasma.pdf> for full text of the agreement)

Rome on 25th March 1957. These agreements came into force on January 1st 1958. The idea beneath EURATOM was to lessen dependence to oil. EEC on the other hand demonstrated an extensive scope. Its objectives were defined as follows¹⁴;

- to maintain healthier functioning of international regulations and contribute to the consistency of world's economic and political balance,
- to use a united Europe power in order to increase life standarts in Europe and provide continous expansion,
- to recover West European Markets which are divided into small pieces particularly because of protective policies from the economic restrictions and turn them into more unrestricted and stronger
- to establish a common market in Europe and approximate the member countries economic situations to each other,
- to end the competition and international conflicts in defence industry
- to have an important place in the World's economic and political structure
- to provide the most productive use of industry, agriculture and other resources and turn them into a single economic region that would bring the community a significant advangate
- to provide a complete unity of customs monetary and economic

Economic Community is a kind of customs agreement among member countries.¹⁵ First customs restrictions and import quotas were to be removed. In the Agreement strong provisions were imposed to prohibit actions such as monopoly and dumping against free trade of goods and services.

European Economic Community have realized six rounds of enlargement so far in the years 1973, 1981, 1986, 1990, 1995, 2004 and 2007. In 1973 Denmark, Ireland and United Kingdom, in 1981 Greece, in 1986 Portugal and Spain, in 1990 East Germany, in 1995 Austria,

¹⁴ Sefer Sener, The Analysis of Contributions of the Full Membership of Turkey in the Context of Transformations in the European Union Development Process, *Acta Academica Karviniensia*, 2006, 1, p. 162.

¹⁵ Haluk Cillov, *Türkiye Ekonomisi*, İstanbul Üniversitesi İktisat Fakültesi, (İstanbul: İstanbul Üniversitesi Yayını No: 1132, 1965), pp. 456-457.

Finland and Sweden, in 2004 South Cypriot Greek Administration, Czech Republic, Estonia, Hungary, Latvia, Lithuania, Malta, Poland, Slovak Republic, Slovenia, and in 2007 Bulgaria and Romania became members of the Organization. Today The Organization have 27 member countries.

Merger Treaty is another agreement that ECSC, EEC and EURATOM's executives were merged in Brussels in 1965.¹⁶ Single European Act (SEA) is another milestone in the history of European Integration. By this treaty fully integrated European economy or "the Single Market" significantly expanded the range of policy areas in which the EEC could begin making its own policy and laws.¹⁷ "The single European Act was signed in February, 1986 and entered into force on July 1, 1987. It has extended the Community's field of competence and brought about significant changes in relations between the institutions and in their operating rules. It also gave formal legal status to European Political Cooperation, which is operational since 1970 simply on the basis of intergovernmental agreements."¹⁸

In addition, Organization's name changed to "European Union" by the agreement signed on December 9-10, 1991 in Maastricht, the Netherlands. European Union Agreement also known as Maastricht Treaty came into force on November 1, 1993 and European Union was officially founded.¹⁹ The Treaty initiated the process of Economic and Monetary Union (EMU) and, again significantly expanded the policy making authority of EU institutions.

Currently, European Union has 27 members, 13 of which form euro area. Total population of the Union is 492,8 million people.²⁰ In the next section European Economic Integration and European Monetary Union are briefly summarized.

2.2. European Economic and Monetary Integration

¹⁶ <http://www.delmkd.ec.europa.eu/en/europe-a-to-z/eu-timeline.htm>

¹⁷ Richard Deeg, "Contemporary Challenges to German Federalism: From the European Union to the Global Economy, *Law ad Policy in International Business*, Volume:33. Issue: 1, 2001, p51. Georgetown University Law Center; Copyright 2002 Gale Group.

¹⁸ Emile Noel, "*Working Together, Institutions of The European Community*", (Brussels, Luxembourg: European Documentation, Periodical, 1991) p. 5 (this document can be reached at; http://aei.pitt.edu/5876/01/003897_1.pdf)

¹⁹ <http://www.ikv.org.tr/pdfs/kronoloji1.pdf>

²⁰ Eurostat news release, "EU and euro area enlargement on 1January 2007, The new EU of 27 and euro area of 13, Luxembourg, 167/2006, pp. 2-3.

In his article in 1978 Brenner compares a monetary union in Europe to a phoenix, a bird of tales believed to burn itself to death and emerge from the ashes as a new phoenix.²¹ However, phoenix re-emerged in 1970 has successfully been hovering for some 30 years.

*“Monetary integration is the phoenix of the European Economic Community. Periodically it rises from the ashes of previous incarnations to hover uncertainly over the Community landscape, only to falter and to consume itself, not in fire but in self-doubt. After an interment far shorted than the mythical 500 years, the idea reemerges, impelled upward by the force of need and assisted by the faithful midwives to the Community ideal”*²²

At its meeting in November 1959 the Action Committee proposed some bold proposals for developing a European financial policy by;²³

- Freeing capital movements between the Sixers in such a way as to establish a real European capital market and thus to increase the Community’s investment potential;
- Coordinating the budgetary and credit policies of the Sixers in order to avoid the erratic movement of capital and of merchandise which would result from divergence of policy in this field, and to further overall economic expansion against a background of price stability;
- Setting up a European reserve fund which would centralize at least a part of the Sixers’s monetary reserves and in time of need enable the mutual aid procedures provided for in the Treaty to be put into operation, thus safeguarding the currencies of member countries.

Following the collapse of Bretton Woods System a new Exchange rate mechanism among member countries were established. 1970s Werner Report indicated significant changes in the monetary system of member countries. EMU is an agreement among member countries of European Union to adopt a single currency and monetary system in their

²¹ wordnet.princeton.edu/perl/webwn

²² Michael Brenner, Monetary Policy: Processes and Policies, *Annals of the American Academy of Political and Social Science*, Vol. 440, The European Community after Twenty Years, November 1978, pp. 98-110.

²³ Action Committee for the United States of Europe, Statements and Declarations 1955-67, p.46. Chatham House/PEP European Series No 9, 1969; acquired from: “Jean Monnet: A Grand Design for Europe”, *European Communities –Commission*, Luxemburg Office, European Documentation Series—5/1988, p 28 (this document can be reached at: http://aei.pitt.edu/4561/01/003906_1.pdf).

transactions. In March 1972 the Sixers decided to take common action against fluctuations in dollar and fluctuations among their currencies. They implemented a system called “snake in the tunnel”. Band of currency fluctuation among member countries represented the snake and band of dolar fluctuations against member countries currencies represented the tunnel. Snake in the tunnel was reviewed in March 1973 and a new system was implemented. In Bremen summit member countries agreed on European Monetary System plan in 6-8 July 1978. The plan was about implementing a 3-leg monetary system. The system included realization of European Currency ECU, exchange rate mechanism and credit mechanism²⁴ The purpose of the mechanism was to keep Exchange rate fluctuations of West European Economies within an acceptable band. European Monetary System that came into force in 1979 attempted to provide economic stability in member countries and improve the harmonization of economic systems accross member counries. In this regard a pool of European Currencies was formed and named as ECU.

By the ‘Delor’s Report’ of European Council in 1989, a three phase plan that targeted realization of economic and monetary union was put forward. This plan had been finalized by a committe chaired by Jacques Delor, president of European Commission in 1988. The Committe’s plan proposed to reach full economic integration. It included establishment of European Central Bank, and single currency. In addition the report summarized the committe’s opinions of the efforts made towards economic and monetary union during the process of European integration. European Community implemented the first phase between 1990-1993 period when the efforts of establishing closer cooperation between central banks were made. European Community commenced the first phase that comprised member countries undertook the responsibility to achieve following economic and monetary goals by January 1, 1994;²⁵

- All restrictions for capital movements among member countries and third world countries will have been removed.
- Price stability and a more powerful public finance will have been established
- Central banks will become independent organizations.

²⁴ Arıkan Kar , *Avrupa Birliği Ortak Politikaları*, (İstanbul: Beta Yayıncılık, 2003), pp. 191-193.

²⁵ Delors Report: http://ec.europa.eu/economy_finance/euro/origins/delors_en.pdf

At the same time preparatory work for an extensive agreement were being conducted and as a result Maastricht Treaty was signed. On November 1st, 1993 Maastricht Treaty came into force and the second phase of monetary union started. European Monetary Institute was established to do preparatory work for the ESCB-European System of Central Banks. In the second phase, member countries undertook the following responsibilities between the years of 1994-1998 period;²⁶

- Establishing strong ties among member countries' central banks
- a coordinated system for monetary issues
- Observing European Monetary System
- Taking over monetary cooperation fund
- Facilitating the use of ECU
- Managing of the foreign exchange reserves of central banks by member countries

As mentioned in the former part, the Treaty initiated the process towards economic and monetary union. The Treaty set out a number of economic convergence criteria for member countries to participate in EMU. These criteria were a precondition to be completed for member countries before they could join EMU. These four convergence criteria are; price stability, public finances, exchange rate stability, interest rates.

Criterion on price stability;

*The first indent of Article 121 (1) of the Treaty requires; "Achievement of a high degree of price stability; this will be apparent from a rate of inflation which is close to that of, at most, the three best performing member states in terms of price stability..."*²⁷

Member country must achieve annual inflation rate of 1,5 in the three member countries with the lowest inflation rate. In other words, the inflation rate of a given member state should not exceed by more than 1,5 % that of the three best performing member states during the year preceding the examination of the situation in that member state.

Criterion on sustainability of public finances;

²⁶ <http://www.ecb.int/ecb/history/emu/html/index.en.html> (online on September 15, 2007).

²⁷ "Assesment of the Fulfilment of the Maastricht Convergence Criteria and the Degree of Economic Alignment of the Czech Republic with the Euro Area", *A Joint Document of the Ministry of Finance of Czech Republic and the Czech National Bank*, approved by the Government of the Czech Republic on 25 October 2006.

The second indent of Article 121 (1) of the Treaty requires; “the sustainability of the government financial position; this will be apparent from having achieved a government budgetary position without a deficit that is excessive, as determined in accordance with Article 104 of the Treaty...”²⁸

This criterion has two sub-criteria. These are about fiscal balance and debt sustainability. According to the criterion the ratio of the annual government deficit to gross domestic product (GDP) can not exceed 3 % of the reference value defined in the protocol. Secondly, the ratio of gross government debt to GDP must not exceed 60% of the reference value defined in the protocol.

Criterion on exchange rate stability;

The third indent of article 121 (1) of the Treaty requires “the observance of the normal fluctuation margins provided for by the exchange rate mechanism of the European Monetary System, for at least two years without devaluing against the currency of any other member state..”²⁹

It states here that the member states must have participated the exchange rate mechanism of the European monetary system without any break during the two years before assessing the success of any member country in subject.

Criterion on the long-term interest rates;

The fourth indent of Article 121 (1) of the Treaty requires; “the durability of convergence achieved by the member state and of its participation in the exchange rate mechanism of the European monetary system being reflected in the long term interest rate values...”³⁰

It states here that the nominal long-term interest rate must not exceed by more than 2 percentage points that of at most the three best-performing member states in terms of price stability (the same member states as those in the case of the price stability criterion).

European Council’s Madrid meeting between the dates of 15- 16 December 1995 confirmed the starting date of stage three as 1st January 1999. It also named the currency of European Union as ‘Euro’.³¹ Prior to

²⁸ “Assessment Of The Fulfilment...”

²⁹ “Assessment Of The Fulfilment...”

³⁰ “Assessment Of The Fulfilment...”

³¹ The European Council Madrid, 15-16 December 1995, *Bulletin of the European Communities*, Bull EU 12-1995, p. 9.

the third phase of economic and monetary union in EU Council's meeting in May 1998 in Brussels, it was determined that eleven countries had met convergence criteria. During the second phase England and Denmark had already declared that they would not pass to stage 3. In the third stage eleven countries' (Germany, Austria, Belgium, Finland, France, the Netherlands, Spain, Italy, Luxemburg and Portugal) currency rates fixed irrevocably to EURO exchange rate. Therefore Euro also replaced ECU. While Denmark and England had announced before that they would not enter the Euro zone (area), Greece and Sweden remained as candidate countries for they could not meet the convergence criteria. However Greece soon recovered its economic condition and it became a Euro-zone member by January 1st, 2001 in European Council's meeting in Feria. Currently, Euro area has 13 members; Belgium, Germany, Ireland, Greece, Spain, France, Italy, Luxembourg, the Netherlands, Austria, Portugal, Slovenia and Finland. The last EU country to enter Euro area was Slovenia on January 1, 2007. Total population of euro area as of 1st January 2007 is 316,6 million.³²

For the countries outside euro area (Denmark, Estonia, South Cyprus Greek Administration, Latvia, Lithuania, Malta, and Slovakia) a new exchange rate mechanism was established. New exchange rate mechanism is also known as ERMII. European Council decided to establish an exchange rate mechanism in the third stage of economic and monetary integration on 16 June 1997 in Amsterdam. This resolution was built upon the agreements reached at the Council's prior meetings in Florence and Dublin. The resolution stated that new exchange rate mechanism would be operated under the procedures that would be organised by an agreement between the European Central Bank and the national central banks of the member states outside euro area.³³ In addition the following objectives were declared.

- Sustaining exchange rate stability for lasting convergence of economic fundamentals, thus pursuing a disciplined and responsible monetary policy aiming at price stability

³² Eurostat news release, "EU and euro area enlargement on 1 January 2007, The new EU of 27 and euro area of 13, Luxembourg 167/2006, pp. 2-3.

³³ EU council's resolution on ERMII, you can reach at:

http://ec.europa.eu/economy_finance/euro/documents/resolution-erm%20_amsterdam_en.pdf

- Creating a stable economic environment in order to have a good functioning market and reach higher levels of investment, growth and employment
- Ensuring that member states outside the euro area adopt their economic and monetary policies to stability

Euro started to be used as banknotes on January 1st, 2002. At this phase it was forecasted that both Euro and other currencies would be in the market and only Euro would remain in the market as a single currency as of July 1, 2002. Euro existed only as a book unit of account, so no actual euro notes and coins were distributed. During this period large multinational firms such as France's Alcatel, Germany's Daimler Benz, Finland's Nokia, and US's Chase Manhattan adopted the Euro for European accounting and financial reporting purposes.³⁴ Chabot explains introduction of euro in three phases as phase a, b and c. It can be seen in Table 1;

Table 1:

Euro's Introduction

³⁴ Christian Chabot, *Understanding the Euro: The Clear and Concise Guide to the New Trans-European Economy*, Blacklick, (OH, USA: McGraw-Hill Professional Book Group, 1998). p.6.

Introducing the Euro in Three Phases	
May 1998	<p>PHASE A: <i>Preparation for EMU, May 2, 1998 to January 1, 1999</i></p> <ul style="list-style-type: none"> •Participating countries determined •Permanent bilateral exchange rates between national currencies announced •European Monetary Institute transformed into European Central Bank •First production of Euro notes and coins <p>8 months</p>
January 1999	<p>PHASE B: <i>Beginning of EMU, January 1, 1999 to January 1, 2002</i></p> <ul style="list-style-type: none"> •Exchange rates between the euro and all national currencies irrevocably locked. •Euro introduced as legal currency for “book” transactions •European Central Bank (ECB) takes over responsibility for monetary policy in single currency area. •All new government bonds in participating countries issued in euros •Money markets, foreign exchange markets, and clearing systems immediately change over to euros •Firms and individuals convert to euro under “no compulsion, no prohibition” rule <p>3 years</p>
January 2002	<p>PHASE C: <i>Money exchange, January 1, 2002 to July 1, 2002</i></p> <ul style="list-style-type: none"> •Euro notes and coins appear for the first time •National currencies exist alongside the euro •National currencies cease to be accepted as means of payment on last day of period <p>Max. 6 months</p>

Source: Christian Chabot, *Understanding the Euro: The Clear and Concise Guide to the New Trans-European Economy*, Blacklick, OH, USA: McGraw-Hill Professional Book Group, 1998, p. 7.

3. Economic and Financial Performance of the Euro Area

Following are tables of macroeconomic indicators of the European Union and the Euro Area. Growth rates, employment, unemployment, inflation, international trade volumes and investments are given to discuss the performance of the Euro Area.

3.1. Growth Rates

Economic growth is basically indicated as the increase in the real GDP. In other words, increase of productivity in a given country in given circumstances is accepted as economic growth.

Table 2a:

Growth Rates of European Union Member Countries in Percentage (1965-2004).

1965	1970	1975	1980	1985	1990	1995	2000	2004
------	------	------	------	------	------	------	------	------

Belgium	2,29	6,35	-1,32	4,47	1,65	3,13	2,38	3,84	2,91
France	4,77	5,73	-0,27	1,85	1,93	2,67	2,35	4,06	2,31
Germany	-	-	-1,04	1,27	2,19	5,72	1,89	3,20	1,56
Italy	3,26	5,31	-2,04	3,47	2,97	1,97	2,92	3,02	1,22
Luxembourg	1,92	1,70	-6,57	0,84	2,79	5,31	1,43	9,02	4,54
Netherlands	5,24	5,69	0,17	1,68	2,65	4,06	3,03	3,46	1,43
Denmark	-	-	-1,72	2,56	6,55	0,96	2,75	2,63	2,38
Ireland	-	-	5,65	3,07	3,08	8,46	9,63	9,91	4,87
U.K.	-	-	-0,54	-2,06	3,56	0,75	2,85	3,85	3,13
Greece	-	-	-	-	2,50	0	2,09	4,47	4,16
Portugal	-	-	-	-	-	3,95	4,28	3,37	0,95
Spain	-	-	-	-	-	7,32	4,93	3,42	4,08
Austria	-	-	-	-	-	-	1,90	3,35	2,16
Finland	-	-	-	-	-	-	3,44	5,11	3,66
Sweden	-	-	-	-	-	-	4,05	4,32	3,59

Source: *Compiled From World Bank Database*
Numbers represent annual change rate compared to previous year
(-) represents non-member during the period

In table 2a, growth rates of European Union Member Countries can be seen since their accession to European Union. Growth rates of the countries gained pace with their accession to EU. In 1965s and 1970s growth rates of 5% were reached. In 1973 Denmark, Ireland and United Kingdom joined the Union. During this period, negative values in growth rates were recorded as a result of the oil crises. Starting from 1980s new member countries joined and the economic situation in the Union recovered. Luxembourg was in the forefront during 2000s with the growth rate of 9% and Ireland 9% during 1990, 1995 and 2000.

Table 2b:

Growth rates for Euro Area (13), Japan and USA in Percentage (2000-2007).

Years	2000	2001	2002	2003	2004	2005	2006	2007
Euro Area	3,9	2,0	1,2	1,3	2,5	1,8	3,0	2,9
USA	3,7	0,8	1,6	2,5	3,6	3,1	2,9	2,2(f)
Japan	2,9	0,2	0,3	1,4	2,7	1,9	2,2	2,3(f)

Source: *Compiled From Eurostat*
Numbers represent annual change rate compared to previous year
(f) represents forecast

As seen in table 2b, in the first years of EMU in 2000, the World's economic situation was in a recovery phase of the crises occurred in Asia and Latin America Countries as well as in Russia. Starting from 1998 fall term, financial markets began to develop and a confident environment was created due to relaxation of monetary policies by developed countries. US economy continued to the biggest share in the World economy. Japanese economy also started to recover in the second half of 1999 following a stationary period.

EMU had high growth rates in the first years of integration. Strong institutional structure to regulate macro economic policies and institutional reforms demonstrated its effects in the first three years of EMU. In this period high interest rates that caused limitation for the investments decreased. Structural reforms in the goods, services and labor markets of the member countries helped improve privatization and liberalization efforts and reflected positively on consumer spendings.

Some of the other factors for the increase in growth can be noted as wide information technology use and stock valuation that created a positive climate in the economy. Following these developments growth rate of the Euro area rose beginning from mid 1999. GDP was recorded around 3% until mid 2000. Fast enlargement supported by strong domestic demand and exports.

However, a short interval of decrease followed the increase in 2000. Growth rates followed a falling trend between 2001 and second half of 2002. Increase in the oil prices, September 11 incidents, regulations on the stock prices caused slow down of economic development. Decrease of World's trade volume affected Euro area countries negatively.

In 2001, World economy entered into recession. While it increased 12% the previous year, it went back 2% in 2001. With the valuation of US dollar against Euro, purchasing power in the Euro area weakened. On the other hand, decline of income expectations and downward float of stocks caused consumer confidence loss. Profit margins in the industry shrank and investments lessened. Contrary to shrinking in the World Trade in 2001 and weak growth in 2002, World economy started to recover in 2003. Economic activities stayed at a stationary status in EU. Although consumption increased in this period, GDP growth remained small compared to previous year. Main reason for the decline is the recession in exports and investments mainly. Starting

from third quarter of 2003, Euro area economy started to recover. Growth trend was caught again together with the increased domestic consumption and exports as well as suitable international economic environment. However, GNP increase was obtained at a very limited level.

Economic revival in the World gained pace in 2004. Decline in the interest rates and strong growth rates occurred in developing countries such as China. Growth became stronger with the growth movement in countries China, USA, Australia and new member countries of EU.

Euro area growth rate for 2004 was 2,4. It was recorded as 1,8 in 2005 and 3,0 in 2006. Growth in 2006 had been higher since 2000. Parallel to the world economy, continuous inflation rate fall, supportive financial conditions and improvements in the structural reforms had played an important role on the economic development of the Euro area.³⁵

3.2. *Employment And Unemployment Rates*

Employment rates indicate the annual change of employment rates compared to previous year. As it can be seen in Table 3.

Table 3a:

Employment Rates of European Union Member Countries in Percentage (1965-2004).

	1965	1970	1975	1980	1985	1990	1995	2000	2004
Belgium	*	*	*	*	0,28	-0,01	0,85	1,16	1,54
France	*	*	*	*	0,64	-0,14	0,52	0,60	0,68
Germany	*	*	*	*	0,35	2,81	0	-0,12	1,32
Italy	*	*	*	*	0,44	0,37	-0,37	0,61	-0,28
Luxembourg	*	*	*	*	0,70	2,04	-2,98	3,93	0,94
Netherlands	*	*	*	*	1,61	2,21	2,45	1,71	1,21
Denmark	-	-	-	*	1,77	1,03	1,45	-0,45	-0,93
Ireland	-	-	-	*	1,07	1,24	3,12	3,56	5,24
U.K.	-	-	-	*	0,88	0,32	-0,03	2,30	0,30
Greece	-	-	-	-	0,62	0,49	2,06	0,42	1,87
Portugal	-	-	-	-	-	0,86	0,17	1,54	1,25
Spain	-	-	-	-	-	1,44	0,79	3,0	2,31
Austria	-	-	-	-	-	-	0,84	0,21	-1,69
Finland	-	-	-	-	-	-	0,50	1,08	-1,14
Sweden	-	-	-	-	-	-	1,07	1,88	-0,45

Source; Compiled From World Bank Database

Numbers represent annual change rate compared to previous year

(-) represents non-member during the period

³⁵ OECD Economic Outlook, "Euro Area", Preliminary Edition, 2007, p.1.

(*) represents data non-available in the source

In table 3a employment rates can be seen. Employment rates increase was observed over 1% only in Denmark, Ireland and the Netherlands. Other countries remained behind this ratio. Germany reached 3% employment rate in 1990 while Netherlands and Luxembourg recorded 2% increase. According to EU's average ratio, only Ireland sustained high level employment growth for ten years. However, significant decreases were observed in other member countries in the last ten years.

Table 3b:

Employment Rates of Euro Area (13), USA and Japan in Percentage (2000-2007).

Years	2000	2001	2002	2003	2004	2005	2006	2007
Euro Area	2,5	1,5	0,6	0,4	0,9	0,8	1,4	*
USA	2,0	0,0	-1,1	0,0	1,0	1,6	*	*
Japan	-0,1	-0,6	-1,4	-0,3	0,2	0,4	*	*

Source; Compiled From Eurostat

Numbers represent annual change rate compared to previous year

(*) represents data non-available in the source

Unemployment rates indicate the annual change of unemployment rates compared to previous year. As it can be seen in Table 4.

Table 4a:

Unemployment Rates of European Union Member Countries in Percentage (1965-2004).

	1965	1970	1975	1980	1985	1990	1995	2000	2004
Belgium	*	*	*	*	-11,03	7,19	9,30	6,59	7,40
France	*	*	*	6,09	10,20	9,19	11,60	10	9,08
Germany	*	*	*	*	*	*	8,10	7,80	9,80
Italy	*	*	*	7,59	10,30	11,40	11,50	10,50	8,00
Luxembourg	*	*	*	*	3,00	1,6	2,90	2,40	4,80
Netherlands	*	*	*	4,59	13,10	7,40	7,00	3,30	
Denmark	-	-	-	*	7,80	3,30	7,00	4,50	6,19
Ireland	-	-	-	*	16,70	13,00	12,20	4,30	4,40
U.K.	-	-	-	*	11,30	6,80	8,60	5,50	4,59
Greece	-	-	-	-	7,80	7,00	9,10	11,10	10,20
Portugal	-	-	-	-	-	4,69	7,19	3,90	6,69
Spain						16,00	22,70	13,90	11,00
Austria	-	-	-	-	-	-	3,7	3,59	4,90
Finland	-	-	-	-	-	-	15,4	9,80	8,89

Sweden - - - - - 9,10 5,80 6,50

Source; *Compiled From World Bank Database*

Numbers represent annual change rate compared to previous year

(-) represents non-member during the period

() represents data non-available in the source*

Table 4a shows that the least unemployment rates were seen in Luxembourg with the average of 3% and the highest unemployment rates were seen in Spain with the average of 16 %. Austria ranks in the second with the 4% average in the table. Except for Germany’s unemployment rate of -11,03 in the year 1985 no deviations could be observed.

TABLE 4b:

Unemployment Rates for Euro Area (13), USA and Japan in Percentage (2000-2007).

Years	2000	2001	2002	2003	2004	2005	2006	2007
Euro Area	8,1	7,9	8,3	8,7	8,9	8,6	7,7	*
USA	4,0	4,8	5,8	6,0	5,4	5,1	4,6	*
Japan	4,7	5,0	5,4	5,3	4,7	4,4	4,1	*

Source; *Compiled From Eurostat*

Numbers represent annual change rate compared to previous year

() represents data non-available in the source*

Table 4b includes Euro area, USA and Japan between the years of 2000-2007. It shows 8% unemployment rate in Euro area starting form the year 2000, and 5% for USA and Japan.

Employment growth is one of the main policy principles of EU. In 1999, EU adopted the following principles in order to realize high level sustainable growth and employment;³⁶

- Following strong economic policies for growth, employment and price stability. These policies should be harmonized with the stability and growth pact. Continuous and decent salary increases should be provided.
- Implementing employment principles that improve general functioning of labor markets and shape them according to the conditions of member countries.
- Implementing economic reforms towards improving effectiveness and flexibility of goods, services and capital markets.

³⁶ European Council Resolution of 22 February 1999 on the 1999 Employment Guidelines, *Official Journal C* 069 , 12/03/1999 P. 0002 – 0008, [http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=CELEX:31999Y0312\(01\):EN:HTML](http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=CELEX:31999Y0312(01):EN:HTML)

Employment growth occurred together with the growth of gross domestic product. One of the main reasons for employment increase is structural reforms made in the labor markets. A strong employment increase was observed and unemployment followed a decreasing trend. Employment capacity also improved due to labor market reforms during preparation period 1999-2001 towards Euro. Starting from 2002 growth rate of employment became stable. Later, employment growth increased one percent in each following year; 2003, 2004, 2005 and 2006 in Euro Area. However, Japan and USA could not achieve the same figures.³⁷

As seen in table 4b, labor market reacted slowly to the economic slow down in the world and in EU from 2001. As a result employment increase recorded as 1,5% in 2001 to 0,4% in 2003. Parallel to employment increase in Euro Area, unemployment rate stayed at 8% until mid 2001. Unemployment rate increased to 8,3% in 2002. In the following years, unemployment rates increased as before. In 2004, 2005 and 2006 unemployment rates increased by 8,4%. Contrary to these figures, the same rates in the USA was recorded by 5% and 4,4% in Japan. It shows that unemployment is more common compared to other countries. As the recession in the economy became serious, companies moved towards decreasing the number of employers in order to sustain their profitability.

March 2000, Lisbon summit is an important meeting of EU where total employment rates and female employment rates objectives were defined as part of a plan to become world's biggest knowledge based economy. One year later new targets for mid-terms and total employment rates were put forward. According to the targets;³⁸

- Total employment rate will be closer to 70% by 2010 and will be around 67% by 2005.
- Female employment rate will be more than 60% by 2010 and will be 57% by 2005.
- Employment rate for older workers will be 50% by 2010

Five years after setting these targets, it can be seen that no significant improvements have been recorded. Ratio increased from 62,5% to 64,4% between 1999 to 2003. Employment rate of older workers for which 60%

³⁷ *European Union Economic Pocketbook*, European Union Commission, KS-CZ-07-01, Luxembourg, 2007, pp. 106-107.

³⁸ <http://www.europarl.europa.eu/highlights/en/1001.html>

was targeted by 2010 was 40% in 2003. However, partial improvements were recorded in labor productivity. Economic slowdown affected social integration issues negatively even made them worse and more complex. It especially affected national and regional employment and employment performance. Employment growth and productivity increase in the EU depends on the advanced level structural reforms in goods, services and financial markets besides labor markets.

3.3. Inflation Rates

Inflation rates indicate the annual change of inflation rates compared to previous year. As it can be seen in Table 5.

Table 5a:

Inflation Rates of European Union Member Countries in Percentage (1965-2004).

	1965	1970	1975	1980	1985	1990	1995	2000	2004
Belgium	6,39	4,54	12,15	4,09	4,62	2,81	1,22	1,26	2,28
France	2,73	5,63	12,97	10,78	5,45	2,17	1,02	1,35	1,63
Germany	*	*	5,46	4,77	2,16	3,21	1,87	-0,67	0,38
Italy	4,19	6,86	16,46	21,35	8,91	8,22	5,02	2,19	2,61
Luxembourg	2,79	15,09	-0,85	7,92	3,09	2,51	2,33	4,15	2,47
Netherlands	6,11	6,17	10,19	5,49	1,80	2,22	2,02	3,94	1,19
Denmark	-	-	13,84	8,06	4,92	3,65	1,75	2,97	1,59
Ireland	-	-	20,13	8,06	4,92	3,65	1,75	2,97	1,59
U.K.	-	-	26,99	14,70	5,18	-0,72	3,03	4,81	3,48
Greece	-	-	-	-	19,02	20,69	9,79	3,37	3,38
Portugal	-	-	-	-	-	13,14	3,42	3,46	2,51
Spain	-	-	-	-	-	7,32	4,93	3,42	4,08
Austria	-	-	-	-	-	-	1,94	1,76	1,90
Finland	-	-	-	-	-	-	4,77	3,18	0,77
Sweden	-	-	-	-	-	-	3,37	1,31	0,77

Source; Compiled From World Bank Database
Numbers represent annual change rate compared to previous year
(-) represents non-member during the period

(*) represents data non-available in the source

Following the oil crises in 1973 inflation rates of European Union countries remained over 10%. It can be seen in table 5a, that the Euro area countries have kept their inflation rates at acceptable rates (according to Maastricht criteria) since 1985. However, Italy and Greece could not show the same performance during those years. Their inflation rates were realized as 8,91% and 19,02%. Italy with the inflation rate of 8,22% in 1990 had similar inflation rates like Greece with the inflation rate of 20,69% and Portugal with the inflation rate of 13,44%. Starting from 2000 these countries also achieved the inflation rate targets. One of the significant issues here is that the European Union membership and its support helped these countries eliminate the risk of high inflation rates. Italy's problematic situation results from its own failure of structural reforms.

Table 5b:

Inflation Rates for Euro Area (13), USA and Japan in Percentage (2000-2007).

Years	2000	2001	2002	2003	2004	2005	2006	2007
Euro Area	2,1	2,3	2,2	2,1	2,1	2,2	2,2	*
USA	3,4	2,8	1,6	2,3	2,7	3,4	*	*
Japan	-0,7	-0,7	-0,9	-0,3	0	-0,3	*	*

Source; Compiled From Eurostat

Numbers represent annual change rate compared to previous year

(*) represents data non-available in the source

Price stability stands in the forefront in the implementation of Euro area monetary policy of European Central Bank. Reducing annual inflation (harmonized consumer price indices) below 2% level is one of the major targets of European Central Bank (ECB).

As it can be seen in table 5b, inflation rate stayed above target level between 2000-2006 period. It was caused by sudden price increases in the Euro area. Contrary to short term price increases, inflation estimations remained low and suitable to European Central Bank's price stability targets. With regard to general monetary policy, ECB created a stable macroeconomic environment by its commitment to price stability. Stable macroeconomic environment is crucial for EMU's long term economic performance.

In the first year of EMU's third phase in 1999, inflation remained at low levels, starting from 2000 consumer prices exceeded 2% margin. In the increase of consumer prices, price volatility of import goods and food were effective. Oil prices went up in 1999-2006. However, Euro lost value against currencies of its commercial partners until 2004. Therefore inflation followed an increasing trend from mid-2000 to first quarter of 2003. In 2001 it reached its highest level 2,3. However recorded inflation rates in July met the criteria of ECB on the 2% mid-term inflation target. Inflation rate was recorded as 2,1% at the end of the year. Inflation rates in the years 2004, 2005 and 2006 were observed at close levels to each other.

Euro area average was recorded as 2,1%. Although there had been price increases, inflation rate was sustained just above 2% which was targeted by ECB. This ratio was 2,2% in the years 2005 and 2006. However, Japan had negative inflation ratios whereas the US economy recorded higher inflation rates compared to Euro Area.

3.4. Foreign Trade, Export and Import Volumes

Following part of the study includes exports and imports volume of the European Union and the Euro Area as well as Japan and the USA.

3.4.1. Exports

Exports rates indicate the annual volume change of exports compared to previous year. As it can be seen in Table 6.

Table 6a:

Export Rates of European Union Member Countries in Percentage (1965-2004).

	1965	1970	1975	1980	1985	1990	1995	2000	2004
Belgium	8,50	9,27	-9,03	-0,15	0,33	4,37	4,75	7,74	5,44
France	-	13,88	-1,71	2,69	2,06	3,95	7,57	11,06	2,96
Germany	-	-	-6,10	5,16	6,83	11,69	5,96	11,91	8,22
Italy	-	5,50	1,46	-9,44	3,71	6,98	11,18	8,81	3,07
Luxembourg	-	8,28	-18,70	-1,46	8,08	5,29	4,37	14,76	7,58
Netherlands	-	10,60	-3,13	2,01	4,88	5,28	8,07	10,16	7,67
Denmark	-	-	-1,37	6,02	4,73	5,81	2,67	11,90	3,83
Ireland	-	-	7,02	5,97	6,17	8,02	16,63	16,92	4,21
U.K.	-	-	-2,98	-0,32	5,65	5,17	8,47	8,62	2,92
Greece	-	-	-	-	1,79	-3,59	2,91	12,37	9,11
Portugal	-	-	-	-	-	8,66	8,12	7,22	4,43
Spain	-	-	-	-	-	4,48	8,59	9,13	2,65
Austria	-	-	-	-	-	-	4,16	7,25	3,66
Finland	-	-	-	-	-	-	5,58	5,60	2,79

Sweden - - - - - 2,33 6,64 4,16

Source; Compiled From World Bank Database

Numbers represent annual change rate compared to previous year

(-) represents non-member during the period

Table 6a shows the exports rates of member countries. It is seen that exports rates increase shrank during 1975 because of the oil crises. Moreover, except for Ireland and Italy exports rates remained at minus rates during those years. Exports rates increases seen in France, Germany, the Netherlands, Denmark and Ireland in 1980 resulted in the recovery of 12 countries in 1985. While Belgium and France recorded low levels of increase and except for Greece's -3,59% in 1990 exports rates remained at average 5% levels. Germany's 11,69% export rate of 1990 is significant. Besides Ireland also recorded significant rates with 16,33% in 1995 and 16,63% in 2000. Germany with the rate of %8,22 and Greece with the rate of %9,11 are successful countries of the year 2004.

Table 6b:

Export Rates for Euro Area (13), USA and Japan in Percentage (2000-2007).

Years	2000	2001	2002	2003	2004	2005	2006	2007
Euro Area	12,2	3,7	1,7	1,1	6,9	4,2	8,3	6,7(f)
USA	8,7	-5,4	-2,3	1,3	9,2	6,8	8,9	7,0(f)
Japan	12,7	-6,9	7,5	9,2	13,9	7,0	9,6	7,3(f)

Source; Compiled From Eurostat

Numbers represent annual change rate compared to previous year

(f) represents forecast

High export rates of 2000 reversed during the years 2001,2002, and 2003. Yet a new increase trend can be observed starting from the year 2004. Same situation can also be seen in Japan and the USA. Following the loss of value of US dollar against Euro in 2003, it is seen that the US exports increased at high rates.

3.4.2. Imports

Imports rates indicate the annual volume change of imports compared to previous year. As it can be seen in Table 7.

Table 7a:

Import Rates of European Union Member Countries in Percentage (1965-2004).

	1965	1970	1975	1980	1985	1990	1995	2000	2004
Belgium	-	7,10	-9,98	-1,95	0,40	4,64	4,44	7,80	5,68
France	-	5,89	-10,72	4,73	4,33	5,30	6,56	12,99	6,43
Germany	-	-	3,43	2,71	3,64	9,69	6,11	9,22	6,31
Italy	-	13,80	-13,52	5,19	4,99	10,28	8,80	6,65	2,44
Luxembourg	-	15,96	-9,90	3,74	6,13	4,76	4,06	13,34	6,35
Netherlands	-	12,80	-3,85	0,15	6,06	3,64	9,51	9,52	7,01
Denmark	-	-	-3,36	-5,90	8,82	1,20	6,68	11,93	6,91
Ireland	-	-	-11,37	-4,70	3,14	4,83	14,09	17,53	2,60
U.K.	-	-	-6,99	-3,57	2,45	0,53	5,26	8,35	4,95
Greece	-	-	-	-	3,64	9,69	6,11	9,22	6,31
Portugal	-	-	-	-	-	12,66	6,90	5,23	6,45
Spain	-	-	-	-	-	8,77	9,96	9,53	7,38
Austria	-	-	-	-	-	-	-1,03	5,71	4,19
Finland	-	-	-	-	-	-	-3,81	1,42	8,57
Sweden	-	-	-	-	-	-	-5,60	5,38	7,07

Source; Compiled From World Bank Database

Numbers represent annual change rate compared to previous year

(-) represents non-member during the period

Table 7a shows import rates. High import rates of 1970 in Italy and Luxembourg and the Netherlands as 13,80%, 15,96% and 12,80% reversed and recorded at negative levels due to recession in the world economic markets in 1975. After the second oil crises in 1975 negative figures were recorded again. Positive import rates were seen again in 2000 and 2004. Ireland's import rates for 1995 and 2000 as 14,09% and 17,53% are significant.

Table 7b:

Import Rates for Euro Area (13), USA and Japan in Percentage (2000-2007).

Years	2000	2001	2002	2003	2004	2005	2006	2007
Euro Area	11,0	1,8	0,3	3,1	6,8	5,0	7,9	6,7(f)
USA	13,1	-2,7	3,4	4,1	10,8	6,1	5,8	3,2(f)

Japan 9,2 0,6 0,9 3,9 8,1 5,8 4,5 7,3(f)

Source; Compiled From Eurostat
 Numbers represent annual change rate compared to previous year
 (f) represents forecast

Table 7b shows import rates for euro area. World’s trade volume demonstrated 8% increase during 1996-2000 period. due to import demand increase of the World and Euro’s value loss against US dolar, Euro area goods and services exports increased. However, increase of oil prices, US import decrease, low demand both in and out of Euro area caused stationary economic status starting from 2001. Export rate increases had been at low levels during 2002. Net exports decreased 18%, due to increase in USdollar/ Euro real exchange rate and weak export volume of the World.

Net exports did not have significant effect on the growth until mid 2003. Outlook of Euro area on the exports item reflect the slow down of World imports. Other countries exports performance were better than Euro area. Weakened price competitiveness in the short term stated as a reason for this issue. Euro exports loss in the short term reversed again with the mid-term regulations.

Like the exports, 2000 is the year of increase in imports. High rates of imports in 2000 was in the fore of the increases during 2004-2005 and 2006.

3.5. Investments

Investment rates indicate the annual volume change of investments compared to previous year. As it can be seen in Table 8.

Table 8a:
 Investment Rates of European Union Member Countries in Percentage (1965-2004).

	1965	1970	1975	1980	1985	1990	1995	2000	2004
Belgium	*	*	*	*	0,28	-0,01	0,85	1,16	1,54
France	*	*	-6,89	3,62	2,57	4,75	1,80	6,71	2,40
Germany	*	*	-4,81	1,87	-0,18	7,19	-0,20	2,92	-0,48

Italy	*	2,94	-5,49	2,89	0,39	3,87	5,64	6,49	2,01
Luxembourg	*	6,96	-8,02	11,27	-10,50	3,26	-1,53	-3,64	3,34
Netherlands	*	*	-4,00	0,18	6,31	2,48	3,97	1,35	2,40
Denmark	-	-	-13,21	-13,79	12,53	-2,27	10,42	6,66	4,51
Ireland	-	-	-3,74	-4,95	-8,35	11,81	13,63	7,05	8,38
U.K.	-	-	-1,92	-4,98	3,95	-2,62	2,97	3,49	5,33
Greece	-	-	-	-	-0,18	7,19	-0,20	2,92	-0,48
Portugal	-	-	-	-	-	7,06	6,14	3,64	1,26
Spain	-	-	-	-	-	6,06	7,18	5,39	4,25
Austria	-	-	-	-	-	-	-0,01	-1,99	4,32
Finland	-	-	-	-	-	-	1,54	-1,99	4,32
Sweden	-	-	-	-	-	-	6,16	6,92	7,37

Source; Compiled From World Bank Database

Numbers represent annual change rate compared to previous year

(-) represents non-member during the period

(*) represents data non-available in the source

When the investments are looked in table 8a, of member countries, negative values are seen during 1975s. Denmark with the rate of %13,79 has the highest rate during 1980 while Ireland and England have negative values. Luxembourg's top rate of 11,27% is significant in the same year. Yet it had the worse results in 1985 with the rate of -10,50%. In the following period starting from 1990 Ireland showed significant investment rates. New members, Austria and Finland demonstrate low levels of investment rates.

Table 8b:

Investment Rates for Euro Area (13), USA and Japan in Percentage (2000-2007).

Years	2000	2001	2002	2003	2004	2005	2006	2007
Euro Area	5,0	0,5	-1,5	1,1	2,3	2,6	4,9	4,4(f)
USA	6,1	-1,8	-3,5	3,2	6,1	6,4	3,1	-1,2(f)
Japan	1,2	-0,9	-4,9	-0,5	1,4	2,4	3,4	5,1(f)

Source; Compiled From Eurostat

Numbers represent annual change rate compared to previous year

(f) represents forecast

Public an private investments play a significant role on the Euro area's growth potential. Economic and monetary union provide great opportunities for investment increases in the Euro area. As a complementary instrument to single market programme, Euro strenghtens competiton and decrease exchange rate risks. The more financial markets integrate by single money the more foreign investments

by companies should be expected. At the economic policy level, it should be said that monetary and structural reforms be faster, decrease interest rates with the reduction of public deficits and create a suitable environment for the investors.

As seen in table 8b, following the global economic slow down investments in the EU shrank. Except for the last quarter of 2002 and 2003 investments were recorded at low levels. Euro area and US economy have better results in 2000 while Japan is forecasted to have a %5 investment increase for the year 2007. US economy is forecasted to have a reverse investment rate of -1,2% for the year 2007.

Conclusion

Finally, European Union is a supranational organization established among European Countries to provide peace and prosperity in the region. Certainly it proved to be a successful partnership so far. In progress, it is hoped to form a “Federal Unity” for countries under its umbrella. Monetary and economic integration has little to do with economics and far more to do with politics and history. Centuries of war in Europe have led a generation of its leaders to see that only a federation of western Europe can make it impossible for such chaos and pain. The EMU is a huge step on the road to that federation.

Statistics put forward the response given to the integration by the member countries. The Union demonstrated high growth rates in the first years of integration. Due to world’s economic situation and serious incidents such as Iraq and increases of oil prices high growth rates could not be obtained during the following years. For the last three years unemployment remained at 7% levels.

Inflation rate and price stability targets of the Euro area which were the main objectives of the integration movement stated in Maastricht Agreement have always remained at the forecasted levels and they did not cause a serious problem with regard to the Union’s economic situation. Yet there had been price increases that caused inflation rates just above 2% for some years.

Macro economic statistics of the Union and EMU area demonstrate in general that the new formation have found a place in the world markets. Although, some significant objectives were realized, there is a stabile economic situation in the Union and it is seen that the results are promising.

Successful implementation of the EU Commission's plans towards integration will open a new dimension to the integration process for the future. Starting from the 1950s, this ongoing planned movement will certainly complete its mission with a Federal State in the near future.

THE EFFECTS OF DEVELOPMENT IN INFORMATION TECHNOLOGIES ON THE PRODUCTIVITY OF BUSINESS ENTERPRISES

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ABSTRACT

Information and information technologies are the main items of the new economic order, and in that order, the firms have to increase their productivities for standing in the competitive sector. After increasing the information technologies investments, the firms can restructure their organization structures and management models, decrease their costs greatly and make their personals more effective and qualified. All that positive activities enable the firms to increase their productivities and to have a more powerful position economically.

Keywords: **Information Technologies, Productivity, Productivity for the Enterprises.**

GİRİŞ

With the globalization fact that has been felt denser since 1980s in particular, there have been crucial changes within the social and economic life in the contemporary world. One of the most important changes is the transition from being an industrial society to being an information society. Thanks to this, there have been transitions from traditional approaches to information economies supported with technology and for the enterprises, there have arrived a new process in which traditional approaches are replaced with information and technology based strategies. This status have led the enterprises weigh on research and development activities and innovative technologies more, and made way for investing on information technologies within the production process in escalating amounts other than labor, soil, capital and traditional production factors.

With the use of local networks, broad communication networks and sophisticated computer networks such as internet within the enterprises and commercial life, the strategies of the enterprises are being reorganized according to the economic orders, and the organization structures are being developed with the support of technology. These developments provide the enterprises with advantages such as being able to work more efficiently, spend less and use the man power more productively. It is observed that information technologies and various technologic innovations are the foundation of this process that accelerated after 1990's in particular.

Information technologies, defined as accumulation, processing, safekeeping of information and transferring information to somewhere or reaching this information from somewhere, strengthen the relationships and loyalty between the suppliers of the enterprises and their customers as well as contributing to a new process leading to productivity growth by effecting enterprise strategies immensely. Within this process, enterprises restructure their strategies, organizational schemes and executive systems; turn their employees into more qualified workers while decreasing their number, and the most important of all, they can reduce expenses concerning all the stages of production. In a manner of speaking, all these developments increase the productivity of the enterprises.

Within this study, after referring to the basic facts that will enable a better understanding of information technologies, there will be a general evaluation of information technologies concept and the development of these technologies will be mentioned according to their periods. After the productivity issue, which is extremely important both individually and institutionally, is evaluated within the enterprises' aspect, the relationships between information technologies and the productivity of the enterprises will be detailed. The effects of information technologies over the strategies of enterprises, their organizational, personnel and financial structures will be presented within this context.

1. Information Technologies and Their Development

As information society replaces industrial society, individuals, firms, sectors, economies, to sum up, all the fields of socioeconomic life are being reconstructed in an important extent. In this new era, the leading factors of industrial society, labor and capital, are losing their

importance, and information and knowledge based technologies are taking their places.

In today's world, where information is gaining more and more importance within economic and social life, the source of economic development is changing from tangible capital to manpower that can process and produce knowledge, science and technology are gaining more and more importance, and search and development activities are becoming the main determining factor in productivity process. The rapid technologic developments, led by computer networks and internet, in the information and communication technologies are being solutions to the geographical distances between buyers and sellers and thus, enlarging the consumption areas, the markets that is, and providing them an international characteristic. Today, for the developed countries in particular, knowledge assets like knowledge, money, patent, copyright, brain power, experience etc. are becoming more important than tangible capital means such as money, labor, equipment, energy, factory etc. and we are going through an era where the first one plays an effective role.²⁵⁶

1.a. Main Facts Concerning Information Technologies

Before explaining information technologies concept, it will be useful to explain informatics, knowledge, technology, computer networks and knowledge society, which are elements directly related to the topic.

1.a.i. Informatics

It is the useful, meaningful and organized state of raw facts and figures that are used in information production and are suitable for illation.²⁵⁷ Informatics, with its most common form, is the processing of information, safekeeping it by storing, transferring the information by means of the easiest and fastest way and providing the information flow. This process constitutes the starting point of information technologies at the same time.²⁵⁸

1.a.ii. Information

Information, an informatics group and understanding how to get use of this informatics the best way, is the main input of administration

²⁵⁶ Arzu Akolaş, 'Bilişim Sistemleri ve Bilişim Teknolojisinin Küreselleşme Olgusu ve Küreselleşme Üzerine Yansımaları', *Selçuk Üniversitesi Sosyal Bilimler Enstitüsü Dergisi*, (Vol.:12, 2004), p. 8.

²⁵⁷ H. Bahadır Akın, 'Bilişim Teknolojilerinin Evrimi ve Bilişim Teknolojilerinin Çağdaş İşletmelerde Stratejik Yönetim Üzerindeki Etkileri', *Çukurova Üni. İİBF Dergisi*, (8-1, 1998), pp. 239-240.

²⁵⁸ Sabahat Bayrak Kök, 'Bilişim Teknolojilerinin Yönetmel ve Örgütsel Etkileri', *Ticaret ve Turizm Eğitim Fakültesi Dergisi*, (Vol.: 2, Year: 2006), p. 125.

and organization processes and seen as the most strategic source of social and economic life in the contemporary world.²⁵⁹ The big revolutions and crucial developments that took place with the help of technology in the information field has played the major role in the transition from traditional sectors (iron and steel sector etc.) that require a lot of energy and based on mass production to industries that are bottomed on advanced technology and flexible production (micro electronics etc.). In these new industries information is more important than raw materials and man power.²⁶⁰

1.a.iii. Technology

Technology, the ways and methods people use during production activities and all the methods people possess and use to change their environment, includes different techniques and their information, products manufactured via that information and the creation process of this products.²⁶¹ Technology is the application of information and information based methods in order to conduct any kind of work. If the information and the information based method let one save time for some particular work, technologic development can be mentioned. Technology and development supported by technology, which are two of the most important factors that led the industrial revolution to be experienced together with capitalism, are the main factors for the information society process to exist as information technologies have come into the production tools field and all other fields of life.²⁶²

1.a.iv. Computer Networks

In its simplest meaning, network means communication between people. The computers, connected to each other through computer networks and using real-time fast communication systems, provides important opportunities in uniting the control systems both within the companies and among the companies, and in shortening and detailing the time. While computer networks provide horizontal connections among the functions that are geographically located in different places, they

²⁵⁹ Bayrak, 'Bilişim...', p. 124.

²⁶⁰ Akolaş, 'Bilişim...', p. 38.

²⁶¹ Mikail Erol, Metin Atmaca and Levent Şahin, 'Bilişim Teknolojilerindeki Gelişmelerin Muhasebe Meslek Elemanlarının (SM-SMMM-YMM) Mesleki Faaliyetlerine Olan Etkileri ve Ampirik Bir Çalışma', *Muhasebe ve Denetim Bakış*, (Vol.:13, Year:4, September 2004), p. 32.

²⁶² İsmail Hakkı Yücel, *Türkiye'de Bilim Teknoloji Politikaları ve İktisadi Gelişiminin Yönü*, (Ankara: DPT, Number: 2690, 2006), p. 8.

contribute to a vertical integration between strategic administration and functional administration within the organization.²⁶³

There are three types of computer networks; local area networks (LAN), wide area networks (WAN) and internet.²⁶⁴

1. Local area networks are the most effective and low cost computer networks that can be used when a small number of users need to connect to each other often or for long term. These networks are usually used for providing information transfer among the units within the enterprise or the individuals.
2. Wide area networks are the networks used for connecting the remote users to each other.
3. The birth of internet, which provides information sharing through computer networks, was a consequence of the developments in military technologies as in many other technologic developments. The United States of America planted the seeds of internet within DARPA (Defense Advanced Research Project Agency) project after 1960's during the cold-hot war times against Russia, Cuba and Vietnam in order to be able to maintain communication in case of a atomic war. Later on, the meaning of internet evolved and it has become an academic medium that lets a lot of scientists in the world communicate and a commercial field. Together with the day by day increasing interest, the existing commerce fields have moved to the virtual world giving rise to new commerce fields both for the companies and the customers. Besides this, the markets have widened since the commerce fields easily reached everywhere in the world thanks to internet and this triggered globalization in the economic aspect. Today, internet provides a lot more than commerce; information concerning medicine, culture, art, education and many other fields are offered for individuals to use.²⁶⁵

²⁶³ Akın, 'Bilişim...', pp. 242-243.

²⁶⁴ Erol, Atmaca and Şahin, 'Bilişim...', p. 33.

²⁶⁵ İzzet Uslu, 'Küresel Pazar ve Elektronik Ticaret', http://www.bilgionetimi.org/cm/pages/mkl_gos.php?nt=458, p. 9, 21.01.2006.

Computer networks remove the hindrances to communication and cooperation, and supports synergy formation and joint entrepreneurship within enterprises. As a consequence of increasing networking, the controlling and commanding activities are lessening and becoming easier, the hierarchy is weakening and thus computer networks are affecting the structural, technologic and cultural dimensions of the change in different extents. According to this;²⁶⁶

1. Structural Change: Together with the spreading of computer networks, the general structure of the organization turns into a flexible, reactive and flowing shape. Within this structure, the information technology removes functional borders and contributes to the formation of dynamic and self-governing groups. In the field that concerns the relationships among companies, computer networks are weakening the exterior boundaries and providing an opportunity for virtual enterprises to be able have continuous communication both with their customers and their suppliers and see the opportunities within the rapidly changing markets.

2. Technological Change: As the computer and communication technologies develop, the computer networks are developing even more and gain even more importance for the enterprises. Together with technologic developments, computer networks are playing a key role in coordinating and controlling the production and distribution in different geographical regions.

3. Cultural Change: The success within the application process of enterprises depends on the character and method of the administration, and the personality and activities of the administrators. It is essential that the administrators analyze the information extremely good. The administrators have to adopt and carry out an approach in which they pave way for their employees to be able move more flexible to provide more efficient reactions for the customers' demands, to improve themselves and to improve their skills to learn by themselves.

1.a.v. Information Society

As information was accumulated, processed, transferred, used and there became big advances in production aimed technologies, a new society order emerged where people were running after innovation and creativity in all the fields and they had the inclination of competing with

²⁶⁶ Akın, 'Bilişim...', p. 243.

each other. The individuals living in this new era called information society were able to read all the information that a 17th century man could have gotten throughout a life time, inside the pages of a newspaper in one day. It can be explained as; the demands of the information society individuals from this new order have increased in parallel with technologic development.²⁶⁷

Today, in the developed countries, a rapid transition process is actualizing from information to information economics where there are industry and services based on intensive production. The main features of these economies, where information is dominant in all fields, can be lined up as below:²⁶⁸

1. Technologic development based on search and development,
2. The rapid growing intensive information and informatics activities,
3. As a consequence of intensive search and development, the reduction in time for the product to enter the market,
4. The convenience communication provides and the rapid globalization as the result,
5. The increase in the integrity of the products.

In traditional economies, while production functions are focused on laborers, capital, energy and raw material, information and technology are considered as production means that are effecting the production from the outside. For the information based economies, information is considered as a function that is effecting the production more directly. And this means; especially within the developed countries, the basis of leadership depends more on brain power and information-intensive technologies assisted by it than financial sovereignty or traditional cost advantages. Within this scheme, the enterprises are reconstructing their organizations setting out from a conjecture in which the world economy is dependent on competition and the ones who can shorten the life span of their products the most effectively will survive.²⁶⁹

1.b. The Concept of Information Technologies

²⁶⁷ Haldun Akpınar, *Daha Hızlı, Daha Güçlü, Daha Yüksek*, (Ankara: Türkiye Bankalar Birliği, No: 172, 1993), p. 4.

²⁶⁸ Yücel, 'Türkiye'de...', p. 84.

²⁶⁹ Yücel, 'Türkiye'de...', p. 63.

The developments in computer and communication technologies are continuously effecting and changing the activities of the enterprises in cost, time, quality and service aspects. Especially, while the advancements in information technologies are causing radical changes within the structure of enterprises, they provide new opportunities such as letting the enterprises enter new markets, present their products and services, enhance the productivity of their process, bring them new customers and strengthen the loyalty of the existing customers.²⁷⁰

Within the new economic order where information is the main element, various definitions are being made for the information technologies that provide many kinds of opportunities for the enterprises. According to a definition, information technologies are defined as the technologies that accumulate, process, safe keep the information and when necessary transfer this information to somewhere or reach this information from somewhere. In another definition, the technologies serving for the accumulation, safekeeping, processing of information, reaching and delivering it, all of the applications and services, and all the information in the system are named as information technologies.²⁷¹

The root is defined as the technology applications that provide the operation processes of the enterprises by redounding information and data to the decision maker administrators of the enterprises.²⁷²

As technology has gained effectiveness in people's daily lives together with its acceptance in social and economic life, the accumulation of technologic information (new inventions and innovations, the information including r&d studies) has gradually increased, the number of patents of scientific articles have reached incalculable numbers. Considering this, the significant changes both in the meaning and the usage of information make us think in future, the information will be solely numerical. Because, once the numerical information is stored, it can be called, compared and reformed through personal computers by all the users who has the accessing authority. This situation makes it compulsory that mediums bottomed on information technologies to

²⁷⁰ Mike Papazoglou and Aphrodite Tsalgatidou, 'Business-to-Business Electronic Commerce Issues and Solutions', *Decision Support Systems*, (Vol. 29, 2000), p. 301.

²⁷¹ Halil Elibol, 'Bilişim Teknolojileri Kullanımının İşletmelerin Organizasyon Yapıları Üzerindeki Etkileri', http://www.sosyalbil.selcuk.edu.tr/sos_mak/makaleler%5CHalil%20EL%20EL%20C4%B0BOL%5C155-162.pdf_p.157,10.04.2007.

²⁷² K k, 'Bilişim...', p. 125.

provide productive and efficient information usage, communication and deliver it to all the sections of the society be formed. Within this context, when the information technology concept is considered, it can be seen that all the equipments (computer, data accumulating means, network and communication means), applications and services that are developing in a rapid pace and used for providing information to enterprises and individuals are being intended.²⁷³

I.c. The Development of Information Technologies

The realization of the importance of the information technologies and for it to become widespread have started in 1950's when the computers were shifted to commercial field and used effectively. Through this process, the evolution of information technologies have actualized in three stages basically. These periods can be mentioned as data processing period, micro period and the network period that has gained pace in 2000's:²⁷⁴

1. Data Processing Period: During the data processing period that lasted about 20 years between 1960 and 1980, main computers, and hardwares and softwares connected to them have been the main elements. In this period, the enterprises get use of computer systems in sublevel accountancy and the automation of the factory works. The main application of this period is the usage of computers for the existing organizations to provide more efficiency; which is "automation". As a consequence of automation, the number of blue collar workers started to decrease considerably in the early 1970's and this process continued in the 1980's.

2. Micro Period: During the data processing period, the struggles of the professionals (information workers) in middle stages to shift to automation failed in an important extent because of the insufficiency of hardware and software in particular. The new paradigm formed for these demands to be supplied and spread the information technologies to more fields in the enterprises is described with the word "informaté". The difference of this period from data processing period is the usage of computers to help professionals unlike the automation process that would replace middle staged administrators. The micro computers made the development of the micro period possible. These computers were

²⁷³ Akolaş, 'Bilişim...', p. 33.

²⁷⁴ Akın, 'Bilişim...', pp. 240-241.

enabling people use computers even though they don't know the programming language and they had graphic interfaces. In this period, the usage of computers spread among individuals as well. The start of the period is late 1970's and early 1980's. The first electronic chip was invented by Intel firm in 1971. Due to the advancements in micro technologies, the effects of micro computers are being felt and from consumer electronics to cars and credits cards, almost in all the products micro processors are being used.

3. Network Period: The growing investments in the fields such as the automation of sublevel works, supporting the information workers and advancing the services have constituted a basis for the networks to be set up and spread. Today, the transforming effects of both local and wide area networks are being felt in many fields. In the enterprises, the fast and efficient communication of the employees in all the posts, together with this, the interactive information traffic with the rivals outside the enterprise, ancillary industries and customers over the network, bring a lot of changes both organizational and sectoral.

Since all the countries in the world, especially the developed ones, have increased their investments on information technologies, the expenditure made on this sector has reached an important level in these countries' GDP. Especially, together with the development in the newly growing economies, the demand for information and communication technologies in the world has increased as well as the investments and between the years 2000-2005, there emerged a %5.6 growth rate worldwide. In this field, it is mentioned that China's information and communication technologies expenditures have increased %22 per year in American Dollars and reached 118 billion in 2005. In addition to China, the fastest increase rates took place in Russia with %25 and in India with %23. Since Indonesia, South Africa and East Europe are among the countries whose investments have increased a lot, it is apparent that the investments on technology are not just peculiar to developed countries.²⁷⁵

Due to the increasing importance of new technologies within economic and social life, every year the European Commission publishes a report and index (European Trend Chart on Innovation) evaluating the

²⁷⁵ OECD, *OECD Information Technology Outlook: 2006 Edition*, (OECD 2006: <http://www.oecd.org/dataoecd/15/30/37826938.pdf>), 21.04.2007.

innovation performances of the member and partner countries according to the Lisbon Strategy. In the report, the countries are classified as “Leading Countries”, “Average Performance”, “Catching Up” and “Losing Ground”. According to the results of 2005 report; Turkey is in the “losers” club together with Estonia, Spain, Bulgaria, Poland, Slovakia and Romania and is in the last place in the index with 0.06 point. The second worst Romania has 0.16 points while the leader country of the index and thus the one who cares about information and communication technologies the most is Sweden with 0.72 point. The report anticipates that the time needed to reach the Europe average is 20 years for the “Catching Up” group and over 50 years for the “Losing Ground”. This is an important indicator that shows how much our country has fallen behind in this field.²⁷⁶

On the other hand, United States of America is the world’s leading country regarding information technologies investments. Her yearly increase rate in information technology is higher than many other sectors. In 2004, the merchandise and goods production industry gained %3.1 value, service industry gained %5.1 value in American economy whereas information technologies gained a real value of %14.7 which is much more higher than the other sectors and this displays the facts clearly.²⁷⁷

If we check how the status of the American economy in general reflected to the enterprises in the country, we can see the investments made on information technologies increased about %28 per year between the period 1987-1999. It is found out that this rate, for the same period, is greater than the annual rate of investments made on labor factor, capital and all other fields other than information technologies. This status clearly proves the importance enterprises give to information technologies in America.²⁷⁸

2. Productivity For The Enterprises

It is possible for the enterprises to get more quality and much more output by increasing the amount or the types of any of the

²⁷⁶ European Commission, *European Innovation Scoreboard 2005: European Trend Chart on Innovation*, (Brussels: 2005), pp. 12-13.

²⁷⁷ Marco Iansiti and Gregory L. Richards, ‘The Information Technology Ecosystem: Structure, Health and Performance’, *The Antitrust Bulletin*, (Vol. 51, No. 1, Spring 2006), p. 89.

²⁷⁸ Ronald Vincent Ramirez, *The Influence of Information Technology and Organizational Improvement Efforts on the Performance of Firms*, (Ann Arbor: ProQuest Information and Learning Company, 2003), p. 118.

production factors consisting of labor, capital, soil and natural resources or changing these. And this means an increase in productivity. A possible increase in the productivity will lessen the costs, if this money is returned to public it will serve for all the individuals, if the income is shared with the workers as well, the employees of the enterprise and their families will benefit. In other words, it will serve for the social welfare. And this portrays the importance of productivity for the enterprises as well as individuals and society.²⁷⁹

2.a. Definition and Importance

There are two main definitions concerning productivity. The first one is a comprehensive one. It is explained as a rationalist life style having the aim of actualizing productivity and the right things in a right way and by conducting an economic study. It is not possible to define and evaluate such a huge productivity concept introducing simple relationships and commenting on the results. Even an enterprise level study requires the targets and post to be determined in the enterprises, the production resources to be provided, all the administrative functions concerning the usage of these, and the interaction and results among all the production resources to be determined and interpreted.²⁸⁰

Since considering productivity at this huge dimension comes together with describing and evaluating problems, the topic is approached with a narrower extent and by handling productivity within the enterprise level, a productivity definition is made taking the inputs and outputs within the production process as a basis. Thus, productivity is expressing the relationship between the input for the production and the outputs after the production and means producing by evaluating the resources the best and most efficient way.²⁸¹ Therefore, productivity is technically described as “the ratio between the product and services amount, and the expenditures made for this product and services and generally this ratio is formulized as output/input. However, since the fields other than economy are being subject to increasing amounts of

²⁷⁹ Kwang Sun Lim, Soo Cheon Kweon and Hyoun Jong Kim, ‘Productivity and Economic Performance of Information Technology’, *Technology and Society*, (June 1997), p. 262.

²⁸⁰ Zühal Akal, *İşletmelerde Performans Ölçüm ve Denetimi*, (5. Ed., Ankara: Milli Prodüktivite Merkezi, No: 473, 2002), p. 24.

²⁸¹ Andreas Horstein and Per Krusell, ‘The IT Revolution: Is it Evident in the Productivity Numbers?’, *Economic Quarterly*, (Federal Reserve Bank of Richmond, 86-4, Fall 2000), p. 51.

examination, changes in the definition on productivity has been observed.

2.b. Methods to Increase Productivity

Today, when we talk about productivity, it is considered together with enhancing the quality of the service provided, preserving the nature and environmental structure, providing the workers the best living and working conditions and meanwhile trying to increase the production amount per input.²⁸² Besides, for an enterprise of any sector to be successful, she has to be able to organize the output-input relationships in favor of the firm, that is to say to be able to increase the productivity. There are three methods for the the enterprises to increase their productivity regarding the input-output relationship aspect.²⁸³

1. Keeping the input amount stable and being able to produce more outputs.
2. Producing the same amount of output while decreasing the inputs.
3. While increasing the amount of inputs, providing more output amounts than the input.

The importance of the productivity dimension is even clearer considering the meaning of the increase in productivity for the administrators, workers and even national interests. According to this, productivity increases within the enterprise level mean more production with less cost, and more income and profit. If these benefits provided through efficient administration and working manner can be shared by workers and employees in a fair way, a welfare and social benefit increase for the people in general will take place.²⁸⁴

To be able to get use of all these advantages it is an inevitable fact that the enterprises should make increasing productivity one of their top priorities. Various ways can be traceable in order to increase productivity.²⁸⁵

1. One of the most popular ways of increasing productivity is getting use of scientific and technologic developments. According to this, the enterprises that are able to reconstruct their organization

²⁸² Milli Produktivite Merkezi, 'Verimlilik Nedir?', <http://www.mpm.org.tr/verimlilik/>, 20.04.2007.

²⁸³ Akal, *İşletmelerde...*, p. 25.

²⁸⁴ Ibid, p. 27.

²⁸⁵ Milli Produktivite Merkezi, 'Verimlilik...?'

structures and always keep them firm, will gain productivity increase and by increasing their income they will strengthen their competition capacity.

2. It can be possible to increase production by applying some changes within the scope of production process. For instance, if an establishment buys semi finished products and starts processing it, since the units that are having high costs and risks will be switched off, the productivity will increase.

3. Together with the developments in the organization and the administration, productivity can be increased. The enterprises that can be successful in putting forward targets and defining the means that are to be used in order to attain them, transporting the materials, planning the production, managing the active and passive assets, and finally managing people.

4. Using the capital capacity of the machineries and counters that cannot be changed much in a short time period and are being used in production in full capacity as well as man power and preventing the long term inactivity of these in particular, are one of the ways of increasing productivity.

5. Enhancing the quality of the inputs and most important of all enhancing the quality of man power will enable the enterprises increase their productivity for sure.

3. Information Technologies and The Productivity of the Enterprises

Increasing the social welfare in a country depends on continuous growth and continuous employment. While continuous growth is possible by enhancing the competitiveness of the country, the most important means in preserving this competitiveness is seen as the increase in productivity of the country. On the other hand information and communication technologies are two of the most important factors in increasing the productivity. Within this context, the efficient production and usage of the information, reaching to it, processing it, sharing it and, including it to decision making processes are very important. And this makes the application of information Technologies in the companies a must.²⁸⁶

²⁸⁶ Peppers&Rogers Group, *Bilgi Toplumu Stratejisi: Strateji Belgesi*, (Ankara: DPT, 2006), p. 6.

Information technologies play an important role in the reconstruction of enterprise structures and work processes. The work processes mentioned are operations intended for product and services production, marketing and selling, processing and arranging the orders and conveying them to the customers, and after sales consumer services and the relationships with the customers. After installing the information technologies to the enterprises, the increase in system productivity, providing the customers with better quality goods and services, lessening the costs to the minimum level, developing new products based on information are possible. In addition, today it has come to a point that for the enterprises to gain competitiveness power, it is inevitable that they use information technologies.²⁸⁷

Providing the efficiency within the administrative functions depends basically on acquiring the right information and using it. For instance, reaching the right information about future is crucial for this function to operate properly. The effectiveness of the control function will increase with the usage of the right information concerning the situation that arises. It is known that one of the most important duties of the administrators, decision making, can only be effective with the right information. Information is one of the most important sources within all the administrative processes as in the case of the employees' motivation. Information technologies are being used in the administrative systems and increasing the efficiency as well as giving rise to radical changes in the administrative activities. According to this, the general effects of the usage of information technologies to the enterprises can be lined up as below:²⁸⁸

1. As the relationships and connections among the enterprises themselves and other enterprises, and between customers and producers, reach a fully solid infrastructure by the agency of information technologies, the economic relationships get denser in all the levels. The geographical borders can be removed and the costs of transportation and transmission processes can be reduced considerably.

2. The enterprises that have widened their customer range, will increase their incomes and will have the opportunity to reduce their expenditure as a result of the increasing productivity.

²⁸⁷ Elibol, 'Bilişim...', p. 159.

²⁸⁸ Ibid, pp. 159-160.

3. The enterprises stabilize their positions within the industry by doing duly production, advertisement, sale, sufficient storage and meeting the demands and needs of the consumers. Thus, information technologies provide cost advantage regarding the effectiveness and productivity of administrative systems of the enterprises.

4. Information technologies, using some methods such as internal accountancy and data base transmission in particular, are almost completely removing operation durations. This prevents time waste and provides an opportunity for the remaining time to be directed for more productive works.

5. Thanks to information technologies, the enterprises can save and preserve all the information related to their activities and clients on the electronic medium and can recall easily in case of a possible need.

Yet, we should keep in mind that for the enterprises to get use of the advantages the information technologies provide and for the information technologies to play a main role in the growth of the enterprises, these technologies shouldn't be seen as simple office automation but perceived as a uniting part of a general strategy.²⁸⁹ Consequently, it is useful to point out that considering information strategies increasing the productivity of an enterprise, not the number of the computers that they have bought but how efficiently they use this technologic means is determining.²⁹⁰

The information technologies increase the productivity of the enterprises in three ways:²⁹¹

1. As a result of the increase in information and communication technologies the capital per employee is also increasing and this increases the productivity of the employees of the enterprise.

2. As a result of technologic developments for the production of information technologies and services, there is also an increase of productivity in the information industry and this reflects to other enterprises as external benefit.

²⁸⁹ Akın, 'Bilişim...', p. 249.

²⁹⁰ Francesco Daveri, 'Delayed IT Usage: Is it Really the Drag on Europe's Productivity?', *IGIER Working Paper Series*, (No: 267, Milano, 2004), p. 6.

²⁹¹ Daveri, 'Delayed...', p. 26.

3. As the usage of information technologies in a country spreads to all sectors, in general the country economy and specifically the enterprises in the country have a total increase in productivity.

The increase of productivity in the enterprises using information technologies are achieved by changing the strategies of the enterprise, reconstructing the organizational structure, the vocational and technical education of the employees, thus improving their qualities, reducing any kind of costs of the enterprise etc. These developments and the effects of information technologies on the productivity of the enterprises are going to be analyzed in details below.

3.a. The Effects of Information Technologies on The Strategies of The Enterprises

Entering the information age and the advancements in the information technologies have put the traditional administration mentality in an insufficient position and wore out in fact. Thus, the enterprises have to reconsider information and the role of information technologies regarding administrative process and institutional operation. It is an inevitable fact that the information technologies are very effective in the reconstruction of administration strategies and will be even more in the future. As we all know, the main condition of being able to compete in this information age is to follow innovative strategies that depend on technologic development. And innovative strategies can only be applied by the usage of information technologies. The information technologies, which have changed the administrative approach in the business world, are providing the enterprises, which apply themselves the best, be superior in the competitive sense.²⁹²

Information technologies, due to their reciprocal interactions with work processes and enterprise strategies, have been an important factor in creating a strategy. The effects of information technologies on the strategies of enterprises can be analyzed in three levels; sectoral, enterprise and strategic. According to this;²⁹³

1. Sectoral Level: While changing the structure of the products and services by substituting the physical content with informational content, the information technologies connects the sectors and markets that are previously not related to each other with widespread

²⁹² Kk, 'Biliřim...', p. 128.

²⁹³ Akın, 'Biliřim...', pp. 246-247.

communication networks and thus, change the marketing strategies. In addition, information technologies are bettering the cost structures of the enterprises and providing them remarkable advancements in institutional effectiveness and service quality levels. This makes it possible for the enterprises get the output with the lowest cost regarding the production economy and it quickens the product and service diversification. Due to intensive competition, all the enterprises within the field have to keep up with this application and the increasing productivity spreads to the whole sector.

2. **Entrepreneurial Level:** The strategic effects of information technologies on the entrepreneurial level are considered as; the effects they have on supplier, consumer, substitute product and services, the effects they have over the enterprises that are entering the sector and their effects on the rival enterprises. The effect of information technologies over the suppliers takes place as it quickens the relationships between supplier and buyer, and makes it more efficient. As for the consumers, the information technologies form a functional chain consisting of suppliers, buyers and customers in particular and create in depth effects in customer-enterprise relationships. In its effect over substitute products and services, information technologies, together with the developments in products and services provided by innovations, have changed the substitute ratio between products and services in some sectors. When their effects on the enterprises, which have recently entered the sector, are analyzed, it can be seen that information technologies are forming important investment fields for the enterprises in order to enter the sector and the industry, and the competition continues according to the advancements in this field. This circumstance has caused the information technologies be a precondition before entering some sectors.

3. **Strategic Level:** The information technologies, possessing a strategic importance today, have become an important factor for the enterprises to pursue their existence and develop. Especially, in the strategic level, the information technologies are creating important effects by providing low cost leadership and diversifying products, heading to new markets. In a similar approach, information technologies provide the opportunity for the details of the customers to be accumulated and analyzed which can be advantageous for the enterprises.

The firms getting use of the advantages, the information technologies are providing in sectoral, entrepreneurial, and strategic level

for the enterprises, will have productivity increase, and thus, their costs will reduce, they will have an effective customer portfolio, will enhance their competitiveness, will easily enter new markets with a strong administration. They will provide themselves a lot of strategic advantages and have more effective and productive structures. These are important facts to be considered.

3.b. The Effects of Information Technologies on Organizational Structure

One the important effects of information technologies on enterprises regarding organizational structures is that it results in organizational shrinkage. Together with the decrease in the number of the staff and bureaucratic processes, the structure of the organization also narrows. The communication within the organization and outside the organization become more efficient, thus the effectiveness of the administrator decision increases.²⁹⁴

Whether the information technologies will lead to centralization of organizational structure or decentralization is a matter of discussion. According to this, some views are supporting that the coordination of the functions of information technologies within the computer medium are strengthening the centralist inclination, and claiming the information technologies are shifting the decision taking power to upper levels and within this context, even the middle level administrators who are transferring the information to upper level will disappear. On the other hand, some other thoughts are of the opinion that usage of information technologies won't centralize the organizational structure, on the contrary decentralize it. The general belief in this issue is that if a centralist structure is adopted in the usage of information technologies there will be a centralist structure; if decentralism is adopted then there will be a decentralist organizational structure. Today, this opinion is having a lot of support and that usage of information technologies aren't directly determining on the organizational structure, yet the structure that is developed according to the aims of the organization is affecting the usage of information technologies is more accepted.²⁹⁵

²⁹⁴ Halim Kazan, Himmet Karadal and Mutlu Uygun, 'Bilişim Teknolojilerine Geçiş Sürecinde Küçük ve Orta Ölçekli Sanayi İşletmelerinin Temel Üretim ve Yönetim Sorunları: Aksaray Örneği', http://www.emu.edu.tr/smeconf/turkcepdf/bildiri_43.pdf, 10.04.2007.

²⁹⁵ Kök, 'Bilişim...', pp. 132-133.

Information technologies rearrange the distribution of employees in the enterprises according to vocational and technical education and consequently in favor of the ones who are more knowledgeable, and the decision making authority and organizational structure is getting shaped according to the situation.²⁹⁶ Together with the start of the usage of the information technologies in the enterprises some of the workers are replaced with computers. With this application, a new organizational level involving supervision and administration is formed and the need for authority assignments has disappeared. By this way, for the information based organizations, which are operating with the opportunities the information technologies are providing, the need to form a separate organizational level for the supervision function, which is mostly data processing, vanished. Owing to this, the information technologies are decreasing the number of positions in the enterprises and bringing the organizations from hierarchic structures to plain organizational structures. Besides the decrease in the number of administration positions in the enterprises, it will be possible for the works to be done more efficiently and more carefully by the help of information technologies and the enterprises will be institutions that can work more productively.²⁹⁷

Eventually, within a small organization structure the bureaucratic oriented delays and lubberliness won't be there thanks to information technologies and at the same time the information workers in the middle level will be replaced with the equipments of information technologies. Thus, the organizational structure will be affected positively and this will increase the productivity of the enterprise.

The usage of information technologies provides remarkable amenities while setting up an innovative administration and a solid organizational structure. After this kind of a organization structure has been set up, the enterprises will employ educated and experienced employees and if they can increase their investments in favor of the innovative technologies they will be able to gain considerable developments. For the firms that can set up such kind of an organizational structure consisting of positive and encouraging elements,

²⁹⁶ Ramirez, 'The Influence...', p. 3.

²⁹⁷ Kk, 'Biliřim...', p. 136.

now the productivity and new technology cycle will emerge and it is only rational that this will bring more innovations and more productivity.²⁹⁸

3.c. The Effects of Information Technologies on Staff Structure

Together with technologic developments in the occupation and administrative structure, it creates and contributes to the productivity of the employees and this situation is forming big changes within the employment structures of the enterprises. The increasing productivity of the employees makes it possible to get the same amount of output by using less input. In this process, the employees being more efficient and qualified are one of the most important effects of information technologies over labor factor. As labor factor is used with less cost and more productively, the productivity of the enterprises will increase directly.²⁹⁹

In addition to information technologies developing the enterprise employees' vocational skills and talents, and increasing their productivity, another thing that has emerged regarding the ones working in the enterprises is the reduction in the number of the employees working in the enterprises since, due to technologic innovations, computers, internet, data saving tools etc. took place of workers who were working in fields such as data collection, evaluation, transmission and safekeeping. Information technologies are operating better than employees regarding data collection and evaluation. After these technologies had been introduced, the jobs of officers in the middle positions working as information workers, some of the secretaries, some sales and buying representatives, some controllers and supervisors working in the controlling and supervising departments were started to be done by electronic equipments and the labor cost for the enterprises have decreased.³⁰⁰

Today, together with the technologic developments and changes as a result of globalization, unification of the firms and new firm organizations, the demand for unqualified man power is gradually diminishing. Today, employees who have improved themselves in the vocational and technical grounds, who have brain power rather than man

²⁹⁸ Thomas Hempell, 'What's Spurious, What's Real? Measuring the Productivity Impacts of ICT at the Firm-Level', *Empirical Economics*, (Vol. 30, 2005), p. 430.

²⁹⁹ Jeremy Greenwood, 'The Third Industrial Revolution: Technology, Productivity and Income Inequality', *Economic Review*, (Federal Reserve Bank of Cleveland, 35-2, Second Quarter 1999), p. 10.

³⁰⁰ Greenwood, 'The Third...', p. 10.

power, are preferred by the enterprises. Thus, the enterprises that can include these kinds of employees to their organizations, can have high rates of productivity increases and head for the sector leadership.³⁰¹

3.d. The Effects of Information Technologies on the Costs of Enterprises

While setting up and using the information technologies, which are important strategic elements within the information development and evaluation capacities of the enterprises, some kind of expenses rooting from information technologies themselves such as equipment investments, software development expenses, the education and bettering of the employees who are going to use the technologic means and the expenses being made to maintain and support them constitute some amount of money to be spent and thus increase the costs in the beginning. These expenditures are necessary cost elements in order for the attainment, processing and development of information, and make it compatible for activities of the enterprise.³⁰²

However, the enterprises are focusing on the profit maximization since once the information technologies are set up, they decrease the general costs, increase the sales, increase employee and system productivity and more importantly the operational productivity, strengthen the competitiveness aspect of the firm, they don't pay too much attention to the expenditures mentioned above. And this portrays the main reason lying under the continuously increasing investments being made by the enterprises on information technologies in the globalizing world.³⁰³

The usage of information technologies can reduce the costs of an enterprise in many ways. For instance, if information technologies are being the substitute for a more expensive production factor it means the costs for the same amount of output will be lower. The development in the processing and transmitting of information technologies will lower the costs and at the same time contribute to the easier adaptation of the enterprises to the changes within the organizational structure. The lessening effect of information technologies over the costs of enterprises

³⁰¹ Yücel, 'Türkiye'de...', p. 95.

³⁰² Ramirez, 'The Influence...', p. 42.

³⁰³ Aylin Ataay, 'Information Technology Business Value: Effects of IT Usage on Labor Productivity', *Journal of American Academy of Business*, (Vol. 9, No: 2, Cambridge, September 2006), p. 230.

can be analyzed in three aspects; the external coordination costs of the enterprises, the internal coordination costs and operational costs:³⁰⁴

1. External Coordination Costs: The effect of information technologies over external coordination costs are lessening. At this point; information technologies provide flexibility of the production processes, axe the hardships rooting from geographical limitations and the costs, enable the safekeeping of the information once it is acquired and be used again when necessary and let the non-expert employees of the enterprise improve their knowledge accumulation and lessen the external coordination costs. At the same time, information technologies let the suppliers and customers communicate at any time and hear about the innovations in the market immediately. Thus, preventing the possible negations that can root from asymmetric information beforehand and let the enterprises structure a more productive cost. This helps the enterprises in decreasing their disadvantages rooting from external grounds to minimum.

2. Internal Coordination Costs: Information technologies provide the information transfer among the hierarchic units within the enterprise, safekeeping of the necessary information and enable it to adapt to the enterprise. At the same time, it lessens the disadvantages rooting from lack of information to minimum when a quick decision has to be made and enables the enterprises to lessen their internal coordination costs. Moreover, an effective controlling and supervising network would reduce the costs to minimum and enable the enterprises work more productively.

3. Operational Costs: The operational costs of an enterprise are the costs that are handled in the production process and the costs faced during the marketing of the products. The greater amount of information technology the enterprises have, the easier the attainment, safekeeping and processing of the information is. This won't bring extra cost to the enterprises if the information is required again within the production process. The costs will be able to be reduced within all the units related to the information and participating in the production process. Together with the enlargement of the information technologies, the network of suppliers and the customers of the enterprises will become broader and the incomes will increase. At the same time, since all the information

³⁰⁴ Ramirez, 'The Influence...', pp. 44-48.

transmitted to these extra institutions or individuals will have already been stored and used, there won't be any costs.

The cost lessening effect of information technologies on external and internal coordination costs and operational costs encourage the enterprises get use of these technologies. This also gives rise to the usage of information technologies by the enterprises while they arrange their firm sizes and organizational structuring to get maximum productivity.

Together with the positive affects of the information technologies over the strategies and organizational structures of the enterprises, if the enterprises take rear office applications such as finance and human resources, the supply chain applications such as buying, storage management and forwarding, and the applications intended for sales and marketing such as customer and campaign management, to the electronic medium in parallel with elements that enable the employees be more productive and lessen costs, their productivity will increase.

Thus, the surveys are supporting this opinion and show that the investments that are made for information technologies are increasing the productivity of the enterprises. The studies conducted together with the Euro region indicates that the sectors, which have produced information and communication technologies during the 1990's, are way ahead of all the other sectors both in the output and productivity level and this also supports the case. At the same time, the increase of productivity within the enterprises that produce information technologies spread to the enterprises that started using these technologies in time and this led to total factor productivity increase of information technologies regarding all the economies.³⁰⁵

Another point concerning the productivity of the information technologies is that the big scale companies are investing on information technologies more than the small scale ones. As a matter of fact, in a survey carried out between the years 1992-1997 in Los Angeles, it is pointed out that the firms that were having the most productivity increase (%66) were the biggest scaled ones while between the same years the small and middle scaled enterprises had a smaller productivity rate of %32. The fact that the big firms invested on the information technologies the most and cared for them displays that one of the main reasons of

³⁰⁵ Focco Vijselaar and Ronald Albers, 'New Technologies and Productivity Growth in the Euro Area', *Empirical Economics*, (Vol. 29, 2004), p. 632.

productivity increase is the investments made on information technologies.³⁰⁶

It is an important point to be stressed out that the enterprises that will have the most productivity within information technologies will be the ones that are able to internalize new technologies within themselves better than the others and that are having complementary factors such as having educated and experienced employees, innovative administration mentality and a solid organizational structure.³⁰⁷ But at this point it should also be mentioned that information technologies alone won't be enough to increase productivity. According to this, if information technologies are applied as a part of the whole in order to increase the performance of the enterprise and could be united with elements such as highly educated man power, right and efficient administration, they are one of the means that can play the lead in increasing the productivity of the enterprises.³⁰⁸

CONCLUSION

The ever increasing importance of the information within the economic and social life results in the enterprises' gradually increasing investments on information technologies and the reconstruction of organizations with the support of technology. Today, the enterprises attach more importance to information technology based innovations such as information, patent, brain power, copyright etc. This provides enterprises a lot of advantages such as reducing the costs, which is the main one, transforming the organizational structures into more efficient ones and axing risk elements and asymmetric information during decision making process. The best part of all these advantages for the enterprises is that they provide remarkable increases in the productivity.

In this globalizing economy, for the firms to exist and continue profiting, there has to be continuous growth and increase in competitiveness. With the importance given to the productivity factor, which is the key to obtaining this power, the enterprises inclined to invest more on information technology starting in 1990's in particular. The increasing expenses of information technologies and their usage provided the

³⁰⁶ Ken Dozier and David Chang, 'The Effect of Company Size on the Productivity Impact of Information Technology Investments', *Journal of Information Technology Theory and Application*, (Vol. 8, No: 1, 2006), p. 44.

³⁰⁷ Hempell, 'What's...', p. 430.

³⁰⁸ Greenwood, 'The Third...', p. 6.

production and support process be more efficient and productive ranging from supplying the inputs for the production to customer technical services support. Thus, the positive effects of usage of information technologies on enterprise productivity are accepted by all the enterprises and have become an important activity that has been put into practice. But we should also mention that for the information technologies be able to provide productivity increase, together with information technologies, highly educated and experienced man power, and an efficient administration should be applied.